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The Effect of Active and Passive Participation with Music on the Foreign Language Acquisition and Emotional State of University Music Students

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THE EFFECT OF ACTIVE AND PASSIVE PARTICIPATION WITH MUSIC ON
THE FOREIGN LANGUAGE ACQUISITION AND EMOTIONAL STATE OF
UNIVERSITY MUSIC STUDENTS

By

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ABSTRACT

The purpose of this study was to examine the effects of singing paired with signing on second language acquisition of university music students under active and passive learning conditions. In addition, emotional states of the subjects were tested. The independent variables were measured by the immediate recall of pronunciation and vocabulary of Japanese songs and emotional states reported by the subjects. All subjects (N=40) were native English speakers studying music at a university, having no experience in learning Japanese. The experiment took place in a music practice room in a 40 minute session and included two trials and posttests. Subjects were divided into two groups, active and passive learning groups. In each trial, a student in the active group (N=20) sang and signed along with the experimenter while the other students in the passive group (N=20) watched and listened. After each trial, the immediate language memory and emotional states were measured. A two-way analysis of variance (ANOVA) with repeated measures showed that there were significant differences in language learning between the active and passive learning conditions and across the two-posttest times with active learners' gaining significantly greater vocabulary and pronunciation skills. Also, there was a significant gain in the comfort level of both groups across both posttests with the active group being significantly more comfortable than the passive group on both tests. The result indicates that active learning with singing paired with signing, compared to simply watching and listening, is more effective for college music students in second language acquisition. The effects of a variety of music structures with different populations and the effects of active and passive learning and interaction need to be examined in future studies.

INTRODUCTION

In the international world, where societies are open and relate closely with one another, the more cultures are unified, the more people from minority societies tend to face enculturation (Shiels, 2001). This adaptation experience exists in each individual and is unique and different for him or her. This complex process needs a lot of effort, support, and time. A person confronting this challenge needs to make progress in communication skills with consistent effort and support from their environmental resources in addition to gaining coping skills through different cultural experiences and personal emotional responses. Language acquisition is one of the most important issues for these people. In addition to ESL studies, there is research in other second language learning (Gan & Chong, 1998; Hatasa, 2002; Mora, 2000; Takahashi, 2001).

In recent years, there has been a growing number of studies to attest to the effect of music with manipulations to help personal needs of language skills. In related fields, music therapists, music educators, and English as Second Language (ESL) teachers and foreign language teachers began exploring efficient methods for their use in language skill acquisition (Daniels, 2003; Gan & Chong, 1998; Hatasa, 2002; Hayashi, 1997; Magrath, 1985; Mora, 2000; Shiels, 2001).

REVIEW OF LITERATURE

Music and Memory

Music has an effect on the human memory when information is taught to music. Previous studies in this area include the effect of a song's melody on learning and recalling the text of the song (Wallace, 1994; Yalch, 1991), the effect of background music on the memorization of text (Balch, Bowman, & Mohler, 1992), the effect of long term memory with music training on musical skills (Crummer, et al., 1988; Jellison & Miller, 1982; Levintin & Cook, 1996), and the effect of the use of music as a mnemonic for the memorization of information (Gfeller, 1983 & 1986; Wolfe & Hom, 1993; Prickett, 1974).

In these studies, Yalch (1991) found musical jingles to be effective mnemonic devices in advertising, and Wallace (1994) ascertained that information is memorized and recalled better if it is heard in music than in speech. Also, Balch, et al. (1992) examined the effect of background music on immediate and delayed word recall by undergraduate students and found that background music effects the memory moderately.

In the ESL learning setting, "din phenomenon" is reported, in that suddenly students remember certain English expressions, and that happens often immediately after hearing English songs (deGuerrero, 1987). In the field of music skills and memory, musicians seem to be more successful in musical tasks based on the memory. The effect of musicians' training and the long-term memory was examined on tasks related to some musical elements such as acute timbre discrimination (Crummer et al., 1988) and on tempo accuracy retention (Levintin & Cook, 1996). In addition, Jellison & Miller (1982) reported that musicians' scores in digit recall were higher than that of non-musicians for sequential recall, despite a lack of a significant difference in overall recall.

As for research with young children, Gfeller (1983 & 1986) worked with children with learning disabilities to examine the effect of musical mnemonics on the short-term memory of academic information although a significant effect was not found as a result. More specifically, Prickett (1974) and Wolfe & Hom (1993) chose certain music factors to examine the effects of those factors on memory. Prickett (1974) examined the effect of rhythm patterns on digit recall with first grade students, and she found rhythm instruction has helped recall significantly. Later, Wolfe and Hom (1993) tested the effect of familiar and unfamiliar melodies on digit recall and retention of five-year-olds in the Head Start Program. The research studied whether recall and retention depend upon the familiarity of the melody. It was found that the numbers were learned significantly

faster with familiar song melody. The elements of music (rhythm and melody) have important role in memorization of numbers, and it is important to choose what kind of music to use.

Effect of Music on Speech and Language Skills and Behavior

Language could be defined as a code by which thoughts are expressed through a conventional order of arbitrary communicational signals (Bloom, 1988) while speech is sensori-motor production of sounds for communication (Lathom-Radocy, 2002; Reed, 1994). Language acquisition requires development of language and speech skills and physiological and neurological function. Lathom-Radocy (2002) suggests that language acquisition needs an input stimulus, ability to hear sounds, and cognitive skills to process, store, and use sounds.

Many children in the U. S. population have been found to suffer from speech and language problems. For example, The American Speech-Language Hearing Association (ASHA) found that there were almost 2.6 million Americans, including more than 50 % of all special needs children in Head Start program, who had speech or language disorders (Crary, 1993). It was also found that 75% of children with learning disabilities had a language learning disability (Owen, 1995).

After the research of the last few decades, there is a growing number of positive findings on the effects of music on language skill and recommendations for more supportive care, such as team work and interdisciplinary training of therapists (Tucker, 1980; Spahr, 1993). Among organizations such as the ASHA and the National Association of Teachers of Singing (NATS), interdisciplinary learning programs have been suggested for those who work with communication disorders and other individuals with language difficulty (Tucker, 1980). The effectiveness of an integrated approach, where many specialists share their ideas, has been noted (Spahr, 1993).

There is a relationship between music and speech abilities, as factors of one influence the other. From the neurological point of view, Jeffries (2003) noted that some persons with difficulties such as problems with stuttering or aphasia could sing because the right brain hemisphere supports singing and other musical skills. But language functioning comes from the left hemisphere. If speech-impaired persons can sing to practice speaking, it is potentially possible for them to speak when music is gradually diminished.

Rhythm is an important factor for both singing and speaking. Alcock, et al. (2000)

reported that individuals with speech and language disorders had problems in both the perception and production of rhythm, although they were able to properly perceive and produce pitches. Further, Giacobbe (1972) mentioned the importance of rhythm for children with learning disabilities and brain damage. He suggested that rhythm gives order and organization to a human's physical and biological functions, and that brain functions and neurological development can be affected by musical rhythms.

Music has proven effect on improving speech and language skills and behavior in a variety of populations including adults with speech difficulty caused by neurological and other physical impairments, typical children, and special needs children. Adults with stuttering improved the fluency and frequency of speech with singing (Colcord & Adams, 1979). In another study, singing was also found to have brought noticeable improvements concerning speaking fundamental frequency and variability, rate of speech, and verbal intelligibility of neurologically impaired individuals (Cohen, 1992). Singing was also used with dementia, and significant effects were found concerning speech content and fluency (Brotons & Koger, 2000). Also, singing vocal exercises for people with Parkinson's disease brought improvement in speech intelligibility and vocal intensity (Haneishi, 2001),

Among a variety of musical interactions, singing is also effective and practical in a setting which integrates both typical and special needs children. Kaplan (1955) reported a positive effect in this setting of singing on language skills for both of these populations.

Concerning typical children, Kuhmerker (1969) used singing with body movement and reported a gain in vocabulary and participation with young children. Later, Colwell (1994) found the effect of reading with music on reading accuracy and attention focusing.

The effect can also be seen in children with special needs. An early study by Kaplan (1955) involved children with cerebral palsy or cleft palate. He reported that the music activities of singing and playing instruments were effective for speech correction. In another study involving children with language delay, significant improvements were found in phrase length, noun retrieval, and verbal imitation with melodic intonation therapy (Krauss & Galloway, 1982). Hoskins (1988) found a great improvement in vocabulary of children with language delay using music activities including use of pictures and singing. Singing songs and vocal exercises given to children with hearing impairments significantly improved the fundamental frequency and frequency range

(Darrow & Starner, 1986). Concerning children with learning disabilities, Rejto (1973) reported that playing piano and music games brought positive gains in auditory and visual perception, sensory - motor integration, and memory. Later, singing was found to have significant effects on reading accuracy and on on-task behavior of children with learning disabilities (Colwell & Murlless, 2002). In addition, Bygrave (1994) identified the positive effect of a story telling program with music on the listening skills of special needs children.

Second [Foreign] Language Acquisition

At the beginning of language acquisition, children must extract related linguistic parts and connect them into linguistic forms (Mazuka, 1998). Mother tongue education is important for cognitive development and second [foreign] language learning (Hayashi, 1997), and it can be a common fact for both typical and special needs populations. It was reported that children with and without hearing impairment exposed to languages (English and sign language) in their early infancy learned a second [foreign] language comparably well later in their lives (Mayberry, Lock, & Kazmi, 2002). Magrath (1985) noticed that sign language and English were two different languages, and that deaf and ESL students needed common methods of Teaching English as a Second Language (TESL), especially in writing and grammar. However, sign language can be simple and convenient to use since it can be used without following the strict orderings of English. For young children, sign language can be a feasible second language (Daniels, 2003) and can be used as a common language in a multicultural class setting (Good, Feekes, & Shawd, 1994).

Recently, another aspect of second [foreign] language acquisition, a learner's emotional state was deliberated (Shiels, 2001; Takahashi, 2001). Shiels (2001) interviewed immigrant students about the factors of stress caused by second [foreign] language acquisition and enculturation including school, the enculturation process, and prejudice. She described helpful teaching strategies for the students, including giving modified or alternative assignments and tests, and using cooperative learning techniques, both manipulative and visual. While Shiels (2001) focused on stress factors, Takahashi (2001) developed an exhilaration scale for learning Japanese as second language for college students based on interviews with Japanese learners, and he implemented the scale with college students learning Japanese. Then, he found that there was high correlation between motivation for learning and a cluster of positive

emotional states encountered when learning Japanese as a second language.

There are a variety of methods for second [foreign] language acquisition. Efficient and appropriate methods for different populations and age groups at different learning stages have been studied in recent years. Mazuka (1998) asked the question about the qualitative difference between processing strategies in children and that in adults. She wondered if children acquire languages with different route according to languages. Adults may not necessarily start to learn as do children. For example, even a syllabary, which is regarded as a useful tool for young learners, does not work in the same way for adult learners. In one study it was shown that there was no significant difference in performance of language skills between two groups, one which was introduced to the Japanese syllabaries eight weeks before the other was (Hatasa, 2002).

Music and Second Language

Music plays a positive and valuable role in second [foreign] language acquisition, as it can be learned passively, but automatically, and can convey verbal information smoothly. Hearing songs in English is the most frequent trigger of “din phenomenon” for Spanish speaking ESL students (deGuerrero, 1987). A practical study conducted by Staum (1987) showed that music paired with speech significantly increased the verbal intonation of ESL university students. Later, Gan & Chong (1998) found an interesting result. Through working with preschool ESL children in Singapore, they showed the effects of using music, not only in second language acquisition, which is defined as speaking and listening skills in English, but also concerning a secondary gain, increasing communicative competence. In addition, Mora (2000), a teacher of English as Foreign Language (EFL) students in Spain, advocates the effectiveness of an approach with musical melody that helps the pronunciation skills and whole language acquisition process of the students.

Use of Sign Language to enhance language and other skills

Sign language has been labeled as one of the languages with a fully developed linguistic system (Magrath, 1985; Siple, 1978 & 1982). The users of sign language are viewed as a cultural and ethno-linguistic minority (Moores, 1990; Hamers, 1996). The effects of sign language have been studied on the relationship between brain development and language and other skills of different populations.

Hendren (1989) studied the effect of signing on right brain hemisphere of the human brain. Signing and doing gestures are visually oriented experiences with the use of both hands, and are considered right brain activities. Thus, the use of sign was suggested for populations with right brain dominance, such as preliterate children, children with learning disabilities, and other types of right brain thinkers (Hendren, 1989). Freed & Parsons (1997) showed that right-brained individuals tend to store information primarily in pictures, and they have a great visual memory despite their weaknesses in logical and linguistic thinking. They may frequently experience a delay in auditory processing that creates a need to connect the auditory stimulus into a visual picture. Also, they may suffer from delayed motor skills. These characteristics are observed frequently in those with attention deficit disorder (ADD), attention deficit / hyperactivity disorder (ADHD), dyslexia, autism (Freed & Parsons, 1997), learning disabilities, high functioning autism, and other types of sensory integration dysfunction (SID) (Kranowitz & Silver, 1998). Further, visuo-spatial skill might be necessary for signing. In a study with individuals with dyspraxia and visuo-spatial impairment, Morgan, et al. (2002) found that the sign language structures were relevant to the visuo-spatial skills. Good, et al. (1994) described that using sign language by these individuals might result in improvement of attention, self-esteem, motivation, communication, socialization, behavior management, math readiness (LaSasso & McKall, 1983), reading readiness, vocabulary, and retention (Sensenig, et al., 1989).

Also, a few studies with signing were implemented with these populations. A significant gain in language skills was found with non-verbal retarded children (Kahn, 1981). In addition, the effect of signing was proven to increase vocabulary of kindergarten children (Daniels, 1996). For the young children, Mayberry, et al. (2002) showed the importance of signing as language experience for the hearing impaired in the early stage of life. Buday (1995) noticed autistic children imitated sign and speech correctly more often in music activity. In a pilot study conducted by Colwell & Murlless (2002), an improvement was found in reading accuracy of children with learning disabilities when signing and singing or chanting were used. Also, more frequent on-task behavior of subjects was observed under the music condition.

Use of Music and Sign Language for Second [Foreign] Language Acquisition

Two recent studies demonstrated the effectiveness of music paired with gesture and sign language for second language acquisition (Madsen, 1991; Schunk, 1999).

Madsen (1991) demonstrated that singing paired with gesture effectively enhanced learning and transferring new words for first graders. Schunk (1999) employed singing paired with signing for elementary ESL students, and there were significant gains in receptive vocabulary skills.

In the previous research, there are few studies that examine the effect of learning conditions (active and passive learning styles) on second [foreign] language acquisition and emotional states when the language is taught by singing paired with signing. There are no studies of learning Japanese using this method, combining singing and signing.

Purpose

The purpose of this study was, to examine the effect of active and passive learning of music paired with signing on university music students' recall of a foreign language (word pronunciation and recognition of Japanese language) and to examine emotional state of the students during this process.

METHOD

Subjects

The subjects in this study were 40 university music students in Tallahassee, Florida. To be included in this study, subjects were required to speak English as their native language and have no prior experience of learning Japanese. seventeen males and 23 females, were included, and their average age was 22.8 years old. An additional 11 subjects were involved in the project but their data were not utilized. Their status did not meet criterion for subjects. Five of them were Spanish speakers, one was a Korean speaker, two had learned Japanese before, and three had difficulty participating in the study because they were sick or distracted by noise from outside of the room.

Design

The design of this study was a two-group repeated-measures format. Subjects were randomly assigned to active learning group (N=20) or passive learning group (N=20). Two trials were included in a 40-minute session, and a posttest was given after each trial to examine three independent variables: word pronunciation, word recognition, and emotional state (See Appendix A for datasheets for each variable). For scoring word pronunciation, the number of syllables which were clearly pronounced with vowel and consonant, sounds was measured with a maximum score of 48. To score word recognition, the number of word meanings, correctly written in English, was counted with a maximum score of 13. As for the emotional state, the levels of comfort, stress, and self-confidence were reported on a Likert scale between one (least) to five (most). Each number was subdivided by dots worth .2 of a point. The average from the three categories: comfort, stress, and self-confidence, was calculated. A Japanese song “Umi” with a pentatonic scale was used for this study (Osada, 1986). Its use involved repeating the melody while alternating the lyrics, vocabulary (See Appendix B for copy).

Procedure

After receiving permissions from the professors, the experimenter announced and solicited volunteers for the experiment from a variety of music classes such as music therapy, choir, band, conducting, guitar, and world music classes. Each experiment was individually arranged by the subjects on a schedule book. Participants were reminded by an email or phone call several days before the scheduled date.

Before this experiment was implemented, the purpose and procedure were explained to the subjects. The consent form was read and signed by every subject. Then, the subjects were exposed to various procedures in the experiment. Each subject sang and signed the Japanese song with the experimenter individually. The experimenter introduced the song, read its text, hummed and sang it, explained the meaning of each word, demonstrated American Sign Language (ASL) for each term, read matching words with ASL, sang the text chaining words slowly, and repeated as needed within a 15-minute trial. Control subjects simply observed the procedure while experimental subjects engaged in the entire learning process as directed by the experimenter. The subject and experimenter sat next to each other facing the piano, where song lyrics written in both Japanese characters (hiragana) and in Roman letters were placed. Accompaniment was played on the piano several times during each session. After each trial of 15 minutes, a posttest and five-minute-break were taken. Then, the second trials took place using identical procedures. During the experiment, each subject was given a water bottle and candies for his or her needs and after the entire session appreciation snacks were given.

RESULTS

The purpose of this study was 1) to determine the effects of the active and passive learning conditions on foreign language acquisition, recall of the reading accuracy and word recognition, of university music students, and 2) to examine the emotional states of the university music students under the active and passive learning conditions.

The results showed that there were significant differences between the outcomes of the active and passive learning conditions across two different posttests. Also, the time-by-group interactions were significant both in pronunciation and vocabulary (See Table 1). The two trials were more effective for learning pronunciation and vocabulary than one trial only; and active learning was significantly more effective in foreign language learning than passive learning. Differences were found between the two groups in both scores of reading accuracy and word recognition. That is, the scores of the active group were always significantly higher than those of the other group (See Table 2). Second, the pronunciation and vocabulary scores at two different times were significantly different in both learning groups. The scores of the two groups at the second posttest time were significantly higher than those on the first test. Third, the interaction between times and groups were significantly different in both the pronunciation and vocabulary scores. The active group's learning was significantly higher than the passive group's on the second test. (See Figures 1 and 2).

Table 1
Two-Way ANOVA with Repeated Measures for Language Acquisition

Source	df	MS	F	P
Reading Accuracy				
Test time	1	7488.450	254.857	< .001*
Test time × Group	1	1125.000	38.288	< .001*
Error (Testing time)	38	29.383		
Group	1	2890.000	85.906	< .001*
Error (Group)	38	33.641		
Word recognition				
Test time	1	285.012	97.418	< .001*
Test time × Group	1	25.312	8.652	.006*
Error (Testing time)	38	2.926		
Group	1	200.256	39.647	< .001*
Error (Group)	38	5.051		

* Computed using $\alpha = .05$.

Table 2
Means of and Standard Deviations for Language Acquisition

Condition	Posttest 1		Posttest 2	
	Mean	SD	Mean	SD
Reading Accuracy				
Active learning	18.20	7.592	45.05	3.379
Passive learning	8.70	5.592	20.55	0.644
Word Recognition				
Active learning	7.45	2.781	12.35	1.040
Passive learning	4.10	1.917	6.75	3.683

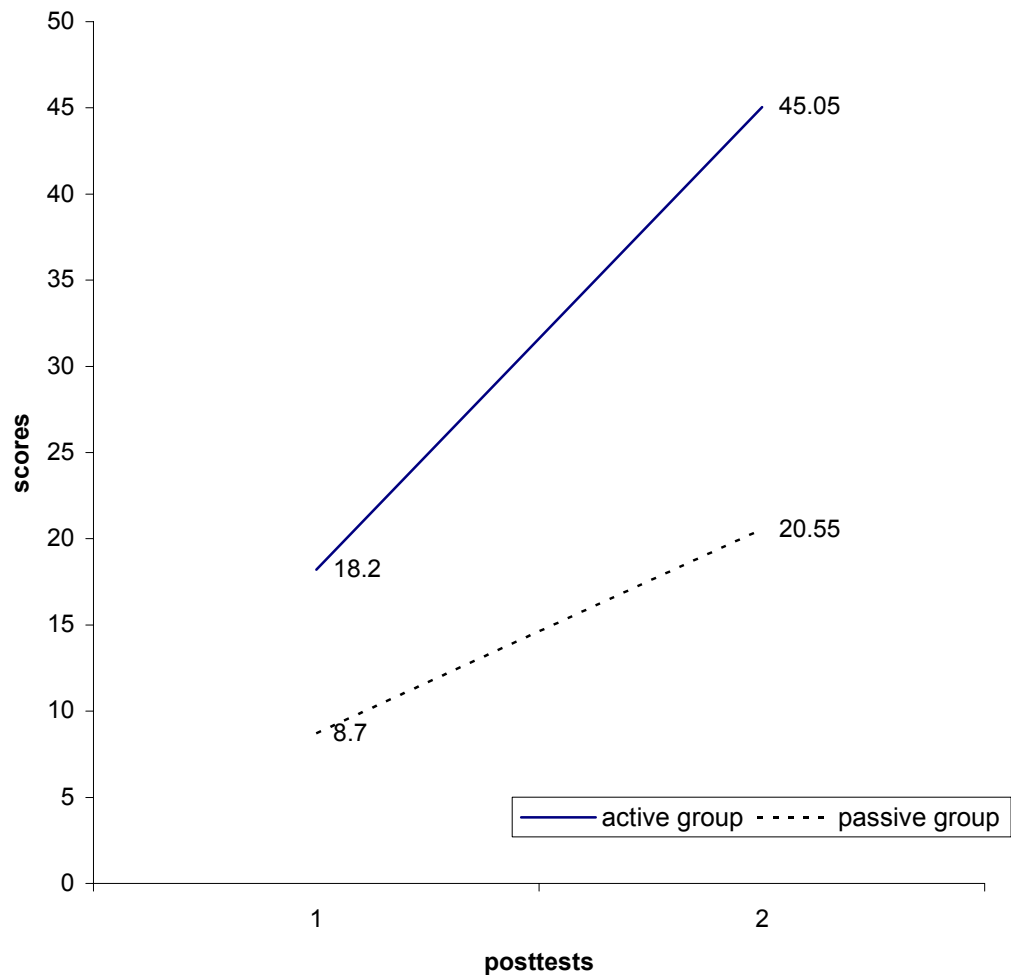


Figure1 Pronunciation Acquisition

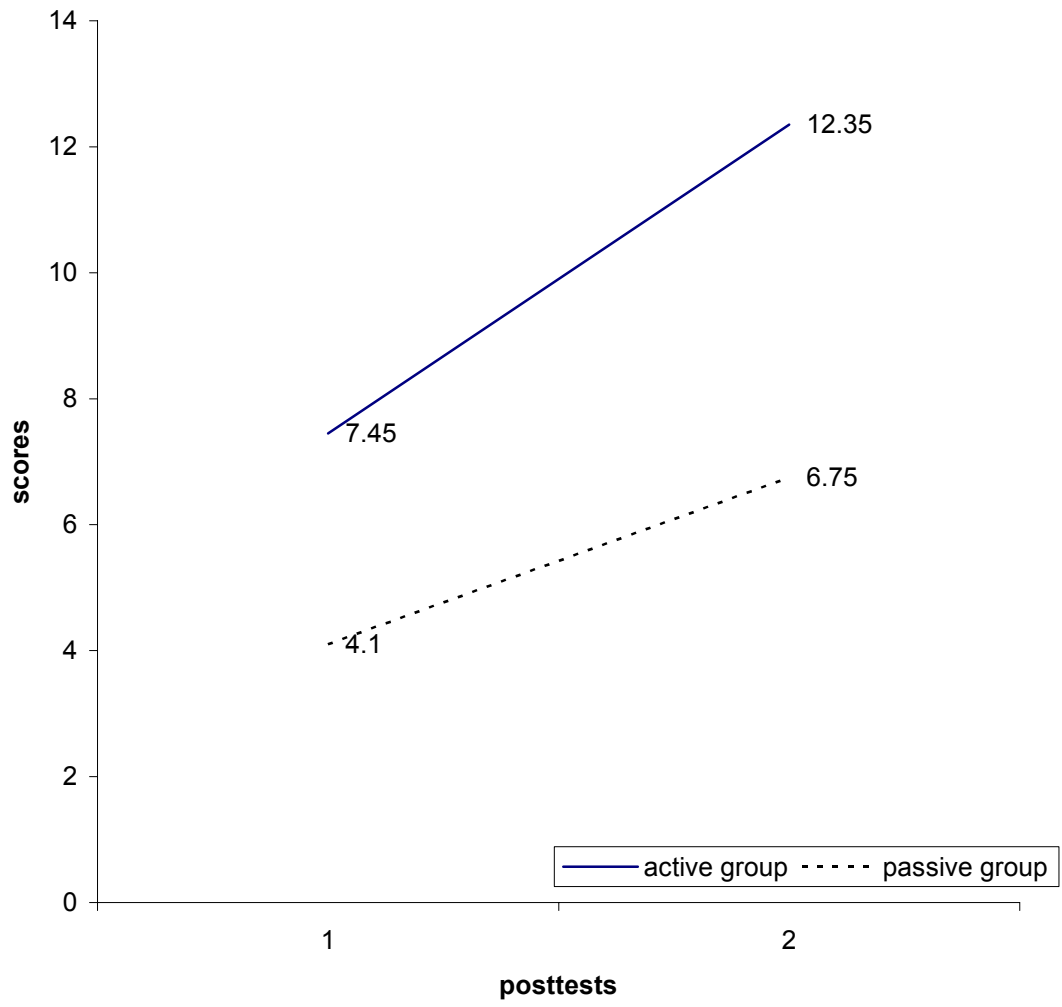


Figure2 Vocabulary Acquisition

Moreover, vocabulary scores by both groups were all higher than those of the pronunciation scores.

As for the emotional states of the students in the two groups, there were significant differences between the two learning conditions across the two different posttests (See Table 3 and 4). This indicated that the comfort levels of the both learning groups increased during the treatment. Also, the active group was significantly more comfortable than the passive group on both posttests.

Table 3
Two-Way ANOVA for Emotional State

Source	df	MS	F	P
Test time	1	8.319	54.296	< .001*
Test time × Group	1	.265	1.728	.197
Error (Testing time)	38	.153		
Group	1	4.290	17.519	< .001*
Error (Group)	38	.245		

* Computed using $\alpha = .05$.

Table 4
Means of and Standard Deviations for Emotional State

Condition	Posttest 1		Posttest 2	
	Mean	SD	Mean	SD
Active learning	3.22330	.533054	3.98330	.466786
Passive learning	2.68340	.674019	3.21330	.574050

DISCUSSION

The current study examined the effect of music paired with signing in active vs. passive learning conditions, on the foreign language acquisition, the reading accuracy and word recognition, and the emotional states of the university music students. The results will assist music therapists and teachers working with ESL and other second [foreign] language learners in providing a more effective method for teaching language skills and improving emotional states.

Balch et al. (1992) and Wallace (1994) found positive effects of passive learning, which was listening to music or background music, on learning and recall of information. In this study, the effect of passive learning was found in some increases in both pronunciation and vocabulary scores across both posttests. The merit of passive learning, watching and listening, is that the cognitive information can be immediately conveyed by a teacher; however, the pace of learning and emotional level might be lower than active learning. On the other hand, the active learning, singing and signing, may enhance methods of learning by combining visual and physical stimuli to help in learning and saving information in the students' memory efficiently while providing more comfort compared to the other learning style.

Subjects in this study had previous music experience and skills which could be effective factors for learning cognitive information, even in a passive style of learning. Some studies indicate that the musical experience, such as discrimination of sounds, pitch changes, or development of musical skills, had an effect on language acquisition (Hurwitz, Wolff, Bortnick, & Kokas, 1975; Lamb & Gregory, 1993; Rejto, 1973). Jellison & Miller (1982) also found that musicians' scores in recall of digit and word sequences exceeded those of non musicians when information was passively learned with an audiotape.

Although it was suggested that music experience should enhance language skills, the effect did not make passive learners catch up with active learners when information was taught with signing and singing. It was revealed that the active learning with signing and singing was significantly more effective than the passive condition. This study demonstrated that the active learning with music paired with signing could efficiently enhance learning a foreign language.

Other populations for whom singing paired with signing could be used includes not only challenged populations such as ESL students without music experience, and children with speech difficulties, learning disabilities or autism but also typical adults

with music experience. The singing paired with signing could reach a wider population than foreign students, especially those for whom language skills are needed.

As for the effects of independent variables, in addition to signing, the music might have had an effect on enhancing learning and the recall of information (Balch et al, 1992; Wallace, 1994). The song structure with pentatonic scale and repetition might have had an influence on learning Japanese text. Past research has demonstrated that the structures and elements of music affect the memory of the melody and cognitive process (Beltz, 1991; Cash, et al., 1997; and Oura, 1991). Pentatonic, anhemitonic, scale structure, which is utilized in Orff-Schulwerk, emerged in the earliest forms of art music, and this pentatonic music appeared throughout all areas in the world (Warner, p.192-193). However, this variable was not tested and further research is necessarily to definitively determine effects.

For future, the effects and possibilities of active and passive types of learning should be further examined and explored more. Common learning methods in the classroom and home often are passive learning; such as listening and watching a teacher taking notes, watching TV or listening to music. Passive learning problems observed in this study included being less interactive and communicative, less attentive, less individualized or flexible, and less social. Adapting instruction to allow active interaction is a preferred teaching method.

Future studies should be carried out with nonmusicians and other typical adults. Also, future research is needed to examine the effects of singing and signing combined, different types of songs with different subjects, and the link between song structure and memory.

APPENDIX A
DATA SHEETS 1, 2, AND 3

Data Sheet 1

Song: うみ(Umi)

-Check unclear parts, not pronounced parts, lack of a vowel or consonant, lack of mix of a clear or voiced consonant.

Posttest 1

Line 1	う	み	は	ひ	ろ	い	な	お	お	き	い	な
Line 2	つ	き	が	の	ぼ	る	し	ひ	が	し	ず	む
Line 3	う	み	に	お	ふ	ね	を	う	か	ば	せ	て
Line 4	い	っ	て	み	た	い	な	よ	そ	の	く	に

Posttest 2

Line 1	う	み	は	ひ	ろ	い	な	お	お	き	い	な
Line 2	つ	き	が	の	ぼ	る	し	ひ	が	し	ず	む
Line 3	う	み	に	お	ふ	ね	を	う	か	ば	せ	て
Line 4	い	っ	て	み	た	い	な	よ	そ	の	く	に

Data Sheet 2

Posttest 1

Please fill out the correct meaning of each word.

うみ umi	つき tsuki	おおきい ookii	おふね ofune
のぼる noboru	しずむ shizumu	ひろい hiroi	くに kuni
うかばせて ukabasete	よその yosono	いって itte	ひ hi
みたい mitai			

-(cut)-----

Data Sheet 2

Posttest 2

Please fill out the correct meaning of each word.

ひろい hiroi	うかばせて ukabasete	くに kuni	いって itte
よその yosono	おふね ofune	うみ umi	みたい mitai
しずむ shizumu	のぼる noboru	おおきい ookii	つき tsuki
ひ hi			

Data Sheet 3

Posttest 1

On reading and recognizing Japanese words, show your level of feeling for each of the following with an arrow (↓).

	Least	Most
-Self-confidence	1 2 3 4 5	
-Stress	1 2 3 4 5	
-Comfort	1 2 3 4 5	
--(cut)-----		

Data Sheet 3

Posttest 2

On reading and recognizing Japanese words, show your level of feeling for each of the following with an arrow (↓).

	Least	Most
-Self-confidence	1 2 3 4 5	
-Stress	1 2 3 4 5	
-Comfort	1 2 3 4 5	

APPENDIX B
SONG LYRICS

「うみ」 Umi

うみは ひろいな おおきいな

u-mi wa hi-ro-i na o-o-ki-i na

つきが のぼるし ひが しずむ

tsu-ki ga no-bo-ru shi higa shi-zu-mu

うみに おふねを うかばせて

u-mi ni o-fu-ne wo u-ka-ba-se te

いって みたいな よその くに

i-tte mi-ta-i na yo-so no ku-ni

APPENDIX C
INFORMED CONSENT FORM

Informed Consent Form

I freely and voluntarily and without element of force or coercion, consent to be a participant in the research project entitled “The effect of music with signs on recognition and pronunciation of Japanese vocabulary.”

This research is being conducted by Kiyomi Iwata, who is a graduate student under Dr. Jayne Standley in the School of Music at Florida State University. I understand the purpose of her research project is to examine the effect of singing and listening to Japanese songs paired with signs on the pronunciation, recognition, and memory of words included in the songs. I understand that if I participate in the project, I may be asked to sing and sign Japanese songs with the researcher or listen to her while she sings and signs or neither of them. I will be asked to read and recognize words in the songs at the beginning and end of experiment, and also 2weeks later.

I understand that my participation is totally voluntary and I may stop participation at any time. All my answers to the questions will be kept confidential and identified by a subject code number. My name will not appear on any of the results. No individual responses will be reported. Only group findings will be reported.

I understand that there is a possibility of a minimal level or risk involved if I agree to participate in this study. For example, I may feel difficulty answering some questions about the songs.

I understand that there may be benefits for participating in this study. I may improve language skills through singing, signing, or listening. In addition, I will provide music therapists and other related professionals with valuable ideas of effective ways for acquisition/ proficiency of [second] language learners.

I understand that this consent may be withdrawn at any time without prejudice, penalty, or loss of benefits to which I am otherwise entitled. I have been given the right to ask and have answered any inquiry concerning the study. Questions, if any, have been answered to my satisfaction.

I understand that I may contact Kiyomi Iwata, Graduate student of Florida State University, School of Music, (850)-445-8243, for answers to questions about this research or my rights. Group results will be sent to me upon request.

I have read and understand this consent form.

(Subject)

(Date)

APPENDIX D
LETTER OF APPROVAL FROM THE FLORIDA STATE UNIVERSITY
HUMAN SUBJECTS COMMITTEE



Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2763
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 6/7/2004

To:
kiyomi iwata
MC: 4174

Dept.: MUSIC SCHOOL

From: John Tomkowiak, Chair

A handwritten signature in black ink that reads "John Tomkowiak M.D.".

Re: **Use of Human Subjects in Research**
The effect of music with signs on recognition and pronunciation of Japanese vocabulary

The forms that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Exempt per 45 CFR § 46.110(b) 6 and has been approved by an accelerated review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If the project has not been completed by **6/6/2005** you must request renewed approval for continuation of the project.

You are advised that any change in protocol in this project must be approved by resubmission of the project to the Committee for approval. Also, the principal investigator must promptly report, in writing, any unexpected problems causing risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Protection from Research Risks. The Assurance Number is IRB00000446.

Cc: Dr. Jayne Standley
HSC No. 2004.402

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BIOGRAPHICAL SKETCH

Name	Kiyomi Iwata
Date of birth	April 8, 1977
Place of birth	Shizuoka, Japan
Education	Bachelor of Art in Special Education Shizuoka University – Japan Degree awarded in March 2000
	Master of Music in Music Therapy The Florida State University – Tallahassee Expected graduation in May 2005