The Effect of Background Music on Vocabulary Recall and Retention of Children Learning English as A Foreign Language

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Abstract

The present research was done in order to examine whether addition of background music in the classroom would have any effect on Iranian children' vocabulary recall and retention. The participants were 34 elementary level learners from two classes studying in an institute in Iran. They were female students ranged in age from 7 to 11. They were randomly divided into two groups of experimental and control. Each group consisted of 17 learners. Their first language was Persian. First, a vocabulary test consisting of 30 multiple choice items was administered to both groups as pretest. Then as treatment, the experimental group studied their lessons while the background music was being played, while the control group studied their lessons in the absence of background music. After 20 sessions, the participants in the two groups were given the same vocabulary test as posttest. The data were analyzed through SPSS. The findings revealed that the experimental group significantly improved the vocabulary recall and retention better than the control group. Moreover, the background music had a positive effect on young learners' motivation in language learning and their paying attention to the teacher.

Keywords: Background music, Vocabulary, Recall, Retention, Foreign language learners.

Introduction

Music is a great language package that bundles culture, vocabulary, listening, grammar and a host of other language components in just a few rhymes. For many people from all around the world, the first exposure to English is through popular song lyrics. Moreover, the use of music in language classes puts students at ease, makes them more attentive and can increase their desire to learn a language (Mishan, 2005). Music and songs add meaning to people’s lives. Music and lyrics give the opportunity to people to express their feelings, ideas and thoughts. Singing and listening to music have the power to excite, move, soothe learners and make them feel relaxed in the language classroom (Abbott, 2002).

Songs aid memory and enhance language learning. It is easy for learners to remember new words and phrases through songs. Many lyrics are repetitive. Moreover, many lyrics contain formulaic chunks which are helpful for learners in future conversation (Meiling 2007). According to Lieberstein (1996), teachers can have different ways to use music in the classroom. They can use both background music and lyrics as the basis of a lesson, but they should know how they can effectively use music in their English learning classrooms. As Abbott (2002) states, songs have the capacity to motivate learners and can be used in the adult English classrooms to increase vocabulary, expand cultural knowledge, and make language lessons enjoyable. Singing songs makes the language classroom entertaining and relaxing, and provides a nonthreatening atmosphere which soothes learners (Lo & Li, 1998). Suggestopedia uses background music to facilitate and accelerate learning. It has been hypothesized that, since music is processed by the right brain and language by the left, both hemispheres are activated during the suggestopедic concert session (Bancroft, 1995). Suggestopedia is based on the idea of super-learning, where one uses the maximum possible brain capacity in a pleasant and relaxed condition.

Particular detail is reviewed for the roles of visualization, fantasy, multi-sensory modalities, background music, and role-playing and simulation in Suggestopedia and brain function. Role-playing and simulation create direct experience in the classroom. In the suggestopедic language class, students are assigned foreign roles to play throughout the course. Students come to class with a two-sided mind and to maximize student learning, right-brain as well as left-brain techniques should be used in the classroom. In the suggestopedia language class, students are assigned foreign roles to play and they maintain these new identities (Bancroft, 1995). According to Bancroft (1995), in addition to singing, suggestopedia uses background music to facilitate and accelerate the learning
of foreign languages. In the concert session, music is one of the principal tools for inducing a relaxed mental state in which material is more easily absorbed and retained.

As Collins (2013) stipulates, when students begin learning another language, vocabulary should be at the heart of instruction. Huyen and Nga (2003) also maintain that 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. However, for many students learning a new language, they look at vocabulary instruction as simply looking up the word in a translation dictionary. This process seems to frustrate the learners because they simply cannot remember the list of words and blame it on themselves (Gnoinska, 1998). According to Huyen and Nga (2003), 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. As Medina (2003) maintains, a wide variety of useful vocabulary items can be acquired through popular songs. Using students' favorite songs to teach vocabulary creates endless opportunities for revision which is fundamental for storing the information in the long term memory (Murphey, 1992). It is believed that music may help learners to overcome the problem of retaining vocabularies since it has the quality of sticking in one's head (Zhang & Wu, 2011).

**Literature review**

Medina (1990) investigated effectiveness of vocabulary acquisition with the use of music and story illustrations, and Schunk (1999) examined the effect of singing when coupled with singing on receptive vocabulary skills. Moreover, Cockerton et al (1997) found an increase in IQ scores for participants who were played (relaxing) music compared to those in a no-music condition. Further, Gardner (1985) has proposed the use of music as a problem-solving tool suggesting that all individuals without brain damage possess some degree of musical intelligence. Tapping the musical intelligence in the classroom combines the theory of multiple intelligences with actual classroom learning. Application of music in foreign language classes could allow teachers to use the students’ musical intelligence and their musical interests to achieve mastery of language skills.

Based on research using background music to aid verbal phrase recall, Mora (2000) asserts that songs have a positive outcome on the students’ language acquisition and that lexical patterns stored in the long-term musical memory can be retrieved with ease at a later date for mental rehearsal, memorization or during oral interaction. Giles (1991) also suggests that most pupils function very well with music in the background and that the right music at the right time can make them less stressed, more relaxed, happier and more productive. She provides a list of music which pupils have identified as preferable for enabling them to relax.

Wilcox (1995) studied the pronunciation of target vocabulary in adult learners through use of music cues to aid prosodic memory, which is confirmed by research into vocabulary recall attached to visual or auditory cues (Brown & Perry, 1991) as well as research into music-dependent memory using background musical cues with specific target vocabulary (Balch et al., 1992). Brutten et al (1985) explored this research further by testing oral proficiency using musical ability and memory in English language learners and suggested that innate musical abilities and verbal memory may have accounted for score variances. Pop songs are useful not only for discrete lexical vocabulary item recall, but also for longer utterances and formulaic phrases. For example, Wray and Perkins (2000) have suggested that most speech is the repetition and variation of memorized formulas and that these formulaic lexical phrases are flexible and therefore allow for many repetitions. Distinctive intonation, rhythmic and stress patterns can accompany each formulaic unit when incorporating the multiple formulaic lexical phrases found in songs, making it easier for the learner to remember and apply.

The use of rhythm and rhyme to assist auditory recall as well as the multimodal combination of rhythm has also been studied. Researchers have shown that music facilitates learning of a foreign language (Keskin, 2011), Salcedo (2002) has shown in her study that there is a significant increase in text recall when that text is learned through the use of songs. Her research has also shown that students who hear texts as music report a higher occurrence of involuntary mental rehearsal than the students who only hear spoken texts. She also tested to find out if there is a significant difference in the recall results when one group of students from a song group hears the melody of the song during the recall test. Moreover, her research has shown that there is no observed advantage for the group that heard the melody of the song during testing.

According to Merrell (2004), the power of music in foreign language classroom in invaluable. Chants and songs are used to serve as chunks of comprehensible input so that students can understand, create relevancy and retain the second language. Keskin (2011) states that for foreign language teaching, if songs are carefully chosen by taking the audience, objectives, language level of students and song content into consideration and if deliberate activities are carried out, it is possible to make use of songs effectively. Utilizing songs this way provides an enjoyable experience not only for students but also for the teacher. Further, using songs along with such activities will have many advantages such as saving the lesson from being boring and monotonous and improving students’ motivation.

**Previous studies**

Hall (1952), exploring the possible uses of music in schools, found that performance on reading comprehension tests significantly improved when background music was playing; 58% of the 245 8th and 9th graders taking part in the study showed an increase in scores on the Nelson silent reading tests. In addition, Felix (1993) reviewed studies that tested whether background music influenced learning. The reported studies varied on the type of music presented to the participants, the tasks to be performed (paired-associate learning being one of them), whether music was played during learning, testing, or both, and, finally, on the studies' setting, in a laboratory or in a natural teaching environment. Felix concluded that music played during learning affects performance positively, especially when the music played concerned baroque and classical pieces. She further concluded that
retention is best when music is played during both learning and testing a finding that exemplifies the well-known phenomenon of 'context-dependent' memory.

Douglas and Willatts (1994) reported correlations between musical abilities and reading achievement by measuring vocabulary, reading, and spelling as well as some musical skills. The researchers found a significant correlation between rhythm performance and both reading and spelling. Additionally, overall significant improvement in reading was apparent in students exposed to music compared to the control group, offering evidence that music instruction can lead to an improvement in reading. Lowe (1995) investigated whether including a music program would reinforce both the learning of music as well as the learning of a second language in second-grade students learning French as a foreign language. Results showed that the group who received the additional music lessons performed significantly better than the control group in all music tests and in oral grammar and reading comprehension as well. The findings concluded that the study of music and foreign languages are mutually beneficial.

De Groot (2006) examined the effects of three stimulus variables and background music on paired-associate learning of foreign language (FL) vocabulary. The stimulus variables were the frequency and concreteness of the native language (L1) words and the typicality of the FL words. Sixty-four L1-FL pairs were presented for learning six times, followed by a recall test after the second, fourth, and sixth learning round. A fourth recall test took place 1 week later. Typical FL words, FL words paired with frequent L1 words, and FL words paired with concrete L1 words were learned better than atypical FL words and FL words paired with infrequent and abstract L1 words, respectively. The results are interpreted in terms of differences between memory representations of L1 words, differences in the phonological coding enabled by the FL words, and individual learner differences. The results showed that more FL words were learned in the music condition than in the silent condition.

Salcedo (2010) examined the effects of songs in the foreign language classroom on text recall and involuntary rehearsal. He wanted to explore whether English native speakers learning a foreign language can benefit from integrating music into the curriculum. Students' text recall was measured after listening to songs and text passages. The study showed that recall was better in the song condition than text passage. Setia (2012) examined the effects of using songs in teaching English language to primary school learners. The results revealed that the use of songs not only helps the learners' understanding, it also stimulates and increases the learners' confidence, learning ability and skill when activities are highly motivated and memorable. Collins (2013) studied the effects of music on foreign language retention in Elementary schools. Both music and interactive play were used in the 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 study showed that adding music through interactive play to the foreign language vocabulary curriculum improved vocabulary retention scores. 1- There is no significant difference between music group and non-music group in English vocabulary recall. 2- There is no significant difference between music group and non-music group in English vocabulary retention.

Methodology

Participants

The study was conducted with 34 female students enrolled at Abrar English institute in Gorgan, Iran. The individuals were comprised of children who age ranged from 7 to 11 with a mean age of 9.5. All of the participants were at similar English proficiency level (beginners).

Instrumentation

The only instrument that was used in this study was a vocabulary test in the pretest, posttest and delayed posttest. The test consisted of 30 multiple-choice items which was chosen from the book back pack 2 in order to check their development in vocabulary. The total score for each test was 30, each item was worth one point. The reliability of the test was met through the KR-21 formula (0.87).

Material

The material used in the present study was Mozart Sonata (K.448, as used by Rauscher et al., 1993). A DVD-player to broadcast the music and a tape recorder to tape record the participants’ responses were also used.

Procedure

The study was carried out in the following manner: Permission to conduct the study was obtained from the institute. The 34 language learners from two classes (each 17) were selected as the participants of the study. Then, they were randomly assigned into two groups. A vocabulary test as pretest was administered to both groups.

The subjects in the experimental groups listened to music in the background during all activities, but the subjects in the control groups took the task without music. The treatment lasted 20 sessions for a period of two months and half through which both experimental and control groups participated in their classes twice a week. At the end of the study, a vocabulary test was run for the second time a posttest. In order to investigate the learners’ vocabulary retention, the same test was administered again after four weeks. Finally, the results of both tests were statistically analyzed.
Data analysis

After collecting the data (i.e. the points which the participants in both groups had obtained through the exercises), an independent samples t-test was conducted in order to indicate whether the background music had an effect on learners' recall of vocabulary items. Likewise, another independent samples t-test was used to show the effect of the background music on the same learners' retention of vocabulary items. The mean and the standard deviation of each group for both variables-recall and retention-were also calculated.

Results

In order to analyze data obtained from the recall and retention tests, the SPSS package was used. Because the study contained one independent variable (i.e. background music) and two dependent variables (i.e. recall and retention) and for each dependent variable there was a distinct test and since two groups of control and experimental were used (the experimental group received the treatment but the control one did not) it was assumed that an independent-samples t-test would be appropriate to show the effect of background music on learner's recall and retention of idioms. Therefore, the independent-samples t-test was run two times (once for the recall test and the other time for the retention test). The results of these two t-tests have been shown in tables 1 and 2.

Table 1. Comparison of the music and non-music groups in recall.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Sig.</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>17</td>
<td>20.88</td>
<td>1.829</td>
<td>0.000</td>
<td>7.847</td>
</tr>
<tr>
<td>Control</td>
<td>17</td>
<td>12.70</td>
<td>3.887</td>
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</tbody>
</table>

Note: The full score is 30. * p<0.05

Table 2. Comparison of the music and non-music groups in retention.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Sig.</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>17</td>
<td>16.71</td>
<td>4.959</td>
<td>0.001</td>
<td>3.683</td>
</tr>
<tr>
<td>Control</td>
<td>17</td>
<td>11.82</td>
<td>2.297</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The full score is 30. * p<0.05

The effect of background music on the learner's recall and retention of vocabulary items can be shown by resorting to both mean scores of the experimental group and the control group. To see whether the first null hypothesis is retained or rejected we must look at the mean scores obtained from the recall task. We see that the participants' mean score in the experimental group is 20.88 (SD=1.829) while the mean score of control group is 12.70 (SD=3.887). This shows that those participants who were provided with the combination of background music with words were more successful in the recall of words than those who did not. By resorting to the results of the independent samples t-test, we can see that our conclusion is retained and the beneficial effect of background music is again confirmed (p=0.00<0.05). To retain or reject this hypothesis, we have to resort to the mean scores obtained from the retention task. The mean score of the experimental group is 16.71 (SD=4.959) while the control group's mean score is 11.82 (SD=2.297). As in the case of recall task, we see that the mean score of the participants who were provided with the background music is higher than that of the participants were not which reveals the positive effect of the background music on retention of words. The results of the independent samples t-test again prove that background music had a significant effect on retention (p=0.01<0.05).

Discussion and Conclusion

The study was aimed to examine whether background music had any effects on Iranian children EFL learners' vocabulary development. The findings of the present study revealed that listening to background music had positive effects on the learners' paying attention to the teacher. The results showed that listening to background music had a significantly positive effect on the learners' vocabulary development compared to the learners that were not exposed to background music. The present article is highly related to the works of researchers like (Hall, 1952; Felix, 1993; Douglas & Willatts, 1994; De Groot, 2006; Salcedo, 2010) who have confirmed that combining background music with learning is an effective instructional method to enhance the learning of a foreign language. The findings of the present article is specifically in line with that of the other researchers such as De Groot (2006) who found that more foreign language words were learned in the music condition than in the silent condition, which was approved by this article, too. This study is also in congruent with the work done by Felix (1993) who concluded that vocabulary retention is best when background music is played during both learning and testing, which was the same as the results of the present article. The findings of the present research is also in line with the work conducted by Hall (1952), who found that performance on reading comprehension tests was significantly improved when background music was playing. The present article specifically relates to the work done by Collins (2013) who studied the effects of music on foreign language retention in Elementary schools and found that adding music through interactive play to the foreign language vocabulary curriculum improve vocabulary retention scores. Based on the result of the present study, it can be concluded that music and songs had the capacity to motivate learners and can be used in the English classrooms to increase vocabulary knowledge and make language lessons enjoyable. Moreover, background music had a positive effect on Iranian children’s paying more attention to their teacher.
Using background music is not a common method of foreign language teaching in Iran. Teachers in public schools use Persian to teach English. However, language institutes use music in the classroom but not in the form of background music. They usually play songs which is helpful in foreign language learning especially for children. Given that using background music is proved to be beneficial for foreign language learners specifically children, it is recommended for language teachers and instructors to use it in foreign language methodology in order to improve language learning in general and vocabulary recall and retention in particular.

References

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