EFFECTS OF FAMILAR AND UNFAMILIAR BACKGROUND MUSIC ON THE READING COMPREHENSION PERFORMANCE OF TURKISH EFL LEARNERS IN A UNIVERSITY PREPARATORY PROGRAM

A THESIS PRESENTED BY
CAN GÜR
TO

THE INSTITUTE OF ECONOMICS AND SOCIAL SCIENCES
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ARTS
IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

BILKENT UNIVERSITY
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To my family

ABSTRACT

Title: Effects of familiar and unfamiliar background music on the reading comprehension performance of Turkish EFL learners in a university preparatory program
Author: Can Gür
Thesis Chairperson: Ms. Susan D. Bosher, Bilkent University, MA TEFL Program
Thesis Committee Members: Dr. Phyllis L. Lim, Ms. Bena Gül Peker, Bilkent University, MA TEFL Program

This study was designed to investigate to what extent familiar and unfamiliar background music might affect the reading comprehension performance of Turkish EFL learners in a university preparatory program. The present study also aimed at examining the possible differences in the reading comprehension performance of females and males.

The present study was conducted in the Preparatory Department of the Faculty of Engineering and Architecture, Gazi University, Ankara, Turkey. Forty-two (15 female, 27 male) Turkish undergraduate intermediate-level subjects aged from 17 to 21 participated in this study.

There were two research questions: (a) the effect of familiar and unfamiliar background music on reading comprehension performance, and (b) the effect of familiar and unfamiliar background music on reading comprehension performance of females and males. In order to investigate these research questions, three groups were formed: two experimental (familiar and

unfamiliar background music) groups and one control (no-background music) group. All three groups took a pretest without background music. One week later, the experimental groups took a posttest with background music playing. The familiar background music group was familiarized with the pieces of music before the test began, whereas the unfamiliar background music group was not familiarized with the pieces of music. The control group did not have background music. Reading comprehension performance was measured by a test consisting of three reading passages, followed by 12 multiple-choice questions on to the passages.

Data were analyzed by one-way analysis of covariance (ANCOVA) to answer the first research question. Results showed that there was no statistically significant difference between the reading comprehension performance of familiar and unfamiliar background music groups. However, the results of this study indicate that subjects with background music (familiar or unfamiliar) showed statistically significant gains in their reading comprehension performance over the no-music control group from pretest to posttest, at $p < .01$. For the second research question, a two-way analysis of covariance was employed. There was no statistically significant difference between the reading comprehension performance of females and males in the posttest among any of the groups.

BILKENT UNIVERSITY

INSTITUTE OF ECONOMICS AND SOCIAL SCIENCES

MA THESIS EXAMINATION RESULT FORM

August 31, 1995

The examining committee appointed by the Institute of Economics and Social Sciences for the thesis examination of the MA TEFL student

Can Gür

has read the thesis of the student. The committee has decided that the thesis of the student is satisfactory.

Thesis Title	:	Effects of familiar and unfamiliar background music on the reading comprehension performance of Turkish EFL learners in a university preparatory program
Thesis Advisor	:	Dr. Phyllis L. Lim Bilkent University, MA TEFL Program
Committee Members	:	Ms. Susan D. Bosher Bilkent University, MA TEFL Program
		Ms. Bena Gül Peker Bilkent University, MA TEFL Program

We certify that we have read this thesis and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts.

Phyllis L. Lim
(Advisor)

Susan D. Bosher
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Bena Gül Peker
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Approved for the
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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1 INTRODUCTION

Background of the Problem

The effect of background music (hereafter BGM) on human behavior has long been an interesting issue for researchers in psychology, where studies have been conducted on the effect of BGM on complex information processing, such as reading comprehension, listening comprehension, and arithmetic tasks.

Most of these studies on the effect of BGM on complex information processing have been conducted with native speakers. These studies have yielded mixed results. For example, Hall (1952) reported that BGM had positive effects on reading comprehension performance. However, Abelson and Petersen (1993) found that Baroque music in the background did not affect the reading comprehension performance of reading-disabled boys.

Some of the studies on the effect of BGM on performance in the field of psychology have focused on various aspects of music, such as characteristics, types, preferences for, and familiarity with music. Different characteristics of music used in the background have been of interest for some researchers. For example, Pearsall (1989) investigated the effect of tonal (identified scales) and atonal (unidentified scales) music on listening comprehension performance. He found that tonal music was distracting whereas atonal

music was not. In another study, Kiger (1989) reported that low-information load music (a highly repetitive synthesizer piece with a narrow tonal range) had positive effects on reading comprehension in comparison with a high-information load music (a dissonant, rhythmically varied, and highly dynamic piece).

Types of music used in the background have also been an issue of interest for researchers. For example, instrumental pop music in the background was found to have negative effects on reading comprehension performance (Fogelson, 1973; Henderson, 1945). However, in two different studies, hard rock music (Wolf & Weiner, 1972) and rock and roll music (Tucker & Bushman, 1991) were found to contribute to the performance on a simple arithmetic task and reading comprehension performance, respectively.

Preference and familiarity factors have also been taken into consideration in the studies investigating the effects of music on performance tasks. For example, Wolf and Weiner (1972) reported that BGM had positive effects on the performance of the students who were familiar with the type of music. Similarly, subject-selected BGM (Daoussis & McKelvie, 1986; Etaugh & Michals, 1975; Parente, 1976) and familiar BGM (Fontaine & Schwalm, 1979; Hillard & Tolin, 1979) were found to have positive effects on reading comprehension performance.

There has also been interest shown in the use of BGM for lowering anxiety in language classrooms. The construct of anxiety plays an important role in second language learning (Brown, 1994); thus, there have been many studies conducted on the relationship between anxiety and learning in the field of second language learning. All of these studies concluded that foreign language anxiety could have a negative effect on the language learning process (MacIntyre & Gardner, 1991). In order to contribute to the language learning process, Krashen (1982) suggests creating a low-anxiety atmosphere in the classroom because anxious learners have a high affective filter, which prevents learning from taking place. Racle (cited in Krashen, 1982) also states that BGM could be used as a means of lowering anxiety, diminishing tension, and producing the state of relaxed alertness considered optimal for learning. Similarly, Radocy and Boyle (cited in Peters, 1987) point out that carefully selected BGM could facilitate learning and contribute to performance. Moreover, the most remarkable characteristic of Suggestopedia, which is a method developed by the Bulgarian psychiatrist-educator Georgi Lozanov in the 1960s, is the use of Baroque music in the background in language classrooms, because Baroque music was proved to have relaxing effect on human behavior according to the results of experiments which had been conducted in laboratories and

in classrooms. In commenting on Suggestopedia, Richards and Rodgers (1986) state that BGM helps to produce a relaxed atmosphere which is considered optimal for language learning in the classroom.

However, in a study conducted in a laboratory setting, which investigated the superlearning techniques (the American adaptation of Suggestopedia) on vocabulary learning and alpha brainwave production with 21 adult intensive English students, language teachers, and graduate music students, Wagner and Tilney (1983) found that the combination of relaxation, special breathing, special intonation patterns, and Baroque music did not show positive effects.

In a small informal experiment, Saeki (1994) used BGM during some activities like pair work or discussion sessions in his high-school EFL classes, and found that BGM contributed to language learning.

Although many studies have been done on the effect of BGM on reading comprehension performance, in my literature review, I have not come across any studies on the effect of familiarity with BGM on reading comprehension performances of second/foreign language learners. Because familiar BGM has been shown to have positive effects on performances, such as reading comprehension and vigilance (state of arousal, readiness) of native speakers, there is a need to investigate whether familiar BGM has positive effects on

the reading comprehension performances of English as a foreign or second language learners (EFL/ESL) compared to unfamiliar BGM and no-BGM.

Purpose of the Study

The purpose of this study was to investigate the effect of familiar and unfamiliar BGM on the reading comprehension performances of Turkish EFL learners compared to no-BGM in a university preparatory school.

Significance of the Study

If it could be shown that familiar BGM, in comparison with unfamiliar or no-BGM, has positive effects on the reading comprehension performances of EFL learners, teachers in preparatory programs at universities could be encouraged to provide appropriate BGM to enhance reading comprehension performance in their reading classes.

Research Questions

In this study the following questions were investigated:

1. Does familiarity with the piece(s) of music in the background contribute to Turkish EFL learners' reading comprehension performance compared to unfamiliar music and no-music?

2. If so, is this effect consistent across genders?

CHAPTER 2 REVIEW OF THE LITERATURE

Introduction

Many studies have been conducted on the effect of BGM on complex information processing such as reading comprehension performance. The subjects of these studies were either native speakers or foreign/second language learners. Therefore, in my literature review, I will review the literature on the effect of BGM on native speaker reading comprehension performance and follow with a review of the effect of BGM on foreign or second language learners.

Background Music and Its Impact on Reading Comprehension of Native Speakers

Many studies, which have yielded mixed results, have been conducted on this issue. For example, in an early study, Hall (1952) examined the effect of BGM on the reading comprehension of 278 eighth- and ninth-grade students during five different periods of the day. The reading comprehension test was the Nelson Silent Reading Test, Vocabulary and Paragraph, Grades 3-9, Forms A and B. A total of 245 students (in the experimental group) took Form A of the reading comprehension test with BGM. The same group took Form B of the reading comprehension test without BGM. A control group of 33 students took both forms of the test without BGM in

order to measure the effect of test procedure familiarity. Hall reported that "during the first morning period and during the first and second afternoon periods over 67% of the students...showed an increase in score with music background" (p. 452). Hall concluded that BGM did not increase the fundamental capabilities of the individual, but that it helped the individual to improve his performance to the fullest extent.

In another study, however, Abelson and Petersen (1993) investigated the effectiveness of the talking book (a read-along cassette tape-recording accompanying printed material) with BGM on the reading comprehension of reading-disabled boys. Twenty-four boys aged from 10 to 13 years old served as subjects. Abelson and Petersen found that Baroque music (Vivaldi's "Four Seasons") did not affect the students' performance. Abelson and Petersen proposed two possible reasons for the lack of effect of background Baroque music: The students were not properly prepared, and auditory stimuli could be distracting for some individuals (because two students complained about the music and expressed a desire to have it turned off).

Many of the studies on the effect of BGM on performance in the field of psychology have focused specifically on the characteristics and types of music, whereas others have focused on the preferences for and familiarity with music.

Characteristics of Background Music

Various characteristics of music used in the background have been of particular interest for some researchers. For example, Pearsall (1989) investigated the differences in listening comprehension with tonal (identified scales, such as C Major, D Minor) and atonal (unidentified scales) BGM, with 90 college freshmen. The students were nonmusic majors aged from 18 to 20. The subjects were randomly assigned to three groups: (a) tonal BGM, (b) atonal BGM, and (c) no-BGM. The experiment was conducted in the classrooms where the students met for their regularly scheduled class. There were between 12 and 24 students in each class and the students in each class were tested simultaneously. Because vocabulary level was considered to be a factor in listening comprehension, a vocabulary test was administered to each class as a pretest to determine the vocabulary level of each student and standardize the test results.

The results of this study showed that there was not a statistically significant difference: (a) between tonal and atonal BGM groups, (b) between atonal and no-BGM groups. However, there was a statistically significant difference between tonal and no-BGM groups in that the scores for the tonal BGM group were lower than those in the no-BGM group. In addition, a high level of correlation was found between the vocabulary

test scores and the listening comprehension test scores for the atonal and the no-BGM groups, whereas a low level of correlation was found for the tonal BGM group.

Pearsall (1989), then, reported that the tonal BGM employed in this study had a negative effect on listening comprehension regardless of vocabulary level. With respect to the results of this study, Pearsall concluded that atonal music demanded less attention and therefore might be used as an effective background for music relaxation exercises and improved performance.

In another study, Kiger (1989) examined the effects of music information-load on adolescents' reading comprehension. The low-information-load music was described as a highly repetitive synthesizer piece with a narrow tonal range. The high-information-load music, on the other hand, was described as a dissonant, rhythmically varied, and highly dynamic piece. The hypothesis was that reading comprehension would be best in silence, moderate in the presence of low-information-load BGM, and lowest in the presence of high-information-load BGM.

One hundred and thirty-three sophomore class students of a small public high school were selected randomly to participate in this study. The experiment was conducted in an isolated room which had been converted into a language laboratory. The students were

given a reading task to complete while listening to the music.

In this study, Kiger (1989) found that the subjects in the low-information-load music group performed significantly better than those in the no-music group and high-information-load music group. As a result, Kiger reported that low-information-load music had positive effects on reading comprehension.

Types of Background Music

Other researchers have focused on types of music, such as rock and roll and popular music. For example, Tucker and Bushman (1991) conducted a study to investigate the effects of rock and roll music on mathematical, verbal, and reading comprehension performance. One hundred and fifty-one male and female undergraduate psychology students participated in this study.

The subjects were randomly assigned to four groups of about the same size. Two groups did the problems while listening to rock and roll music, and two groups did the problems in silence.

The results of this study showed that rock and roll music decreased mathematical and verbal performance but not reading comprehension performance compared to the control groups. However, rock and roll music was not enough to increase the reading comprehension performance

because the mean scores showed no difference between the music and no-music groups.

Although the focus was not on the type of music, in another study investigating the effects of background noise conditions (including music), Wolf and Weiner (1972) found that hard rock music had positive effects on a arithmetic task. This study will be discussed in greater detail in a later section in this chapter, under "Preference for and Familiarity with the Piece(s) of Music."

In some other studies, however, some types of music were found to have negative effects on reading comprehension performance. For example, in a study examining the effect of music on reading test performance, Fogelson (1973) employed popular instrumental music because Williams (cited in Fogelson, 1973) had found that popular music adversely affected mental test performance requiring quantitative ability. The purpose of Fogelson's study was to investigate whether the playing of popular instrumental music during a reading comprehension test was distracting or not. Fourteen eighth-grade students participated in the study and they were divided into three groups: (a) bright no-music, (b) bright with music, (c) non-bright no-music, and (d) non-bright with music. Groups without music were tested in the presence of silence, whereas the other groups were tested while the music was playing in

the background. The results of this study indicated that bright students without music performed better than those with music, and non-bright students without music outperformed those with music. Therefore, Fogelson concluded that playing popular instrumental music during test-taking affected the reading test performance of all fourteen eighth-grade students negatively.

Another study compared two types of music for a secondary purpose. Because college students claimed that they could study effectively with the radio on, Henderson, Crews, and Barlow (1945) conducted a study to determine whether or not reading efficiency was influenced when music was used in the background, and whether there was any difference in the influence of popular and classical music on reading efficiency.

Fifty female freshmen served as subjects in this study. They were divided into three groups: (a) no-distraction, (b) classical, and (c) popular. The reading comprehension test had two sections: a vocabulary section and a paragraph comprehension section. The reading comprehension test had two forms (A and B), one of which was used as a pretest and the other as a posttest.

First, the subjects filled out a questionnaire which aimed at determining whether or not the subjects were accustomed to studying with the radio on. Then, the reading test was administered. Typical, familiar

recordings of both classical and popular music were used during the tests. The results indicated that all three groups showed an increase in the vocabulary scores in the posttest even though the increases were not statistically significant. In the paragraph section, the students in the no-distraction group increased their scores, whereas those in the classical group showed a decrease in theirs, but these increases and decreases were not statistically significant, either. However, the students in the popular group showed a statistically significant decrease in their scores in the paragraph section.

The scores for the students who used and who did not use the radio when studying showed nearly the same results above; that is, there was no statistically significant difference between the students who were accustomed to and those who were not accustomed to studying with the radio on.

Therefore, with respect to the results of this study, Henderson, Crews, and Barlow (1945) concluded that "students accustomed to studying with the radio were influenced as much or little as students unaccustomed to studying with the radio" (p. 317), and that classical music did not influence the test results, while popular music negatively influenced the paragraph section of the test.

Preference for and Familiarity with the Piece(s) of Music

The preference factor has also been taken into consideration in the studies investigating the effects of music on performance tasks. In their study, Wolf and Weiner (1972) investigated the effects of four noise conditions (quiet, speech, music, and industrial noise) on the performance of university students on a simple arithmetic task. This research also aimed at specifying what type of noise, if any, had the greatest effect on a given task.

Fifteen female college students participated in the study. The subjects were college students who listened to hard rock music, and they reported that on occasion they had even studied while listening to this type of music.

A hard rock song was selected for the music condition and the experiment was conducted in a sound proof room via headphones. The subjects were given a large number of simple arithmetic problems and instructed to solve as many as possible under four different noise conditions. The arithmetic problems were of equal difficulty for each of the four noise conditions. Results were statistically significant and music condition showed significantly better performance than the industrial noise, speech, and quiet conditions. Speech and quiet conditions were not different from each

other, but they showed better performance than the industrial noise condition.

Since the music condition was probably the more familiar condition to these students, Wolf and Weiner (1972) concluded that "unfamiliar noises are potentially more distracting than familiar noises even when loudness levels are equivalent" (p. 929).

Because the BGM had been arbitrarily selected by the experimenter in all of the research up to that time, Etaugh and Michals (1975) examined the effects on reading comprehension of BGM chosen by the subject rather than by the experimenter. The purpose of the study was to test Wolf and Weiner's (1972) hypothesis that unfamiliar sounds are more distracting than familiar sounds.

Sixteen male and 16 female undergraduate college students aged from 19 to 22 years participated in the study and each was tested individually. Each subject participated in the experimental session with his or her own preferred album. Popular music was the most preferred type of music. Each subject read a passage for approximately 10 minutes and answered five questions related to the text without looking at the text. Subjects read the first passage in the absence of music and the second one in the presence of their preferred music at a moderate volume. After the experiment was concluded, the subjects were asked how often they

studied to music. Males reported studying to music more often than did females.

According to the results of the study, listening to music of one's choice impaired the performance of females but not males. Therefore, Etaugh and Michals (1975) reported that "the more frequently students reported studying to music, the less music impaired their performance" (p. 553). Etaugh and Michals supported Wolf and Weiner's (1972) hypothesis that unfamiliar sounds were more distracting than familiar sounds.

In another study, Parente (1976) investigated whether the subject's most preferred and least preferred music caused distraction on the Stroop tasks performance (the Stroop tests are widely used as color-naming and color-word tasks). Three groups of 10 randomly selected subjects participated in the study and they were assigned to three groups: (a) most preferred music, (b) least preferred music, and (c) no-music groups. They were first presented with a list of musical albums and were asked to list their most and least preferred musical selections on the basis of names. Then, subjects in Experimental Group I were asked to perform the tasks while their most preferred musical selections were playing, whereas the ones in the Experimental Group II were asked to perform in the presence of their least preferred musical selections. Subjects in the

Control Group performed the tasks without music. Each subject in all groups was tested individually.

The results of this study showed that there was a statistically significant difference among the three groups. Parente (1976) found that performance was better without music and better with most preferred than with least preferred music.

Because Wolf and Weiner's (1972), and Etaugh and Michals' (1975) studies did not manipulate familiarity with specific background stimulation systematically, Hillard and Tolin (1979) studied the effect of variation in familiarity of BGM on reading comprehension scores using an experimental manipulation of familiarity.

In this study 64 male and female undergraduate students served as subjects. Subjects listened through headphones to one of two tape-recorded selections. In the familiar music condition, subjects heard the selection which had been presented earlier, but in the unfamiliar condition they heard another selection.

All subjects reported a lack of prior familiarity with the musical selections, but experimental manipulation of familiarity was sufficient to influence reading comprehension test performance. Scores in the presence of familiar BGM were higher than the ones in the presence of unfamiliar BGM. Hillard and Tolin (1979) then concluded that there was a positive effect

of familiarity of BGM on reading comprehension performance.

Familiarity with Playing Music while Studying

The effect of familiarity with studying to music on vigilance has also been of research interest. For example, Fontaine and Schwalm (1979) attempted to clarify the relationship between familiarity with BGM and vigilance performance. Twenty-seven male and 8 female undergraduate students participated in the study. Subjects were randomly assigned to either "familiar rock", "unfamiliar rock", "familiar easy-listening", "unfamiliar easy-listening", or "no-music" conditions.

The experiment was conducted in a soundproof environmental room, and each subject had electrodes attached to monitor subjects' electrocardiographs (EKG). Each subject was given typed instructions for the required task, and they answered all task-related questions. Subjects were instructed to press a response button each time they detected a signal. Stimuli, signals, and subjects' responses were recorded automatically by an operations recorder.

Results indicated a statistically significant main effect of familiarity of the music but no main effect of type of music on subjects' levels of arousal. With respect to these results, Fontaine and Schwalm (1979) reported that "familiar music apparently mitigated the

classical vigilance decrement shown by the unfamiliar and no-music groups" (p. 73). Therefore, they concluded that familiar music significantly increased arousal and over-all percent detections on a vigilance task.

In another study, Daoussis and McKelvie (1986) investigated the musical preferences and effects of music on a reading comprehension test for extroverts and introverts. Forty-eight undergraduate students (28 male, 20 female) participated in the study. Subjects were classified either as extroverted or introverted and assigned to four groups: (a) extrovert music, (b) extrovert no-music, (c) introvert music, and (d) introvert no-music groups.

Daoussis and McKelvie (1986) initially conducted a small survey to explore the musical study habits and preferences of the subjects. The survey first asked the subjects to select their most preferred type of music and to state how often they studied to music. Rock and roll was the most preferred category of music. Then the reading comprehension test was administered. Each subject was tested individually. The results gave only one statistically significant comparison: introvert music and introvert no-music groups. The subjects in the introvert no-music group scored higher than those in the introvert music group.

Therefore, Daoussis and McKelvie (1986) concluded that "extroverts, who reported in the survey that they

studied with music more often than introverts, were not affected by the presence and absence of music, whereas the introverts were impaired when it was playing" (p. 288).

Background Music with Foreign or Second Language Learners

How music might be used in language classrooms to lower anxiety has also been of interest to theorists and researchers. According to Brown (1994) there are three components of foreign language anxiety: (a) communication apprehension, arising from the learner's inability to express ideas, (b) fear of negative social evaluation, arising from the learner's need to make a positive social impressions on others, and (c) test anxiety. The construct of anxiety (Brown, 1994) plays an important role in second language learning. Therefore, there have been many studies conducted on the relationship between anxiety and learning in the field of second language learning. With respect to these studies, MacIntyre and Gardner (1991) concluded that foreign language anxiety could have a negative effect on the second language learning process. Because anxious learners have a high affective filter, which prevents learning from taking place, Krashen (1982) suggests creating a low-anxiety atmosphere in the foreign language classroom.

Many studies in the field of psychology have indicated that BGM had positive effects on human behavior. Racle (cited in Krashen, 1982) states that BGM could be used in order to lower anxiety, diminish tension, and produce the state of relaxed alertness considered optimal for learning. Similarly, Radocy and Boyle (cited in Peters, 1987) emphasize the importance of selecting the appropriate BGM and they point out that carefully selected BGM could facilitate learning, improve task performance, or increase verbal interaction. According to Ostrander, Schroeder, and Ostrander (cited in Richards and Rodgers, 1986), the type of music used in the classroom was critical to language learning because if it was not appropriate, "the desired altered states of consciousness will not be induced and results will be poor" (p. 146). In addition, in Suggestopedia (Lozanov, 1978) Baroque music is used in the background in language classrooms based on the fact that Baroque music was proved to be relaxing. Richards and Rodgers (1986) comment:

> The musical background helps to induce a relaxed attitude, which Lozanov refers to as concert pseudo-passiveness. This state is felt to be optimal for learning, in that anxieties and tension are relieved and power of concentration for new material is raised. (p. 146)

However, Wagner and Tilney (1983) conducted a study in a laboratory setting to investigate the effects of the superlearning techniques (the combination of relaxation, special breathing, intonation, and Baroque music) on vocabulary learning and alpha brainwave production (indicating a state of relaxation). Twenty-one adult intensive English students, language teachers, and graduate music students participated in that study and Wagner and Tilney (1983) found that the combination of relaxation, special breathing, intonation, and Baroque music did not have positive effects on vocabulary learning and alpha brainwave production.

Saeki (1994) conducted a small informal experiment in order to examine the effect of BGM on foreign language learning. Saeki used BGM during some activities like pair work or discussion sessions in his high-school English classes, and found that BGM contributed to language learning. Saeki also pointed out that the BGM could: (a) relax students, (b) activate students, (c) get students to be attentive, (d) let students have fun, (e) change the classroom atmosphere, (f) create learning situations, and (g) make students quiet or noisy. Saeki concluded that most of the students who participated in this experiment were in favor of BGM because it helped to create a less tense atmosphere in class.

Although many studies have been done on the effect of BGM on reading comprehension performance, in my literature review, I have not come across any studies on the effect of familiarity with BGM on the reading comprehension performance of second/foreign language learners. Because familiar BGM has been shown to have positive effects on performance (such as reading comprehension, listening comprehension, and vigilance) of native speakers, there is a need to investigate whether familiar and unfamiliar BGM has positive effects on the reading comprehension performances of EFL/ESL learners.

Since all of the previous studies on the effect of familiar and unfamiliar BGM on reading comprehension performance have focused on native speakers, the purpose of the present study was to investigate the effects of familiar and unfamiliar BGM on reading comprehension performance of intermediate-level EFL learners in a university preparatory school. In addition, this study aimed at examining the possible different effects of familiar and unfamiliar BGM on reading comprehension performance of females and males because females and males are physiologically different and they may react to the background music in a different way. Virtually no attention has been paid to this issue in the literature.

CHAPTER 3 METHODOLOGY

Introduction

This study was an experimental study and was designed to investigate the effect of familiar and unfamiliar BGM in comparison with no-music on reading comprehension performances of Turkish EFL learners in a university preparatory program. This study was conducted with three groups in the English Preparatory Department of the Faculty of Engineering and Architecture at Gazi University, Ankara, Turkey. There were two experimental groups and one control group in this study. Classes were randomly assigned to: (a) familiar-BGM group, (b) unfamiliar-BGM group, and (c) no-BGM group.

Subjects

Forty-two undergraduate male and female students in the English Preparatory Department of the Faculty of Engineering and Architecture at Gazi University participated in this study. Subjects were between 17 and 21 years of age. All of the subjects were Turkish and their native language was Turkish. They were born and raised in Turkey, and they attended Turkish schools.

Three intermediate-level classes, each of which consisted of 25 students, were randomly assigned as familiar-BGM group, unfamiliar-BGM group, and no-BGM

group. However, not all the 25 students in each group participated in the study. Because four students in the familiar-BGM, 3 students in the unfamiliar-BGM, and 6 students in the no-BGM groups did not volunteer to participate in this study, they took neither the pretest nor the posttest. Twenty-one students in the familiar-BGM, 22 students in the unfamiliar-BGM, and 19 students in the no-BGM group took the pretest. Six of the students who took the pretest in the familiar-BGM, 4 of the students who took the pretest in the unfamiliar-BGM, and 3 of the students who took the pretest in the no-BGM group declined to take the posttest. The scores of one student in the familiar-BGM, one in the unfamiliar-BGM, and five in the no-BGM groups were later dropped from the study because of evidence that they did not take the study seriously. Therefore, the present study was conducted with 14 (4 female and 10 male) subjects in the familiar-BGM group, 17 (8 female and 9 male) subjects in the unfamiliar-BGM group, and 11 (3 female and 8 male) subjects in the no-BGM group. In order to understand whether gender had significant main or interactive effects, this factor was also taken into consideration.

All three groups were considered equivalent because the course followed the same curriculum and students had been assigned to the intermediate-level based on test results. The subjects in each group had been assigned to the intermediate-level according to their average grade

on four mid-term examinations in the previous semester. Intermediate-level classes were chosen for two reasons. First, there were no elementary level classes being offered at the time the study was conducted. Second, there was no other group of three classes at the same level in the program other than intermediate-level classes.

Before the test began, both experimental groups and the control group were given consent forms (see Appendix A) which informed the students that this would be a study in the field of education and to assure them that their scores in this test would not affect their grades and would be kept confidential. Their cooperation was solicited but participation was voluntary. The present study was implemented with three groups in three different but same quality classrooms (same size and facing the north) at the same time.

Instruments/Materials

Musical Tapes

Three CDs were employed to record a selection of jazz ballads which had not been released in Turkey so far. The selected pieces for BGM were instrumental and slow (60-80 beats per minute). The jazz guitar and the piano were the most widely used solo instruments in

those pieces. The pieces of BGM and the albums were as follows:

1. "Something Tells Me" (Jane Hall) taken from the album "These Rooms" by "Jim Hall Trio featuring Tom Harrell" (released by Denon, CY-30002),

2. "In a Sentimental Mood" (Kurtz-Mills-Ellington) and "Morning Blues" (M. Petrucciani) taken from the album "Power of Three" by "Michel Petrucciani 'Power of Three' featuring Jim Hall and Wayne Shorter" (released by Blue Note, CDP 7 46427 2),

3. "Beija-Flor" (Nelson Cavaquinho-Noel Silva-Augusto Tomaz, Jr.) and "Big Blues" (Jim Hall) taken from the album "All Across the City" by "The Jim Hall Quartet" (released by Concord Jazz, CCD-4384).

Musical tape for the familiar background music group. "Beija-Flor" and "Something Tells Me" were selected for the familiar-BGM group. First, "Beija-Flor", which lasted 5:30 minutes, was recorded. Second, "Something Tells Me", which lasted 4:30 minutes, was recorded just after "Beija-Flor". These two pieces lasted 10 minutes together. Then, both pieces were recorded one after the other (3 times) on one side of the cassette for the familiar-BGM group. It lasted approximately 41 minutes. The order of the pieces recorded was as follows:

1. "Beija-Flor"
2. "Something Tells Me"
3. "Beija-Flor"
4. "Something Tells Me"
5. "Beija-Flor"
6. "Something Tells Me"
7. "Beija-Flor"
8. "Something Tells Me"

Musical tape for the unfamiliar background music group. "Beija-Flor" (5:30 minutes), "Something Tells Me" (4:30 minutes), "In a Sentimental Mood" (12:18 minutes), "Morning Blues" (8:15 minutes), and "Big Blues" (6:24 minutes) were recorded once each on one side of the cassette tape immediately after each other for the unfamiliar-BGM group. The tape lasted approximately 38 minutes. The order of the pieces recorded was as follows:

1. "Beija-Flor"
2. "Something Tells Me"
3. "In a Sentimental Mood"
4. "Morning Blues"
5. "Big Blues"

Musical Apparatus

Two same quality cassette recorders were used in this study. The trade mark of the cassette recorders

was "ARÇELIK Stereo radio cassette recorder", and produced by Bekoteknik Sanayi A.S., Turkey. Technical specifications were:

Model no: MS 1200

AC : 220 V.

DC : 6 V.

Output power: 2 x 5 watts.

Two "Raks ED-X 90 (normal position type I)" model cassettes were employed in order to record the selected pieces of music. The recording was done at home via the following musical apparatus:

"Technics" stereo graphic equalizer SH-8058,

"Sony" stereo cassette deck TC-K 490,

"Sony" compact disc player CDP-X 229ES,

"Sony" integrated stereo amplifier TA-F 690ES, and

Two "JBL" speakers LX-55.

Testing Material

For the reading comprehension test, reading passages and comprehension questions were selected from the retired forms of the University Entrance and Placement Examination administered by the Higher Education Council (YÖK) of Turkey. There were three short reading passages and 13 inference and factual questions pertaining to the texts (4 questions for the first, 5 questions for the second, and 4 questions for

the third passage). Each question had one (1) correct answer and 4 four distractors.

The reading comprehension test was piloted with a total of 24 undergraduate male and female students at the intermediate-level in the English Preparatory Department of the Faculty of Engineering and Architecture, Gazi University in order to insure whether it was at the appropriate level of difficulty and to determine the appropriate time necessary for completing the reading comprehension test. These students were chosen from intermediate-level classes other than the experimental groups and control group. The students did not listen to music during the pilot test. The students completed the test in 16 minutes although there was no time constraint.

After the pilot test, a split-half internal correlation was conducted and Spearman-Brown Prophecy Formula was applied to the full test in order to check reliability. The results (r_{tt} = .53) showed that the test was not very reliable. Therefore, each item of the text was scrutinized in consultation with the thesis advisor, and it was found necessary to make some changes. First, it was discovered that one question pertaining to the second passage was too difficult for this test. Because all of the students missed it, that problematic item was dropped from the test. Second, there was another item in which one of the distractors

was arguably correct according to common knowledge. This distractor was replaced by a more appropriate one. Third, one of the questions had both an incorrectly keyed answer and proved to be too difficult after the item was re-keyed correctly. The synonym for the word "physician" was keyed as "physicist" instead of "doctor". Because everyone marked the distractor "physicist" as a correct answer, it was replaced by "architect". The last change was made with the format of the test. In order to minimize success with guessing, the answers were pyramided by length to avoid unconscious placing of correct answers in a predictable position. The revised test served as pretest and posttest.

Further steps were taken to maximize reliability. Before the pretest and posttest were administered, the teachers who helped me conduct this study were given information about what they should do during the pretest and posttest in order to standardize administration procedures. The test was presented in two differently keyed forms (A and B) in order to prevent the students from cheating during the test. In addition, students were instructed not to guess.

However, a correlation between the pretest and posttest conducted at the completion of the study showed that the test was not very reliable ($r = .63$) even with

these revisions and precautions, although it was somewhat improved.

Procedure

Pretest

During the first phase of the study, the pretest was administered to the three groups in their respective classrooms by their teachers at the same time.

During the pretest, both experimental groups and the control group were given the reading comprehension test and the students were asked to answer the questions in silence. There was no time-constraint, but each group completed the pretest in approximately 18 minutes. After the students finished answering the questions, the teachers collected the test booklets and separate answer sheets.

Posttest

The posttest was administered to the same groups in their respective classrooms after one week. BGM was employed during the posttest with the classes which were randomly assigned to the familiar and the unfamiliar-BGM groups, but no-music was played for the no-BGM group. The BGM for the familiar and unfamiliar-BGM groups was played at a low volume so as not to disturb the students while they were doing the reading comprehension test.

None of the students, except one in the unfamiliar group, complained about the volume level of the music in the background. Students in both music groups were also asked whether they were accustomed to studying while the music was playing in the background in order to find out whether familiarity with the music condition resulted in a difference between the familiar and unfamiliar-BGM groups. One Yes-No type question "Are you used to studying with music?" was asked printed on the answer sheets. Thirteen (out of 14) students in the familiar and 15 (out of 17) students in the unfamiliar-BGM group reported that they were used to studying with music playing in the background.

In the familiar-BGM group, students were first instructed to listen to the cassette (which was recorded for this group) and to relax. The music was broadcast through the cassette player from the front of the classroom. This listening and relaxation period lasted 10 minutes. During this period, students were introduced to the pieces by playing "Beija-Flor" and "Something Tells Me" once. Then, the teacher handed out the reading comprehension test and separate answer sheets. The students began to read the passages and then answered the questions while the same pieces of music ("Beija-Flor" and "Something Tells Me") continued playing one after another. The same pieces were played over and over in order to increasingly familiarize the

students with the pieces of music as, in Hillard and Tolin's (1979) study. There was no time-constraint, but the students completed the test in approximately 15 minutes. Therefore, during the experiment, students listened to "Beija-Flor" three times and "Something Tells Me" twice which was considered enough to familiarize students with the pieces of music. Finally, the teacher collected the test booklets and separate answer sheets at the end of the test.

In the unfamiliar-BGM group, students were first instructed to listen to the cassette (which was recorded for this group) and to relax. The music was broadcast through the cassette recorder from the front of the classroom. This listening and relaxation period lasted 10 minutes. During this period, students listened to "Beija-Flor" and "Something Tells Me" once. Then, the teacher handed out the reading comprehension test and separate answer sheets. The students began to read the passages and answer the questions while "In a Sentimental Mood", "Morning Blues", and "Big Blues" were playing one after another. The different pieces were used in order not to allow students to become familiar with the pieces of music. There was no time-constraint, but the students completed the test in approximately 14 minutes. Therefore, during the experiment, students listened to "Beija-Flor", "Something Tells Me", "In a Sentimental Mood", and "Morning Blues" once each.

In the no-BGM group, students did not listen to music and they were asked to read the passages and answer the reading comprehension questions in silence. There was no time-constraint. At the end of the test, the teacher collected the test booklets and separate answer sheets. This group completed the test in approximately 14 minutes.

The pretest and posttest scores of all the students in each group for the reading comprehension test were used as data.

CHAPTER 4 DATA ANALYSIS

Overview of the Study

The aim of this study was to investigate the effect of familiar and unfamiliar music in comparison with no-music on reading comprehension performance of Turkish EFL learners in a university preparatory program. Reading comprehension performance was measured by a reading comprehension test which involved three short reading passages and 12 multiple choice comprehension questions related to the passages. To analyze the differences (if any) among the scores in the familiar-BGM, unfamiliar-BGM, and no-BGM groups, a one-way analysis of covariance (ANCOVA) was conducted with pretest scores used as the covariate. This covariate was included to control for any initial differences among groups. To analyze the differences (if any) between the genders, a two-way (group x gender) ANCOVA was conducted.

Overview of Analytical Procedures

The statistical analysis was carried out in two stages. In the first stage, reading comprehension performance test scores on the pretest and posttest were calculated. There were 12 questions in the test, and one point was given to each correct answer. Therefore, possible scores ranged from 0-12. Some students' scores

were dropped from the analysis, however. One student in the familiar-BGM group, one student in the unfamiliar-BGM group, and 5 students in the no-BGM group scored zero in the posttest. Because their pretest scores were higher than six, their posttest answer sheets were checked again and it was seen that they had not marked more than three answers. Therefore, it was assumed they had not taken the test seriously, and their scores were dropped from the analysis. Both pretest and posttest scores were calculated in the same fashion for each subject.

In the second stage, a one-way ANCOVA was conducted to test whether the means of the scores of the three groups on the posttest were significantly different with respect to reading comprehension performance. The means of the three groups were compared to see if there was a significant difference after treatment and if so, to see where the difference was. Group was the independent variable and posttest scores the dependent variable. The pretest was used as a covariate in order to adjust the means of the posttest for any initial differences among the groups.

As an extension of the main scope of this study, it was further investigated whether there was a significant difference between the females and males with respect to reading comprehension performance between groups. Two levels of gender and three levels of groups (i.e., two

independent variables) were identified. Again, pretest scores for each student were used as a covariate to control for possible initial differences. Posttest scores for the students who took the pretest were the dependent variable.

A two-way (group x gender) ANCOVA was then conducted to test whether the means of the females and males were significantly different with respect to the reading comprehension performance of the students between groups. The means of the females and males were compared to see if there was a significant difference after treatment, and if so, where the difference was.

Results of the Study

Between Groups

The design of the analysis was a one-way analysis of covariance (ANCOVA). In order to carry out the analysis, the groups (i.e., independent variable) were treated as categorical data, and the means and standard deviations for pretest scores and posttest scores were calculated. Table 1 presents the mean scores and standard deviations for the pretests and posttests for each of the three groups.

Table 1

Means and Standard Deviations of Pretest and Posttest Scores for All Groups

		Pretest		Posttest	
Group	n	M	SD	M	SD
Fam.	14	7.42	1.74	8.42	1.65
Unfam.	17	7.70	1.89	7.94	1.67
No-mus.	11	6.72	1.79	6.27	1.95
All Groups	42	7.35	1.81	7.66	1.90

Note. Fam. = Familiar-BGM group;
Unfam. = Unfamiliar-BGM group;
No-mus. = No-BGM group.

Table 1 shows that there was an increase in the mean scores of the familiar-BGM and unfamiliar-BGM groups, whereas there was a decrease in the no-BGM group. It was necessary to conduct a one-way ANCOVA to investigate whether there was a statistically significant difference among the reading comprehension performance of the groups.

The results of a one-way ANCOVA (see Table 2) show that there was a statistically significant difference

(F (2, 38) = 4.57, p<.01) between the groups. The summary of all effects of analysis of covariance are presented in Table 2.

Table 2

Results of ANCOVA: Familiar, Unfamiliar, No-music Groups, and Reading Comprehension Performance

(N = 42)

Source of variance	Effect df	Effect MS	Error df	Error MS	F	p
Between groups	2	9.43	38	2.06	4.57	.01*

Note. df = degree of freedom; MS = Mean of squares.
*p<.05.

Table 2 shows that there was a statistically significant difference among the groups at p<.05. Therefore, there was a need to investigate where the difference was, and a follow-up post hoc (Newman-Keuls) test was conducted in order to find out whether the difference was: (a) between the familiar-BGM and unfamiliar-BGM groups, (b) between the familiar-BGM and no-BGM groups, or (c) between the unfamiliar-BGM and

no-BGM groups. Table 3 shows the results of the Newman-Keuls test.

Table 3

Newman-Keuls Test: Probabilities for Post Hoc Tests

Group	Familiar	Unfamiliar	No-music
Familiar		.3533	.0018**
Unfamiliar	.3533		.0048**
No-music	.0018**	.0048**	

**p<.01

The results of Newman-Keuls test revealed that the difference (p = .0018) between familiar-BGM and no-BGM groups was statistically significant at p<.01. According to the mean scores and standard deviations presented in Table 1, the students in the familiar-BGM group performed better than those in the no-BGM group. Similarly, the difference (p = .0048) between the unfamiliar-BGM group and the no-BGM group was also found statistically significant at p<.01. Therefore, it can be claimed that the students in both the familiar-BGM and unfamiliar-BGM group performed better than those in the no-BGM group. However, the results of Newman-Keuls test revealed that the difference (p = .3533) between

familiar-BGM and unfamiliar-BGM groups was not statistically significant.

Because the students in both familiar-BGM and unfamiliar-BGM groups performed better than the ones in the no-BGM group, it can be concluded that BGM had a positive effect on reading comprehension performances of Turkish EFL learners. In addition, it can also be said that familiarity with the piece of music was not a determining factor in the reading comprehension performance of Turkish EFL learners in a university preparatory program.

Between Genders

A two-way ANCOVA was used to test whether the mean scores of females and males were significantly different with respect to reading comprehension performance in the three groups. The mean scores and standard deviations of the females and males in each group were calculated in order to find out the general tendency and variance. Table 4 shows the means and standard deviations of females and males in each group.

Table 4

Means and Standard Deviations of Pretest and Posttest Scores for Females and Males in All Groups

			Pretest		Posttest	
Sex	Group	n	M	SD	M	SD
Female						
	Fam.	4	8.75	0.00	9.00	0.00
	Unfam.	8	7.62	2.32	7.75	1.75
	No-mus.	3	7.66	2.30	6.00	3.00
Male						
	Fam.	10	6.90	1.72	8.20	1.81
	Unfam.	9	7.77	1.56	8.11	1.69
	No-mus.	8	6.37	1.78	6.37	1.88

Note. Fam. = Familiar-BGM group;
Unfam. = Unfamiliar-BGM group;
No-mus. = No-BGM group.

Table 4 shows that there was an increase in the mean scores of both females (.25) and males (1.30) in the familiar-BGM group and in the unfamiliar-BGM group (.13 and .34, respectively). However, there was a decrease in the mean scores of females (-1.66) and no change in the mean scores of males in the no-BGM group. A two-way ANCOVA was conducted to examine whether there

was a statistically significant difference between reading comprehension performance of the sexes between groups.

The results of the two-way ANCOVA showed that there was not a statistically significant difference (F (2, 35) = .29, p<.75) between the females and males between groups (see Table 5). That is, there was no interaction between group and gender. Therefore, there was no reason to conduct a follow-up post hoc test. The summary of all effects of the two-way ANCOVA are presented in Table 5.

Table 5

Results of ANCOVA: Groups, Gender and Reading Comprehension Performance

(N = 42)

Source of variance	Effect df	Effect MS	Error df	Error MS	F	p
Between genders	1	2.60	35	2.15	1.21	.28
Between groups	2	9.26	35	2.15	4.31	.02*
Between groups and genders	2	.61	35	2.15	.29	.75

Note. df = degree of freedom; MS = Mean of squares.

*p< .05.

CHAPTER 5 DISCUSSION OF FINDINGS AND CONCLUSION

Summary of the Results

The purpose of the present study was to investigate how familiar and unfamiliar BGM, in comparison with no-music, affect the reading comprehension performance of Turkish EFL undergraduate students in a university preparatory program. This study also aimed at examining the effect of BGM on the reading comprehension performance of females and males. Data were collected through pretest and posttest scores of the students who took the reading comprehension test. The collected data were analyzed by a one-way analysis of covariance (ANCOVA) in order to find out whether there was a difference between the familiar-BGM, unfamiliar-BGM, and no-music groups. For the second analysis a two-way ANCOVA was used in order to find out whether there was a difference between the reading comprehension performance of females and males between groups.

Results showed that there was no statistically significant difference between the reading comprehension performance of familiar-BGM and unfamiliar-BGM groups. Similarly, there was no statistically significant difference between the performances of females and males between groups. However, the present study revealed

that BGM, both familiar or unfamiliar, had positive effects on reading comprehension performance.

Discussion of the Findings

The main research question of the present study was to investigate the effect of familiar and unfamiliar BGM on reading comprehension performance of Turkish EFL learners in a university preparatory program. The findings of this study can be classified in three ways: (a) familiar-BGM and unfamiliar-BGM group, (b) BGM groups (familiar and unfamiliar together) and no-music group, and (c) gender.

Familiar and Unfamiliar Background Music Groups

The results of this study indicated that there was no statistically significant difference between the familiar and unfamiliar-BGM groups. This was unexpected because all the previous studies in this field have found statistically significant differences between the effects of familiar and unfamiliar BGM on reading comprehension performance. For example, in a study investigating the effect of variation in familiarity of BGM on reading comprehension, Hillard and Tolin (1979) found that familiar BGM improved the reading comprehension performance of the undergraduate students.

Twenty-eight of the students (90%) in the familiar and unfamiliar-BGM groups reported that they were

accustomed to studying while the music playing in the background. The results of this study indicated that being accustomed to studying with music did not cause a difference between the reading comprehension performance of the students in the familiar-BGM and unfamiliar-BGM groups. However, Wolf and Weiner (1972) studied the effects of four noise conditions (quiet, speech, music and industrial noise) on a simple arithmetic task with college students who listened to hard rock music while studying, and they found that being accustomed to studying while listening to music improved the performance of the students. In a similar study supporting Wolf and Weiner's (1972) hypothesis that unfamiliar sounds are more distracting than familiar ones, Etaugh and Michals (1975) reported that the students who were used to studying while listening to music improved their reading comprehension performance. Therefore, the present study does not support the previous studies, and it can be claimed that familiarity with the music condition did not make a difference between the performances of familiar-BGM and unfamiliar-BGM groups.

Jazz ballads were used as the BGM in this study. The selected pieces for BGM were instrumental and slow (at a tempo of 60-80 beats per minute). The jazz guitar and the piano were mostly used in solos. Those solos, especially the ones that were played in the familiar-BGM

group, included some repetitive melodic patterns and motifs which appear to fit Kiger's (1989) description of low-information-load music as highly repetitive with a narrow tonal range, which Kiger found positive effects on reading comprehension performance. Findings from the present study, while revealing no difference between the reading comprehension performance of familiar-BGM and unfamiliar-BGM groups, suggest that low-information-load-like music contributed to the students' performance in both music groups, compared to the no-BGM group.

Background Music Groups and No-Music Group

Perhaps the most important finding of this study was the statistically significant difference between the reading comprehension performances of both BGM groups and the no-BGM group. Students who listened to music in the background during the reading comprehension test outperformed those who did not listen to music in the background. Thus, BGM (at least of the type used in this experiment) appeared to facilitate reading comprehension performance. Hall (1952) suggested that BGM does not increase the fundamental capabilities of the individual but that it helps the individual improve his performance to the fullest extent. Therefore, it can be concluded that there was a temporary improvement in reading comprehension performance with BGM in this study.

One reason for the improved performance with BGM may be the relaxing effect of (at least some types of) music on human behavior. If the appropriate type of music is employed in the language classroom, music in the background may create a low-anxiety atmosphere and help the students be relaxed and ready to learn. According to Ostrander, Schroeder, and Ostrander (cited in Richards & Rodgers, 1986), the type of music used in the classroom is critical to language learning because if it is not appropriate, "the desired altered states of consciousness will not be induced and results will be poor" (p. 146). In addition, Lozanov (1978) stresses that the effect of BGM should be experimentally checked both in the electrophysiological laboratory and in the foreign language courses. Although the effect of the type of BGM in the language classroom was not tested in the present study, jazz ballads were found to improve reading comprehension performance. Therefore, it can be concluded that instrumental jazz ballads, as used in this study, are an appropriate type of music which can be used in the background in the field of foreign language learning.

Gender

The difference between the reading comprehension performance of females and males has never been the main

focus of studies investigating the effect of BGM on reading performance.

Although the main purpose of this study was to investigate the effect of familiar and unfamiliar BGM on reading comprehension performance of Turkish EFL learners, if there had been a statistically significant difference between the reading comprehension performances of genders between groups, this would have been an important finding. No differences were found, however, suggesting that gender played little or no role.

Limitations of the Study

The main strength of this study lies in the fact that it is a pioneer study which investigated the effect of familiar and unfamiliar BGM on reading comprehension performance of adult EFL learners. However, this study had its limitations too, with respect to subjects, instruments, and design.

Subjects

The first limitation is that the subjects for this study were limited to Turkish EFL intermediate-level university prep students. Also, the number of the subjects was small (N = 42) and they were not randomly assigned to groups. Therefore, it can be argued that the findings are limited to 42 (15 female and 27 male)

Turkish undergraduate students at the intermediate-level of proficiency in the preparatory program of the Faculty of Engineering and Architecture, Gazi University, Ankara, Turkey. The second weakness was the human factor. It should also be noted that although all the students in this study had seemed to take the study seriously, the scores of 7 students were dropped from analysis following an examination of their posttest scores with respect to their pretest scores. There might have been others who did not take the study seriously, casting doubt on the results.

Instruments

The pretest-posttest reliability of the 12-item test was low (r = .63). A longer test might have proved more reliable. Another possible weakness was the question format. In this test, only multiple-choice questions were used in order to measure the reading comprehension performance. This type of format encourages guessing. Some additional questions in an open-ended, and/or short answer format might have improved reliability.

Other limitation was the use of one type of BGM. Although the BGM (familiar or unfamiliar) used in this study made a positive difference in reading comprehension performance, results can not be generalized to other types of music.

Design

The main limitation related to the issue of familiarizing the students with the BGM. More time could have been spent on familiarizing the students with the BGM because the pieces of music used in this study were jazz ballads and jazz is not a popular type of music in Turkey.

Another limitation of this study in terms of design relates to the number of treatments. Only one treatment was conducted in this study. If more than one treatment had been employed, the results would have been more reliable.

Implications of the Study

Implications for Further Research

The present study has contributed to the field of foreign language education by experimentally studying the effects of BGM on student's performance in class. In light of the results of this study, suggestions for further research are made. First, this study should be replicated with a larger number of subjects and a more reliable test. Another is to investigate the effects of jazz ballads as BGM on different kinds of performance (e.g., writing performance and listening performance) in foreign language education.

Another suggestion is to compare the effect of different types of music (e.g., jazz ballads and popular music) on different kinds of classroom performance of foreign language learners.

Educational Implications

Based on the statistically significant results favoring BGM (instrumental jazz ballads) with respect to reading comprehension performance of foreign language learners in a university preparatory program, the present study can contribute to foreign language education. EFL teachers can benefit from this study by providing appropriate BGM (e.g., jazz ballads) to improve reading comprehension performance in reading classes. First, the teacher should carefully select appropriate pieces of instrumental jazz ballads in consultation with a musician who is interested in jazz because not all jazz ballads are at a tempo of 60-80 beats per measure. Then, those selected pieces should be recorded on a tape. Finally, the tape should be played back at a low volume in silent reading classes in the classroom. In addition, teachers can suggest that students may be able to improve their reading comprehension performance by listening to this type of music while studying at home.

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Appendix A

Consent Form

I agree to participate in a research study of education. I am aware that there is no risk involved in my participation. I understand that I may withdraw from the study at any time. I will take part in an anonymous experiment as a part of this study. It has also been made clear by the researcher that my name will not be used in the reports.

If there are any questions about the study, you may contact either the researcher:

Can Gür
MA TEFL Program
Bilkent University

or the study advisor:

Dr. Phyllis Lim, Director
MA TEFL Program
Bilkent University

Number Name Signature Date

Appendix B

READING COMPREHENSION TEST

Answer the questions 1-4 according to the following passage:

For some people it is driving; for others, elevators; for still others, flying. The objects differ but the reaction is the same-an intense, persistent, and irrational fear called a phobia. The name comes from the Greek word phobos meaning fear of flight, and it describes an anxiety disorder that affects millions of Americans in many different forms. Those suffering, for example, from agoraphobia are afraid of open spaces; they venture unwillingly from their homes, carefully avoiding all large and crowded places. In contrast, there are those who suffer from claustrophobia, a fear of narrow, enclosed spaces. Closets, elevators, and even small rooms can create severe and painful stress. For men and women who suffer from hydrophobia, water is the enemy, and water sports are the occasion for terror rather than fun.

1. A phobia ---------- .

A. is fear of flight.
B. is a reasonable fear.
C. is a Greek invention.
D. affects cowardly people.
E. has different effects on different people.

2. A phobia ---------- .

A. is a slight fear.
B. lasts for a short time.
C. is an uncontrollable fear.
D. is nothing to worry about.
E. affects Americans in the same way.

3. Victims of claustrophobia ---------- .

A. hate open spaces.
B. never leave their homes.
C. prefer to live in small rooms.
D. are subject to stress in closed areas.
E. have grown an intense dislike for water.

4. Which of the following is NOT true?

A. A phobia is a disorder of anxiety.
B. Flying may terrorize some people.
C. Elevators may frighten some people.
D. People may be frightened by different objects.
E. Victims of hydrophobia look forward to swimming in the sea..

Answer the questions 5-8 according to the following passage.

One day when Galileo was seventeen years old, he wandered into the cathedral of his native town. While he was admiring the cathedral, he looked up at the lamps hanging by long chains from the high ceiling. Then something very difficult to explain occurred. He found himself no longer thinking of the building, worshippers, or the services; of his artistic or religious interests; of his hesitation in becoming a physician as his father wished. He forgot the question of a career. As he watched the swinging lamps, he began to wonder if perhaps their movements back and forth took the same amount of time. Then he tested this idea by counting his pulse because that was the only timepiece he had with him.

5. Galileo went into the cathedral ---------- .

A. to please his father
B. without having intended to.
C. to admire its artistic beauty.
D. with a specific purpose in mind.
E. to be able to explain a difficult problem.

6. What attracted Galileo's attention in the cathedral was ---------- .

A. his pulse beating too fast.
B. the worshippers in the cathedral.
C. the swinging lamps in the high ceiling.
D. the admirable building of the cathedral.
E. the religious interests of the worshippers.

7. Galileo's father wanted Galileo to be ---------- .

A. a doctor.
B. an artist.
C. a priest.
D. a scientist.
E. an architect

8. Galileo wondered about whether ---------- .

A. he would be able to decide on his future career or not.
B. he would be as good a physicist as his father expected.
C. he would be able to understand time by counting his pulse.
D. he could explain to his father why he entered the cathedral.
E. the time it took the swinging lamps to move back and forth was the same.

Answer the questions 9-12 according to the following passage.

The White House , the official home of the United States President, was not built in time for George Washington to live in it. It was begun in 1792 and was ready for its first inhabitants, President and Mrs. John Adams, in 1800. When the Adamses moved in, the White House was not yet complete, and the Adamses suffered many inconveniences. Thomas Jefferson, the third president, improved the comfort of the White House in many respects and added new architectural features such as the terraces on the east and west ends. When British forces burned the White House on August 24, 1814, President Madison was forced to leave, and it was not until 1817 that then President James Monroe was able to return to a rebuilt residence. Since then, the White House has been occupied by each U.S. President.

9. Which of the following would be an appropriate title for this passage?

A. The Burning of the White House
B. The Architecture of the White House
C. The Early History of the White House
D. Presidential Policies of Early U.S. Presidents
E. George Washington's Life in the White House

10. Why did George Washington NOT live in the White House?

A. It had been burned by the British.
B. He did not like the architectural features.
C. Construction had not yet been completed.
D. It did not have terraces on the east and west ends.
E. He did not want to suffer the inconvenience that the Adamses had suffered.

11. It can be inferred from the passage that John Adams was the ---------- president of the U.S.

A. first
B. second
C. third
D. fourth
E. fifth

12. According to the passage, when James Monroe came back to the White House, it had been ---------- .

A. reserved
B. relocated
C. repressed
D. represented
E. reconstructed