

Full Length Research Paper

An analysis of the academic achievement of the students who listen to music while studying

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This study's aim is to examine the correlation between the study type, the type and quality of the music students listen to while studying as well as their educational level. The participants of the study are 481 students on a scale of different ages listening to music while studying. The data of the study were collected through a survey questionnaire. Frequency and percentage and the chi-square tests were used. The study data indicate that Turkish pop music is the mostly listened to music genre and students tend to listen to music mostly while studying social courses.

Key words: Student, music, type of music.

INTRODUCTION

The case of listening to music while studying has been a study topic for a long time. These studies have focused on two major questions: does listening to music while studying inhibit the learning or does it facilitate the learning? These questions are hard to answer since the situation is affected by many variables.

LITERATURE REVIEW

Related studies analyzed this correlation in terms of intellect, perception and attention span and different results were found.

Odabaş et al. (2008) argued that external factors including listening to music should be controlled and avoided while reading, trying to comprehend, thinking and interpreting. Other studies argued similar views as well. For instance, Aktaş and Gündüz (2004) suggested

that if music is listened to improperly, there are two negative effects on focusing on the topic. Firstly, allocating time for listening to music reduces the time spent for studying. It is mostly common among younger learners. Secondly, listening to music while reading inhibits the individuals' critical reading skills and deeper understanding of the text (Aktaş and Gündüz, 2004: 42). Odabaş et al. (2008) did not support the view that listening to music facilitates the understanding of the text that is being read. Instead, like other external stimuli, listening to music inhibits the concentration during the process of reading and understanding, and that listening to music while reading inhibits the individuals' focus on the text and impairs the setting of the critical reading (Odabaş et al., 2008: 438).

Wilson and Brown found that limited support for the previously obtained enhancing effect of listening to Mozart's music was revealed in measures of

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performance accuracy on spatial task, whereas no effect was found (1997: 1).

Nantais and Schellenberg (1999) aimed that Mozart's effect described by Raucher et al. (1994) is supported by authors. Mozart's effect indicates that spatial-temporal abilities are enhanced after listening to music composed by Mozart (1994:4). Authors replicated and extended the effect. They reasoned that performance on a spatial-temporal task was better after participants listened to a piece composed by Mozart or by Schubert than sitting in silence.

Çelikkaya and Kuş (2010: 326) argued that students' preference whether to listen to music or to have a silent setting while studying should be evaluated as part of the socio-affective learning strategies. In other words, students prefer what is proper for their strategy to learn. The effects of the music type listened to on these influences were also studied. For instance, Yılmaz (2006) and Köksoy (2009) concluded that the type of music listened to affects the correlation between listening to music while reading and the understanding of the text that is being read.

Yıldırım et al. (2007) found that the participants often choose to listen to instrumental or classical music while reading a book. Regarding the tempo of the music they listen to, they reported that "slow" tempo was preferred the most.

In the 1960s, Lozanov developed a learning and teaching method called Suggestopedia where baroque music was employed. It was mostly used for language learning. The method was tested by UNESCO in the 1970s and established as an effective method. In this method, teacher reads the texts while the music is playing. Students may also read the text with teacher. When teacher stops reading the text, they go on listening to music together (Akbyık, 2007: 10).

As stated by Gökşenli, foreign language and music are linked to each other closely in terms of rhythm and syntax (2011: 17). Öztürk (1999) argued that if the music listened to while studying is a relaxing one, it leads to affective harmony and does not cause shift of interest. However, if the rhythm is changed frequently, then the music is focused on rather than reading or learning. Therefore, as a result of such concerns individuals may not prefer listening to music while studying. For instance, İspir and Aykol (2010: 8) found that 21.7 % of the participants (n=38) prefer listening to music while studying.

Research suggests that some rhythms of classical music and Turkish classical music have the ability to activate the brain waves in the alpha region that is one of the significant brain regions associated with learning (Selçuk et al., 2003: 59). Research found that there is a significant positive correlation between students' studying habits, study skills and academic achievement (Bay et al., 2004: 224). All kinds of external factors during studying process, including music in the environment, can change the outcome of the study.

The research question of this study is "at which level

is the academic achievement of the students who listen to music while studying?" Is there any relationship between the study type students do while listening to music, the type and quality of music they listen to and the educational level of students listening to music while studying?

METHOD

A quantitative descriptive method was employed in the study. The participants are 481 students on a scale of different ages listening to music while studying. The participants who voluntarily took part in the study were from different provinces of Turkey.

The study data were collected through the administration of a questionnaire developed after a literature review and was developed with the opinion of three experts. Questionnaire items were concerning the music type listened to while studying, during the study process of which course the music was listened to, the form of the music listened to (instrumental or song). Regarding the music types listened to, the details such as music group/singer and song were asked. The city in which the participants live was also asked. The types of the music listened to were given to the participants, and they were asked to choose among them. After this, an open-ended question, "give examples of group/singer and song?" was added.

1. "What kind of music is listened to while the students are studying?"

To evaluate this question, frequency and percentage of the answers were analyzed.

2. "What type of study is preferred by students while listening to music?"

To evaluate this question, frequency and percentage of the answers were analyzed.

3. Is there any correlation between the music type students listen to while studying and the type of study?

To evaluate this research question, the Chi-square test was used. The test results showed that there was a significant difference [$p > .05$] for all dimensions.

4. Is there any relationship between the type of music students listen to while studying and the type of study?

To evaluate this research question, the Chi-square test was used. The test results showed that there was a significant difference [$p > .05$] for all dimensions.

5. Is there a relationship between the music type listened to while studying and the educational level of the students?

FINDINGS

Findings on the types of music listened to while studying

The participants mostly listen to Turkish pop (n=113) and pop music (n=90) while studying. The other two frequently listened to types of music by the participants

while studying are found to be Turkish folk music (n=66) and classical music (n=57). Rock-metal music is found to be listened to by 11.6 % of the participants while studying (n= 56). It is found that the rate of the students who listen to either authentic music or Turkish classical music is the same (5.8 %). Rap music is found to be listened to by 4.6 % of the students while studying (n=22). Arabesque (n=9), religious music (n=8) and jazz (n=4) are found to be less listened to music types while studying. Gür et al. (2012), in their research with 10.174 participants, found that the most listened to music types are Turkish (52.4%) and foreign (22%) pop music. Arabesque (%21.9%), Turkish folk music (21.8%), rock (%14) and Turkish classical music (10.3%) follow these most listened to types.

Findings on the course types

The rate of the students listening to music while studying numerical courses is found to be 51.1% (n=246). The rate of those who listen to music while studying social courses is found to be 48.9% (n=235). Therefore, students mostly listen to music while studying numerical courses.

Findings on the correlation between the music type listened to while studying and the study type

According to the findings, there is no relationship between the music types listened to while studying and the type of study ($\chi^2=18,219$, $p=0,51$). It is seen that the monitored and expected values are notably close to one another.

Findings on the correlation between the music type listened to while studying and the study type

As seen from the study, there is no relationship between the music types listened to while studying and the type of study ($\chi^2=2,052$, $p=0,163$). It is seen that the monitored and expected values are notably close to one another.

Findings on the correlation between the music types listened to while studying and the education level of the students

It is seen that, there is a notable correlation between the music types listened to and the school type of the students ($\chi^2=82,114$, $p=0,000$).

DISCUSSION AND CONCLUSION

The findings of the study show that the participants mostly listen to "Turkish pop music" (n=113) and "pop music" (n=90) while studying.

The word pop is an abbreviation of the word "popular." It is thought that this word was derived from Latin word Populous which means populace. This type of music refers to a music type liked by many people (www.tdk.gov.tr), and it is found that it is listened to by the participants mostly while studying.

Research suggests that young people listen to pop music not only while studying but also most of the time (Ekinci, 2005; Kotsopoulou and Hallam, 2010; Bulut and Altay, 2012; Umuzdaş, 2012). This finding is consistent with the findings of this study. Therefore, it is proper to argue that students prefer pop music while studying as well.

The rate of the students who listen to music while studying numerical courses is determined to be 51.1% (n=246). The rate of those who listen to music while studying social courses is determined to be 48.9 % (n=235). Therefore, students listen to music mostly while studying numerical courses.

Since students listen to music mostly while studying numerical courses, such as mathematics, geometry, etc., it can be argued that music they listened to facilitates concentration on the topics they study. On the other hand, they seem to avoid listening to music while studying social courses, such as Turkish language, history, etc., due to their view that music would inhibit their comprehension of the topics. Research established that there is a similarity between language and music in terms of mental activities (Akbiyık, 2007; Gökşenli, 2011). That is why music is used as a teaching device in foreign language teaching.

As argued by Çelikkaya and Kuş (2010: 326), students' preference on whether to listen to music or to have a silent setting while studying should be evaluated as part of the socio-affective learning strategies. In other words, students prefer what is proper for their learning strategy.

In the consequence of the research, no significant relationship is found between the type of music and the study, as well. Based on this, it is understood that students do not change the type of music they prefer to listen to while studying according to the type of study. Even though it is found that students tend to listen to music while studying science, no connection could be made with a certain type of music.

Yıldırım et al. (2007) found that students prefer slow and medium level of music while studying since they believe that music with higher tones inhibits their understanding. Öztürk (1999)'s study supported this hypothesis.

The type variable may present no importance as long as the volume of the music listened to while studying is set not to decrease student's perception. The fact that there is no relationship between the type of study and the type of music gives rise to the thought that any form of music does not prevent students from studying.

Research states that classical music is used as a teaching device or method in teaching process (Selçuk et al., 2003; Akbiyık, 2007). As stated in the study, any type

of music can be used while studying and may affect the study differently.

It is also found that there is no relationship between the music forms listened to while studying and the type of study.

As stated in the introduction, the results of the studies in the literature have discussed music suitability for use during the learning process and come up with conflicting results. One should determine the characteristics of the music listened to as a variable to interpret these results. It is possible to say that whether the music has lyrics or not is not related to the type of study for the participants of this study. An experiment is needed to be able to assess the positive or negative effects of the music with lyrics to reading and comprehension. An experiment conducted with a certain group may not result in a general conclusion because there are variables affecting this situation such as musical life, skills, education of musical aptitude. Given there is no relationship in the related finding of the research, it is not possible to determine that students listen to the music with lyrics or vice versa while studying numerical courses. Consequently, students who listen to music while studying do not choose the type of music according to the type of study.

A significant relationship is found between the type of music students listen to while studying and their educational levels. Accordingly, the music type students prefer to listen to while studying varies according to their educational levels. The higher students' educational levels are, the more they tend to listen to Turkish classical music and classical music. The other way round was observed for rock and rap music. The higher educational level is the lower tendency to listen to rock and rap music becomes. Rock and rap are music types preferred to be listened to fast and loudly. Students with higher educational levels may also have difficulty in perception while listening to these music types due to their older ages. Or they may already prefer to listen to these music types in their daily lives. Similarly, the fact that the higher the educational level is, the more the tendency to listen to Turkish classical music and classical music may be related to a general preference. Or students may be thinking that these music types affect the perception and learning positively through their calm and rather simple structure.

According to Kotsopoulou and Hallam (2010), music played while studying was most strongly reported to relax, alleviate boredom and help concentration. Students reported that they mainly played music while studying when they were happy or bored and that their mood was a determinant of their decision.

Most turned off the music when they felt that it was interfering with their concentration (Kotsopoulou and Hallam, 2010). These findings therefore must be interpreted with some caution.

Consequently, students prefer the music which they generally listen to while studying. A type may not be chosen for studying by developing a certain strategy.

Therefore, the situation analysis conducted in this study may not be used to change the current situation, but to improve the learning environments that are planned strategically by educationists.

Conflict of Interests

The author has not declared any conflict of interests.

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