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THE CORRELATION BETWEEN FREQUENCY OF LISTENING TO ENGLISH SONGS ON MUSIC STREAMING APPLICATIONS AND TERTIARY EFL STUDENTS' ENGLISH PROFICIENCY TEST (TEP) LISTENING SCORE

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ABSTRACT

Listening comprehension remains a crucial challenge for tertiary EFL students despite advances in language learning technology. This study investigated the correlation between listening frequency of English songs on music streaming apps (Spotify, YouTube Music, Apple Music) and English Proficiency Test (TEP) listening scores. Using a quantitative correlation design, data were collected from 35 English Language Education students (2021 intake, Surabaya State University) using a validated 5-item Likert-scale questionnaire and TEP scores. Pearson Product-Moment analysis via SPSS revealed a strong positive correlation ($r = 0.706$, $p = 0.000$), rejecting the null hypothesis. The results showed that higher listening frequency significantly predicted better TEP performance. In conclusion, music streaming apps effectively improve autonomous listening skills, although factors such as audio quality and accent moderated the results.

Keywords: English Songs, Listening Comprehension, Listening Frequency, Music Streaming Applications, TEP Scores

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INTRODUCTION

Listening is an essential receptive skill in language acquisition that involves complex cognitive collaboration to decode spoken information, construct meaning through interpretation and critical thinking, and organize information to produce an appropriate response (Rost, 2024; Gilakjani & Sabouri, 2016). This process is active and crucial for communication and understanding real-world situations, where listening comprehension is a more advanced stage that integrates speech sound recognition, word meaning, sentence structure, and meaning construction with contextual clues and existing knowledge (Chastain, 1998; Al-khresheh, 2020). Its main components include the ability to distinguish the sounds, intonation, and vocal qualities of the target language from the mother tongue, understand the overall message, store it in auditory memory, and capture important meaningful elements (Chastain, 1998; Pourhosein Gilakjani & Sabouri, 2016).

Music streaming apps like Spotify, YouTube, and Apple Music have revolutionized access to authentic listening materials, with lyrics, podcasts, and videos that support the internalization of pronunciation, intonation, and cultural references (Nadhifah, 2024; Erlinna, 2024). Research shows that regularly listening to English songs through these platforms increases motivation, engagement, and listening comprehension scores in EFL students, including at the university level (Nurjannah et al., 2018; Supriyani et al., 2025). This technological integration creates a fun learning environment that is integral to modern education (Setyobudi, 2022; Nurfadilla & Kusrin, 2024).

Despite their significance, the majority of EFL learners face challenges in processing auditory information, such as accent, unfamiliar vocabulary, speaking rate, recording quality, cultural differences, length of material, and lack of concentration (Andriani, 2018; Bingol et al., 2014). At the tertiary level, these difficulties are further compounded by the demands of real-life and professional communication, where a lack of authentic exposure hinders target language acquisition (Al-khresheh, 2020; Juita, 2024). Previous studies have largely focused on secondary schools or a single application, with a positive correlation between frequency of listening to songs and listening comprehension, but have rarely comprehensively explored EFL students in Indonesia (Najmustsaakib, 2020; Sari, 2025).

This issue creates a research gap, particularly the lack of data on the relationship between the frequency of listening to English songs via various streaming apps and English Proficiency Test (TEP) listening scores among EFL students (Nurfadilla & Kusrin, 2024; Luthfiya, 2024). Factors such as self-report bias and a single institutional focus limit generalizability, while a single-period exposure does not capture long-term dynamics (Al-Khresheh, 2020; Juita, 2024).

This study aims to investigate the correlation between the frequency of listening to English songs on music streaming apps and the TEP listening scores of English Language Education students from the 2021 intake of Surabaya State University, through a quantitative analysis of habit surveys and comprehension tests. Its urgency lies in providing innovative, technology-based strategies for educators and curriculum designers to improve listening skills in an engaging and accessible manner, while also benefiting students in finding effective learning methods (Setyobudi, 2022; Supriyani et al., 2025). Its novelty stands out in its multi-application and tertiary-level focus in the Indonesian context, complementing previous studies limited to a single platform or secondary school, with implications for the broader academic community (Nadhifah, 2024; Sari, 2025).

METHOD

This study adopted a quantitative correlational design to reveal the relationship between the frequency of listening to English songs on music streaming apps and the listening comprehension achievement of tertiary EFL students, without any manipulation or intervention of variables (Bhandari, 2023; Sugiyono, 2023). This approach is suitable for identifying patterns of positive, negative, or zero correlations between variables, where a positive correlation occurs if the variables move in the same direction, while a negative correlation occurs if they move in the opposite direction (Creswell & Creswell, 2023; Sudaryono, 2021). Data collection techniques through surveys and statistical analysis using SPSS allow for objective and precise measurement of these relationships (Emzir, 2022; Taherdoost, 2019).

The research instrument consisted of a 4-point Likert scale-based questionnaire (1-4) with 5 items to measure the frequency, duration, and genre of English songs listened to via Spotify, YouTube Music, Apple Music, or similar platforms, as well as TEP listening score data submitted by respondents with consent (Taherdoost, 2019; Emzir, 2022). The instrument's validity was tested using Pearson Product-Moment, where the calculated r-value of all items (0.688-0.816) exceeded the table r-value of 0.334 at a significance level of 0.05, indicating item validity (Ary et al., 2010; Sugiyono, 2023). Reliability was measured by Cronbach's Alpha of 0.797, which falls into the acceptable category ($\geq$0.70), ensuring instrument consistency (George & Mallery, 2021; Sudaryono, 2021).

The study population was students from the 2021 intake of the English Language Education Study Program at Surabaya State University who had passed the TEP. A sample of 35 students (male and female) was selected through purposive sampling based on the inclusion criteria: having passed the TEP and regularly listening to English songs via streaming apps (Sugiyono, 2023; Sudaryono, 2021). The selection of the 2021 cohort ensured a uniform academic background after completing the initial stages of the program and proficiency tests, making the sample relevant for analyzing the relationship between streaming habits and listening performance (Creswell & Creswell, 2023; Emzir, 2022).

The research procedure began with the preparation of an instrument based on the theory of listening frequency and listening comprehension, followed by a validity-reliability test and a pilot test on 10 non-sample students for item clarification (Ary et al., 2010; Sugiyono, 2023). The questionnaire was distributed online via personal WhatsApp to samples who met the criteria, with instructions to

answer honestly and attach a screenshot of the TEP listening score; the data was then organized for analysis (Bhandari, 2023; Taherdoost, 2019). Data analysis used Pearson Product-Moment via SPSS to test the hypotheses H0 (no significant correlation) and H1 (there is a significant positive correlation), with the interpretation of r: 0.00-0.19 very low, 0.20-0.39 low, 0.40-0.59 moderate, 0.60-0.79 high, 0.80-1.00 very high; decisions based on sig. <0.05 reject H0 (Creswell & Creswell, 2023; Sudaryono, 2021).

RESULTS AND DISCUSSION

The Results of Students' Listening Frequency and TEP Listening Scores

To determine the frequency level of listening, a set of validated questionnaires was delivered to 35 students of the English Language Education study program of Universitas Negeri Surabaya. The questionnaire measures students' habit in listening to English songs through music streaming applications such as Spotify, YouTube or YouTube Music, Apple Music, and other applications.

Table 1.a TEP listening scores criteria

Correct Answer	Listening (50 questions)
50	68
49	67
48	66
47	65
46	63
45	62
44	61
43	60
42	59
41	58
40	57
39	57
38	56
37	55
36	54
35	54
34	53
33	52
32	52
31	51
30	51
29	50

Table 1.b Listening Frequency and TEP Scores

N	X	Y
1	20	64
2	17	63
3	20	62
4	18	60
5	18	58
6	16	58
7	19	58
8	18	57
9	16	57
10	20	56
11	16	56
12	17	56
13	18	56
14	16	55
15	14	55
16	14	55
17	12	54
18	15	54
19	15	54
20	15	54
21	13	54
22	14	54
23	12	54
24	15	53
25	14	52
26	11	52
27	13	52
28	15	52
29	13	51
30	11	51
31	13	51
32	9	51
33	9	50
34	20	50
35	8	50
Average	14.97143	54.55882

The table presents quantitative data collected from 35 respondents who participated in this study. The table consists of three columns: the number of respondents (N), the frequency of listening to English songs through music streaming apps (X), and students' English Language Proficiency (TEP) scores (Y). The X column shows that listening frequency varied among respondents, with the highest frequency recorded at 20 and the lowest at 8, indicating a relatively wide range of listening habits among students. Meanwhile, the Y column displays the TEP scores, which range from 64 as the highest score to 50 as the lowest score. The average for listening frequency is 14.97, while the TEP listening score is 54.55. This range indicates moderate variation in respondents' listening frequency and proficiency levels.

Data Correlation Analysis

Pearson Product-Moment Correlation test was used to determine the correlation between two variables: X (listening frequency) and Y (TEP listening score). The results are presented in the table below.

Table 2. Correlation Analysis

Correlations

		Listening Frequency	TEP LISTENING SCORE
Listening Frequency	Pearson Correlation	1	.706**
	Sig. (2-tailed)		.000
	N	35	35
TEP LISTENING SCORE	Pearson Correlation	.706**	1
	Sig. (2-tailed)	.000	
	N	35	35

**. Correlation is significant at the 0.01 level (2-tailed).

Pearson Product-Moment Correlation analysis was conducted to determine the relationship between listening frequency (X) and TEP listening score (Y). The result of the analysis, as presented shows a correlation coefficient (r) of 0.706 between the two variables. The correlation coefficient indicates a strong positive correlation between listening frequency and TEP listening score.

Based on Darren(2021)Correlation coefficient above 0.70 reflects a high degree of correlation, indicating that listening frequency plays an important role in students' listening comprehension performance. The significance value (Sig. 2-tailed) was 0.000, which is lower than the significance level of 0.01. This result indicates that the correlation between listening frequency and TEP listening score is statistically significant. In conclusion, the findings demonstrate that there is a strong and significant positive correlation between students' frequency of listening to English songs through music streaming applications and their TEP listening scores. Students who listen to English songs more frequently through music streaming applications tend to achieve higher listening scores on the Test of English Proficiency (TEP). Conversely, students with lower listening frequency tend to obtain lower listening scores.

DISCUSSION

What is the correlation between the frequency of listening to English songs on music streaming applications and tertiary EFL students' English Proficiency Test (TEP) listening scores?

The findings presented indicate a strong and significant correlation between the frequency of listening to English songs and students' listening proficiency, as measured by TEP listening scores. This result implies that frequent exposure to English songs significantly supports listening comprehension development.

Frequency of listening refers to the consistency and repetition of listening activities within a period of time. As discussed previously in Chapter II, the amount of linguistic exposure increases along with the frequency of listening. Listening to English songs allows learners to become familiar with the target language, which over time supports the development of listening proficiency of the target language.

The relationship between listening frequency and listening proficiency can be explained through Behavioristic Learning Theory proposed by Skinner (2014), who argued that learning is a process of continuous reinforcement and stimulation. Here, frequent listening of English songs acts as operant behavior, since learners engage in such activity voluntarily and repeatedly. Songs, on the other hand, act as positive reinforcement that creates enjoyment and satisfaction during the activity. Repetition of such behavior allows learners to receive more language stimuli, which helps them become familiar with sounds, vocabularies, and language patterns. These results are consistent with previous studies by Putri (2019) and Alfa Rezi et al. (2025), which reported that frequent exposure to English songs positively contributes to listening comprehension development.

The results of this study, as well, align with Krashen's Affective Filter Hypothesis(1985), which emphasizes emotional factors take an important role in the language learning process. A joyful and enjoyable learning environment with low anxiety level significantly increases motivation in language learning. Listening to English songs through music streaming applications fosters greater motivation for students, for it provides a relaxing atmosphere. Such conditions allow learners to process input more effectively, which explains why students with higher listening frequency tend to achieve better TEP listening scores.

Another point to consider alongside of the theories mentioned, music applications serve as important tools in facilitating language learning, specifically improving listening skills. Music applications have plenty of access to English audio that can facilitate listening practice. Moreover, features such as playlists, lyrics display, repeated playback, and others have made it easier for learners to maintain consistent listening habits outside formal classroom settings. Music streaming applications enable learners to listen autonomously. Thus, the result is in line with Marsela et al. (2024), who emphasized the effectiveness of music streaming applications.

Although autonomous learning is not a variable in this study, it appears as an implication of the findings. Voluntary and self-directed listening activity supports the repetitive pattern and

continuously exposes students to spoken English. Hence, autonomous listening activity through available music applications is important to raise awareness in recognizing sounds and meaning of spoken informationFatimah et al. (2021).

How do different levels of listening frequency relate to TEP listening performance among tertiary EFL students?

The participants' average listening frequency was categorized as moderate, with a mean score of 14.97. This finding indicates that students regularly listen to English songs through music streaming applications.

Based on the TEP listening score conversion criteria, most participants obtained listening scores ranging from 50 to 58, indicating a moderate to high level of listening comprehension. This level reflects students' ability to understand general ideas and basic information in spoken English. Conversely, participants who achieved TEP listening scores between 60 and 64, representing good listening comprehension, and these participants generally demonstrated a higher level of listening frequency.

The TEP listening scores reflect the significant correlation between frequency of listening and listening comprehension ability, which shows the ability of learners to process sounds, understand spoken words, and construct meaning. The results confirm that frequent exposure to English songs is significantly beneficial to support listening skills, especially extensive and selective listening skills, where learners are required to focus on understanding general meaning and identifying key words. Furthermore, it also emphasizes on receiving and understanding stage of listening, as learners required to decode and interpret spoken information precisely.

Although the overall results show strong correlation, the data shows anomalous results, which are particularly shown by participant number 34, where high frequency of listening to English songs does not affect TEP listening scores. According to Gilakjani & Sabouri (2016) this situation is affected by several factors as explained below:

1. **Quality of recorded materials**

   The quality of sound system plays a big role to the output of the recorded materials. Students will have difficulty in grasping the spoken messages, which decreases the chance of getting a good score.

2. **Cultural differences**

   Cultural differences can somehow bring significant impact to listening comprehension. Learners should be familiar with a certain language culture to be able to process information. Thus, it is important for teachers to provide background knowledge about the listening activities in advance.

3. **Accent**

   Different people across the world speak different accents, and accented speech can decrease comprehension level. Unfamiliar accents can cause serious problems, yet familiarity helps learners understand information. Unfamiliar accent makes comprehension impossible for the foreign listener.

4. **Unfamiliar vocabulary**

   Previous studies have found that learners tend to comprehend spoken information conveyed in familiar vocabularies. Familiar vocabularies are believed to be effective in increasing learners' interest, increasing motivation, and minimizing confusion.

5. **Length and speed of listening**

   Length and speed of listening bring different impacts on different levels of students. Lower-level students usually find it difficult to focus on more than three-minutes of audio and complete the tasks given. Moreover, the speed of speakers' speech also creates problems for different levels of learners. Thus, it is important to make sure that teachers adjust the material according to the learners' level.

This finding indicates that frequent listening alone does not guarantee improved listening proficiency. Several factors such as mentioned above may interfere with the listening process, especially during the receiving and understanding stages.

Hence, based on the statistical analysis and discussion presented above, the null hypothesis (H0) is rejected, while the alternative hypothesis (H1) is accepted. The findings indicate a statistically

significant positive correlation between the frequency of listening to English songs through music streaming apps and college-level EFL students' TEP listening scores. These results confirm that higher listening frequency is associated with better listening skills, although individual differences and other contributing factors may also influence listening performance.

Limitations

Although the study had been supervisory conducted under expert lecturer at tertiary level, and the findings were encouraging, several limitations should be taken into consideration, as some aspects may not be able to be covered thoroughly. First, limited sample, which contains only 35 tertiary-level students may limit the generalizability of the results. Second, this study relies on self-reported questionnaire completed by the participant, whose answers could overstate and understate their actual habits. Additionally, variations of genre may give different input. Moreover, different music applications provide different features, especially some students who are not subscribing to premium features may not be able to experience all benefits offered by certain music applications.

CONCLUSION

This study found a strong and significant positive correlation ($r = 0.706$, Sig. $= 0.000$) between the frequency of listening to English songs through music streaming applications such as Spotify, YouTube Music, and Apple Music with the English Proficiency Test (TEP) listening scores of tertiary EFL students at Surabaya State University. Students with higher listening frequency tended to achieve better listening performance, which supports the alternative hypothesis (H1) and rejects the null hypothesis (H0). This finding aligns with Skinner's Behavioristic Learning theory and Krashen's Affective Filter Hypothesis, where repeated exposure and a pleasant learning environment improve listening comprehension through the recognition of authentic sounds, vocabulary, and language patterns.

However, this study has limitations such as a limited sample size of 35 students from a single institution, potential self-report bias in the questionnaire, and incompletely controlled variations in song genres and app features. Future research is recommended to expand the sample to multiple institutions, integrate direct observation or streaming log data, and explore moderating variables such as initial proficiency level or genre type. Practically, these results encourage educators to integrate streaming apps as an autonomous strategy to improve EFL listening motivation and skills, while considering supporting factors such as audio quality and accent recognition.

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