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The Influence of Using Google Classroom-Based Audio Tasks on Students' Listening Skill

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Abstract

This study investigated the influence of Google Classroom-Based Audio Tasks on students' listening skills at the eleventh grade of students at SMK 4 PGRI Bandar Lampung. The study employed a quantitative method using a pre-test and post-test control group design. The participants consisted of 68 students divided into two classes, namely an experimental class and a control class, with 34 students in each class. The experimental class was taught through structured audio tasks distributed via Google Classroom, while the control class received instruction using conventional audio media. The research instrument consisted of listening comprehension tests administered as pre-test and post-test. Prior to the implementation, the instrument was tested for validity and reliability through a try-out test. The collected data were analyzed using descriptive statistics, normality test, homogeneity test, and Independent Sample t-test. The findings revealed that the mean score of the experimental class improved from 46.35 in the pre-test to 68.82 in the post-test, whereas the control class improved from 45.18 to 59.76. Furthermore, the result of the Independent Sample t-test showed that the significance value was 0.001, which was lower than 0.05. Therefore, the alternative hypothesis was accepted, indicating that Google Classroom-Based Audio Tasks had a significant positive effect on students' listening skills. The findings also suggest that structured digital listening activities can enhance students' engagement, participation, and flexibility in EFL listening instruction.

Keywords:
audio tasks, digital learning, EFL learning Google Classroom, listening skills

1. Introduction

Listening is widely recognized as one of the most essential skills in English as a Foreign Language (EFL) learning. However, it remains one of the most difficult language skills for learners to master. Unlike reading, listening requires learners to process spoken language in real time, making it cognitively demanding, particularly for students with limited exposure to authentic language input. Previous studies have revealed that many EFL learners continue to encounter difficulties in listening comprehension due to limited input, insufficient listening strategies, and low engagement during instructional activities

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(Nguyen & Tran, 2021; Widodo & Slamet, 2022). In many Indonesian EFL classrooms, listening instruction is still largely dominated by textbook-oriented materials and teacher-centered approaches, which provide limited opportunities for learners to actively develop listening competence. Consequently, listening is frequently treated as a passive activity rather than an active meaning-making process.

The rapid advancement of digital technology has transformed educational practices and created new possibilities for language instruction. Among various digital learning platforms, Google Classroom has become one of the most widely adopted Learning Management Systems (LMS) because of its accessibility, flexibility, and ease of use. Despite its popularity, previous studies indicate that teachers primarily utilize Google Classroom for administrative purposes, such as distributing materials and collecting assignments, rather than for pedagogically meaningful language-learning activities (Rashid et al., 2023; Suryani et al., 2022). This condition suggests that the pedagogical potential of Google Classroom, particularly in developing specific language skills such as listening, remains underutilized.

From a theoretical perspective, integrating audio-based tasks into digital learning environments can be supported by recent developments in language learning theory. Contemporary perspectives on meaningful input emphasize that learners achieve better comprehension when language exposure is combined with interaction and task-based processing rather than passive reception alone (Zhang, 2021). Furthermore, scaffolding theory highlights the importance of structured support in online learning environments to facilitate learners' comprehension and gradual skill development (Huang & Li, 2022). In addition, Cognitive Load Theory suggests that listening activities should be carefully designed because spoken information is transient and may overload learners' cognitive capacity if instructional materials are not properly organized (Leppink, 2021). Therefore, structured audio tasks delivered through digital platforms may create more effective and manageable listening experiences for EFL learners.

Although technology-enhanced language learning has received increasing scholarly attention, several important gaps remain in the literature. First, existing studies on Google Classroom mainly focus on student engagement, motivation, or general academic achievement, while relatively limited attention has been given to listening skills specifically (Rashid et al., 2023; Suryani et al., 2022). Second, studies investigating technology-assisted listening instruction tend to emphasize specialized media such as podcasts, multimedia applications, or interactive video platforms (Amalia & Hidayat, 2021; Chen, 2022), leaving

commonly accessible platforms such as Google Classroom underexplored. Third, there is still limited empirical research integrating theory-based instructional principles, including scaffolding and cognitive load management, into listening task design within LMS environments. As a result, empirical evidence regarding the effectiveness of structured Google Classroom-based audio tasks in improving students' listening comprehension remains insufficient.

To address these gaps, the present study positions Google Classroom not merely as a platform for instructional management but as a structured digital environment for implementing audio-based listening tasks. The novelty of this study lies in three aspects. First, the study focuses on the pedagogical design of listening tasks rather than solely on technological features. Second, it integrates contemporary theoretical perspectives, particularly scaffolding and cognitive load management, into the design of listening activities. Third, the study contributes empirical evidence from the Indonesian EFL context, which remains underrepresented in international discussions on digital language learning. Therefore, this study is expected to contribute both theoretically and practically to the development of technology-assisted listening instruction.

Accordingly, this study aims to investigate the influence of Google Classroom-based audio tasks on students' listening skills. Specifically, the study seeks to determine whether structured audio tasks delivered through Google Classroom significantly improve students' listening comprehension. In this study, the independent variable is the use of Google Classroom-based audio tasks, while the dependent variable is students' listening skills. The study employs a quantitative approach using a pre-test and post-test design.

The hypothesis of this study is that the use of Google Classroom-based audio tasks has a significant positive effect on students' listening skills. The findings are expected to enrich the existing literature by providing updated empirical evidence regarding the pedagogical use of Google Classroom in listening instruction. Furthermore, the study is expected to provide practical implications for teachers in designing effective and theory-informed listening activities in digital learning environments. Ultimately, this research seeks to explore how structured digital listening tasks can enhance students' listening comprehension in EFL contexts.

In this study, Google Classroom refers to a digital learning management system used to organize and manage instructional activities. Audio tasks refer to structured listening activities requiring students to comprehend and respond to spoken input.

Listening skill refers to the ability to accurately understand and interpret spoken language. This research finds that the use of Google Classroom-Based Audio Tasks significantly influences the students' listening skills in EFL learning.

2. Literature Review

2.1. Technology-Enhanced Language Learning in EFL Contexts

The use of technology in EFL classrooms has grown rapidly in recent years, especially as digital learning becomes more common. Many studies show that technology can make learning more flexible and engaging, particularly because students can access materials anytime and repeat them as needed. This is especially helpful for listening, since students often need to hear the same audio more than once to fully understand it (Kohnke et al., 2023; Zhang, 2021). However, simply using technology does not automatically improve learning outcomes. Researchers point out that digital tools need to be supported by good instructional design; otherwise, they may only function as tools for sharing materials rather than supporting real learning (Rashid et al., 2023).

2.2. Google Classroom as a Learning Management System

Google Classroom is one of the most widely used platforms in education because it is easy to access and simple to use. Many teachers use it to distribute materials, give assignments, and communicate with students. Previous studies have found that Google Classroom can increase student engagement and make classroom management more efficient (Albashtawi & Al Bataineh, 2020; Suryani et al., 2022). However, most of these studies focus on general learning outcomes or skills like writing. Only a few studies look specifically at how Google Classroom can be used to improve listening skills. As Heggart and Yoo (2021) explain, the real value of Google Classroom depends on how teachers design the learning activities, not just on the platform itself. This means there is still a need to explore how it can be used more effectively for specific skills like listening.

2.3. Listening Skill Development in Digital Environments

Listening is not a simple skill, as it involves understanding sounds, interpreting meaning, and connecting information in real time. For many EFL students, this can be quite challenging. Technology has helped address this issue by providing more exposure to spoken English through audio and video materials. Studies show that technology-based learning can improve listening skills because students can access authentic materials and practice more frequently (Nguyen & Tran, 2021; Rahimi & Fathi, 2021). In addition, audio-supported learning helps students become more familiar with different accents, speeds, and

contexts of spoken language (Chen, 2022). However, most of these studies focus on specific tools like podcasts or interactive videos, rather than commonly used platforms such as Google Classroom.

2.4. Audio-Based Tasks and Instructional Design

Audio-based tasks are an important part of listening instruction, especially when they are carefully designed. Research shows that structured listening activities, such as those used in podcast-based learning, can improve both comprehension and student motivation (Amalia & Hidayat, 2021). In online learning environments, it is also important to provide guidance or support, often referred to as scaffolding, to help students understand the material step by step (Huang & Li, 2022). In addition, Cognitive Load Theory reminds us that listening tasks should not overwhelm students, since spoken information is temporary and can be easily forgotten if it is too complex (Leppink, 2021). Therefore, well-designed audio tasks should be clear, structured, and appropriate to students' levels.

2.5. Research Gap and Contribution

Based on the discussion above, it can be seen that previous studies have shown the benefits of both digital learning and audio-based instruction. However, these two areas are often studied separately. Research on Google Classroom tends to focus on general usage, while studies on listening skills often focus on other tools like podcasts or videos. There is still limited research that combines the use of Google Classroom with structured audio tasks to specifically improve listening skills. Therefore, this study aims to fill this gap by examining how Google Classroom can be used not just as a platform, but as a meaningful learning environment for listening activities. This research is expected to contribute both theoretically and practically, especially in helping teachers design more effective listening lessons in digital classrooms.

3. Method

3.1. Mesearch Method

This study employed a quantitative approach using a quasi-experimental design, specifically a pre-test and post-test control group design. This design was selected to examine the causal effect of Google Classroom-based audio tasks on students' listening skills. In this design, two intact classes were used: one as the experimental group and the other as the control group. Since random assignment of individual students was not possible, the study followed a quasi-experimental procedure. The research design can be illustrated as follows: G1 = T1 X T2 G2 = T1 O T2

Where G1 represents the experimental group receiving treatment through Google Classroom-based audio tasks, and G2 represents the control group .During the treatment phase, students were assigned audio-based tasks that included listening to recorded materials, answering comprehension questions, and participating in follow-up activities. The audio materials were selected based on students' proficiency.

4. Findings

This study aimed to investigate the influence of Google Classroom-Based Audio Tasks on students' listening skills students at SMK 4 PGRI Bandar Lampung. The research employed a quantitative approach using a pre-test and post-test control group design. The participants consisted of two classes selected through cluster random sampling, with 34 students in each class. The experimental class received treatment through Google Classroom-Based Audio Tasks, while the control class was taught using conventional audio media.

Prior to conducting the treatment, the researcher administered a try-out test to another class to examine the validity and reliability of the research instrument. Based on the try-out results, 25 valid items were selected for the pre-test and another 25 items for the post-test. The treatment was conducted in three meetings focusing on structured listening activities distributed through Google Classroom.

Before testing the hypothesis, the researcher conducted prerequisite tests to ensure that the data met the assumptions required for parametric analysis. The normality test was analyzed using the Shapiro-Wilk test because the number of participants in each group was fewer than 50 students.

Table 1. Normality Test Results

Group	Sig. (Shapiro-Wilk)
Pre-test Experimental Class	0.186
Post-test Experimental Class	0.660
Pre-test Control Class	0.737
Post-test Control Class	0.308

The results showed that all significance values were higher than 0.05. Therefore, it can be concluded that the data were normally distributed.Furthermore, the homogeneity of variance test was conducted using Levene's Test, as shown in Table 2.

Table 2. Homogeneity Test Result

Levene Statistic	df1	df2	Sig.	Levene Statistic
0.287	**1**	**66**	**0.594**	**0.287**

Since the significance value was 0.594, which exceeded 0.05, the data were considered homogeneous. Thus, the assumptions for conducting an Independent Sample t-test were fulfilled.

After meeting the assumptions of normality and homogeneity, the researcher conducted an Independent Sample t-test to examine the hypothesis of the study.

Table 3. Hypothesis Testing

Measurement		Experiment (N=34)	Control (N=34)
Pretest	M	46.35	45.18
	SD	14.453	13.268
Posttest	M	68.82	59.76
	SD	10.080	20.372
t^1		3.652	0.001
p^1		0.001 (<0.05)	0.001 (<0.5)

As presented in Table 1, the mean score of the experimental class increased significantly from 46.35 in the pre-test to 68.82 in the post-test. Meanwhile, the control class also showed improvement, increasing from 45.18 to 59.76. However, the increase in the experimental class was substantially higher than that of the control class. These findings indicate that students who were taught using Google Classroom-Based Audio Tasks demonstrated better listening performance compared to those who learned through conventional audio media.

The result of the Independent Sample t-test revealed that the significance value was 0.001, which was lower than the significance level of 0.05. Therefore, the alternative hypothesis (Ha) was accepted, while the null hypothesis (Ho) was rejected. This result indicates that the use of Google Classroom-Based Audio Tasks had a statistically significant positive influence on students' listening skills.

In addition to the statistical findings, classroom observations during the treatment sessions also showed positive learning behaviors among students in the experimental class. Students appeared more engaged, focused, and motivated while participating in listening activities through Google Classroom. The structured audio tasks, which included listening exercises, comprehension questions, and guided activities, encouraged students to actively interact with the listening materials. Moreover, students were able to replay the audio recordings and complete the tasks independently using their smartphones, allowing them to learn more flexibly and comfortably.

Overall, the findings suggest that the integration of structured audio tasks within Google Classroom can effectively support listening instruction in EFL classrooms. The implementation of digital audio tasks not only improved students' listening achievement but also enhanced students' participation, engagement, and learning motivation during the instructional process.

5. Discussion

The findings of this study demonstrated that Google Classroom-Based Audio Tasks significantly improved students' listening skills. This conclusion was supported by the statistical analysis, which showed that the post-test mean score of the experimental class (68.82) was considerably higher than that of the control class (59.76). Furthermore, the Independent Sample t-test revealed a significance value of 0.001, which was lower than the significance level of 0.05. These findings indicate that the implementation of structured audio tasks through Google Classroom had a positive and statistically significant effect on students' listening comprehension.

One possible explanation for this improvement is the flexibility provided by Google Classroom in accessing listening materials. Through the platform, students were able to replay audio recordings multiple times and complete listening activities independently using their smartphones. This flexibility allowed students to process spoken language at their own pace, which is particularly important in listening comprehension because learners often require repeated exposure to spoken input in order to understand meaning effectively. This finding is consistent with Zhang (2021), who stated that digital learning environments can enhance learner engagement and improve language learning outcomes when supported by meaningful and interactive instructional activities.

In addition, the structured design of the audio tasks appeared to help students maintain concentration during listening activities. The tasks required students to identify

specific information, answer comprehension questions, and interpret the meaning of spoken texts systematically. Such structured activities may have reduced students' confusion and guided them step by step throughout the listening process. This finding supports the theory proposed by Huang and Li (2022), who emphasized that scaffolding in online learning environments can facilitate students' comprehension and gradually improve their language skills. Through structured support, learners become more capable of processing listening materials effectively and independently.

The findings of this study can also be explained through Cognitive Load Theory proposed by Leppink (2021). According to this theory, listening comprehension requires substantial cognitive processing because spoken information is temporary and cannot always be revisited instantly during real-time communication. Therefore, instructional activities should be designed carefully to reduce unnecessary cognitive burden. In this study, the listening materials were organized into manageable and sequential tasks, enabling students to focus on essential information without becoming cognitively overwhelmed. As a result, students were able to comprehend the listening materials more effectively and improve their listening performance.

Furthermore, the findings are in line with previous studies on technology-enhanced listening instruction. Amalia and Hidayat (2021) found that audio-based learning activities could improve students' listening comprehension as well as their learning motivation. Similarly, Rahimi and Fathi (2021) reported that technology-assisted language learning provides learners with greater opportunities for listening practice and exposure to authentic language input. The present study extends these previous findings by demonstrating that Google Classroom can function not only as an administrative learning platform but also as an effective medium for implementing structured listening activities in EFL classrooms.

Another important finding of this study relates to students' engagement during the learning process. Students in the experimental class appeared more active and enthusiastic during listening activities compared to those in the control class. This condition may be influenced by the familiarity of students with smartphone-based learning environments and the accessibility of digital platforms in their daily lives. According to Suryani et al. (2022), digital learning platforms such as Google Classroom can increase students' participation and interaction because they provide more flexible and student-centered learning experiences. Therefore, the use of Google Classroom-Based Audio Tasks may not only

improve students' listening achievement but also create a more engaging learning atmosphere.

Despite the positive findings, several limitations of this study should be acknowledged. First, the study involved only two classes from one school, limiting the generalizability of the findings to broader educational contexts. Second, the treatment was conducted within a relatively short duration consisting of only three meetings. A longer period of implementation might provide deeper insights into students' listening development and long-term learning outcomes. Third, this study mainly focused on quantitative data and did not explore students' perceptions, attitudes, or learning experiences in greater detail.

Therefore, future researchers are encouraged to involve larger samples from different educational settings and combine quantitative and qualitative approaches to obtain more comprehensive findings. Future studies may also investigate the effectiveness of Google Classroom-Based Audio Tasks on other language skills, such as speaking, reading, or vocabulary development. In addition, future research could compare different types of digital listening activities to determine which instructional designs are most effective for improving listening comprehension in EFL classrooms.

Overall, this study contributes to the growing body of literature on technology-enhanced language learning by providing empirical evidence that Google Classroom-Based Audio Tasks can effectively improve students' listening skills in EFL contexts. The findings also suggest that carefully designed digital listening activities can support more flexible, engaging, and meaningful language learning experiences for students.

6. Conclusion

The findings of this research highlight the importance of integrating well-designed digital learning activities into EFL listening instruction. Google Classroom was not only effective as a platform for distributing learning materials, but also functioned as a meaningful digital environment that supported active listening practice through structured audio tasks. The flexibility of accessing audio materials repeatedly and independently enabled students to process spoken language more effectively and confidently. This study concluded that Google Classroom-Based Audio Tasks had a significant positive effect on students' listening skills. The findings showed that students in the experimental class achieved better listening performance than those in the control class. In addition, the use

of structured audio tasks through Google Classroom increased students' engagement, participation, and flexibility during listening activities.

This study contributes to the growing body of research on technology-enhanced language learning, particularly in the Indonesian EFL context. The results suggest that teachers should consider integrating structured digital listening activities into classroom instruction to create more engaging and student-centered learning experiences. Furthermore, the study demonstrates that accessible digital platforms such as Google Classroom can play a significant role in improving students' listening skills when combined with appropriate instructional design and meaningful learning tasks. Google Classroom can be effectively utilized not only as a learning management platform but also as a supportive environment for improving students' listening comprehension through structured audio tasks based.

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