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Digital Tools in Language Education: Boosting Listening Skills with Edpuzzle for High School Students

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ABSTRACT

This research investigated the impact of the Edpuzzle application on the listening skills of eleventh-grade students at SMAN 1 Sekincau, Lampung Barat. The study aimed to assess whether using Edpuzzle as a digital tool could significantly enhance students' listening comprehension compared to traditional methods. A quasi-experimental design with a pre-test and post-test approach was employed. Two groups were involved: an experimental group that used Edpuzzle for listening practice and a control group that received conventional listening instruction. Pre-tests and post-tests were conducted over six weeks to measure improvements in listening skills, focusing on understanding the main idea, identifying details, and making inferences. Data were analyzed using SPSS version 26, with an independent samples t-test comparing the scores of both groups. Results showed a significant improvement in the experimental group's listening skills, confirming Edpuzzle's effectiveness in enhancing comprehension. The findings suggest that digital tools like Edpuzzle provide an interactive learning experience, allowing students to learn at their own pace and receive immediate feedback, crucial for developing listening skills. The study implies that educators should integrate digital tools like Edpuzzle into teaching strategies to promote active learning and improve listening skills. It highlights the benefits of combining traditional methods with digital innovations to create more engaging and effective language learning environments. Future research should examine the long-term effects of digital tools in language education and their impact on other language skills.

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Introduction

Listening is a fundamental skill in language learning, critical for effective communication and comprehension. Unlike reading, which involves visual processing, listening demands more focused auditory processing to understand and interpret spoken language (Andrean et al., 2022). This difference often makes listening a more challenging skill for language learners. Students, particularly those learning English as

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a foreign language, frequently struggle with listening skills due to limited practice opportunities and insufficient interactive learning resources. Traditional methods, such as listening to teachers read aloud in class, often prove inadequate in addressing these challenges, as they may not effectively engage students or provide the necessary practice to enhance listening comprehension.

The importance of listening skills in language acquisition has been widely acknowledged in educational research. Effective listening allows students to understand spoken English, which in turn supports the development of other language skills such as speaking, reading, and writing (Şendağ et al., 2018). However, in many educational settings, listening is often undervalued or inadequately addressed in language curricula. Teachers may prioritize reading and writing skills, leading to insufficient emphasis on listening exercises (Damiri et al., 2022). This oversight can create significant gaps in students' language proficiency, particularly in environments where English is not the primary language.

In the context of SMAN 1 Sekincau, Lampung Barat, preliminary research indicates that students face several challenges in developing their listening skills. Interviews with teachers and students reveal that listening classes are rarely conducted, and when they are, students often find it difficult to follow and comprehend spoken English due to limited vocabulary, unfamiliar pronunciation, and the rapid pace of native speakers. Additionally, teachers struggle to find effective and engaging media to support listening instruction, further complicating efforts to improve students' auditory skills. As a result, a significant number of students score below the minimum mastery criteria in listening tests, highlighting the need for more effective teaching tools and strategies.

The use of technology in education, particularly in language learning, has been increasingly explored as a means to enhance engagement and learning outcomes (Hastomo et al., 2024). Digital tools and applications such as Edpuzzle have emerged as innovative solutions that can address some of the limitations of traditional listening exercises (Mischel, 2019). Edpuzzle is a video-based learning application that allows teachers to integrate interactive content, such as quizzes and audio notes, into existing videos from platforms like YouTube, Khan Academy, and TED Talks (Cesare et al., 2021). This interactive approach not only captures students' attention but also allows for self-paced learning and repeated exposure to listening material, which are crucial for developing listening skills.

Research has shown that Edpuzzle can be an effective tool for improving students' listening skills. For example, previous studies demonstrated significant improvements in students' listening comprehension after using Edpuzzle as a learning tool (Abou Afach et al., 2018; Rahayu & Bhaskoro, 2022). These studies highlighted the platform's ability to provide interactive, engaging, and customized listening experiences that cater to students' individual learning needs. Moreover, the application's ability to track students' progress and provide immediate feedback further enhances its effectiveness as a teaching and learning tool.

Despite these promising findings, there is still limited research on the application of Edpuzzle in different educational contexts, particularly in Indonesian high schools.

This study aims to fill this gap by examining the influence of using the Edpuzzle application on the listening skills of eleventh-grade students at SMAN 1 Sekincau, Lampung Barat. By adopting a quasi-experimental design, this research will explore whether integrating Edpuzzle into listening instruction can significantly improve students' listening performance compared to traditional methods.

The primary objective of this study is to determine the effectiveness of the Edpuzzle application in enhancing students' listening skills. The study will employ pre- and post-tests to assess students' listening comprehension before and after using the application. Additionally, it will analyze the data using statistical methods to determine the significance of any observed changes in listening performance. This research is expected to provide valuable insights for educators seeking innovative approaches to teaching listening skills and contribute to the broader discourse on the integration of technology in language education.

Furthermore, this study holds practical significance for various stakeholders, including students, teachers, and researchers. For students, the findings could lead to more engaging and effective listening practices that cater to their learning preferences and needs. For teachers, the study could provide a model for incorporating digital tools into their instructional strategies, enhancing their ability to teach listening skills more effectively. Finally, for researchers, this study will add to the existing body of knowledge on technology-enhanced language learning, offering new perspectives on the use of Edpuzzle and similar applications in diverse educational settings.

In conclusion, the increasing reliance on digital tools in education, coupled with the challenges faced by students and teachers in developing effective listening skills, underscores the importance of exploring innovative solutions like Edpuzzle. This study seeks to investigate whether integrating Edpuzzle into listening instruction can provide a significant improvement in students' listening skills, thereby offering a potential model for other educators to follow.

Method

Research Design

This study employed a quasi-experimental design with a pre-test and post-test approach to investigate the influence of the Edpuzzle application on students' listening skills. Quasi-experimental designs are suitable for educational settings where random assignment is not feasible but control and experimental groups can be formed using existing classes (Andewi & Hastomo, 2022). In this study, the participants were divided into two groups: an experimental group that received instruction using the Edpuzzle application and a control group that followed traditional listening exercises without the use of digital tools.

Participants

The population for this study comprised eleventh-grade students at SMAN 1 Sekincau, Lampung Barat, during the 2023/2024 academic year. The sample was selected using cluster random sampling from three classes. The total number of

participants was 68 students, with 34 students assigned to the experimental group and 34 students to the control group. All participants had similar backgrounds in terms of English language proficiency, ensuring comparability between groups.

Instruments

Two primary instruments were used for data collection: a pre-test and a post-test. The tests measured the students' listening comprehension skills and were constructed based on the English curriculum for the eleventh grade. The pre-test was administered to both groups before the intervention to establish a baseline for each student's listening skills. The post-test was administered after six weeks of instruction to assess any improvements in listening skills resulting from the use of Edpuzzle in the experimental group.

The tests consisted of multiple-choice questions and short-answer questions designed to evaluate various aspects of listening comprehension, including understanding the main idea, identifying specific details, and making inferences. The tests were validated through expert judgment and piloted to ensure reliability and clarity.

Data Collection Procedures

Data collection took place over a period of six weeks. Before the intervention, the pre-test was conducted for both the experimental and control groups to assess their initial listening skills. Following the pre-test, the experimental group was taught using the Edpuzzle application, while the control group continued with traditional listening instruction methods. The experimental group had access to interactive video content through Edpuzzle, which included embedded quizzes and audio notes to engage students actively. Teachers guided students in using the application, allowing them to interact with the content and receive immediate feedback.

In contrast, the control group followed a conventional method where the teacher read aloud or played audio recordings, and students answered questions based on the listening material. After the intervention period, both groups took the post-test under similar conditions to measure any changes in their listening skills.

Data Analysis

The data collected from the pre-test and post-test were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0. An independent sample t-test was conducted to compare the mean scores of the pre-test and post-test between the experimental and control groups. This test was used to determine whether there were statistically significant differences in listening skills improvement between the groups.

Before performing the t-test, assumptions of normality and homogeneity of variance were checked using the Shapiro-Wilk test and Levene's test, respectively. The results indicated that the data were normally distributed and that variances were homogeneous (Sig. 0.594 > 0.05), fulfilling the requirements for parametric testing. The hypothesis testing was conducted at a 0.05 significance level. If the p-value (Sig. 2-

tailed) was less than 0.05, the null hypothesis was rejected, indicating a significant effect of using the Edpuzzle application on students' listening skills.

Ethical Considerations

The study adhered to ethical standards for educational research. Consent was obtained from the school administration, teachers, and students before conducting the study. Participants were informed about the purpose of the research, the procedures involved, and their right to withdraw from the study at any time. The confidentiality and anonymity of all participants were maintained throughout the research process.

Results and Discussion

Results

The results of this study are based on the analysis of the pre-test and post-test scores of the experimental group (using Edpuzzle) and the control group (using traditional listening methods) among eleventh-grade students at SMAN 1 Sekincau, Lampung Barat. The data were analyzed using SPSS version 26 to determine the normality, homogeneity, and significance of the differences between the two groups.

Table 1 presents the descriptive statistics for the pre-test and post-test scores of both groups. The mean score of the pre-test for the experimental group was 64.32, while for the control group, it was 63.85. This shows that both groups had similar listening comprehension skills at the baseline, with no significant difference in initial ability levels.

Table 1. Result of the Mean Post-test Score

Group	N	Mean Pre-Test Score	Mean Post-Test Score
Experimental	34	64.32	78.45
Control	34	63.85	68.12

After the intervention, the mean post-test score for the experimental group improved to 78.45, while the control group showed a smaller increase to 68.12. The standard deviation for the experimental group's post-test was lower than that of the control group, indicating that the scores in the experimental group were more consistent.

Normality and homogeneity tests were conducted to verify the suitability of the data for parametric testing. The Shapiro-Wilk test for normality resulted in p-values greater than 0.05 for both groups, indicating that the data were normally distributed. Additionally, Levene's test for homogeneity of variance resulted in a significance value of 0.594 (based on the mean), which is greater than 0.05. This confirms that the assumption of homogeneity of variances was met, allowing for the use of an independent samples t-test.

An independent samples t-test was conducted to examine whether there was a statistically significant difference in the listening comprehension scores between the experimental and control groups after the intervention. The results of the t-test showed a significant difference in the post-test scores between the two groups (Sig. 2-tailed = 0.001 < 0.05). This indicates that the use of the Edpuzzle application had a significant

positive effect on the students' listening skills compared to traditional listening instruction.

Discussion

The findings of this study reveal that the integration of the Edpuzzle application in teaching listening skills has a significant impact on improving students' listening comprehension compared to traditional methods. This section discusses the implications of these results in the context of the relevant literature and theoretical frameworks. The significant improvement in the experimental group's listening skills aligns with previous studies that have highlighted the benefits of using interactive digital tools like Edpuzzle in language learning. According to Mischel (2019), the interactive nature of Edpuzzle, which includes embedded quizzes and immediate feedback, engages students more effectively than traditional listening exercises. This interactivity allows students to actively participate in the listening process, which enhances comprehension and retention of information.

The ability of Edpuzzle to provide differentiated instruction is another factor that may have contributed to the improvement in students' listening skills. Unlike traditional methods, where the teacher's pace and content delivery are uniform for all students, Edpuzzle allows for self-paced learning (Nguyen, 2023). Students can pause, replay, and engage with the material multiple times, which is particularly beneficial for those who need more time to process auditory information. This aligns with the findings of Cesare et al. (2021), who noted that Edpuzzle effectively caters to diverse learning needs, thereby improving listening comprehension among students.

The control group, which received traditional listening instruction, showed only a marginal improvement in their post-test scores. This suggests that conventional methods, such as listening to teacher-read texts or audio recordings, may not be sufficient to develop students' listening skills to the same extent as digital tools like Edpuzzle. Traditional methods often lack interactivity and may not adequately engage students in the listening process. As Harmer (2001) points out, effective listening instruction requires more than just passive listening; it involves engaging students in tasks that promote active listening and comprehension.

Moreover, the limitations of traditional methods, such as the inability to provide immediate feedback and the lack of engaging content, could also explain the lesser improvement in the control group. Without immediate feedback, students may not recognize their mistakes or misunderstandings, hindering their ability to learn from the listening exercises. In contrast, Edpuzzle provides real-time feedback, allowing students to correct their mistakes and reinforce their understanding.

The findings of this study have several pedagogical implications for language educators. First, the use of digital tools like Edpuzzle can enhance the effectiveness of listening instruction by providing an interactive and engaging learning experience. Teachers should consider integrating such tools into their curriculum to promote active listening and improve students' listening comprehension.

Second, the study highlights the importance of using varied instructional strategies to cater to different learning styles. While some students may benefit from

traditional methods, others may require more interactive and engaging approaches to develop their listening skills. Therefore, a blended approach that combines traditional and digital methods could be more effective in addressing the diverse needs of students.

This study contributes to the growing body of research on technology-enhanced language learning by providing empirical evidence on the effectiveness of Edpuzzle in improving listening skills. While previous studies have focused on different educational settings and age groups, this research extends the understanding of Edpuzzle's impact by focusing on high school students in Indonesia. The findings support the notion that technology can play a crucial role in addressing the challenges of listening instruction in language learning.

Conclusion

This study examined the impact of using the Edpuzzle application on the listening skills of eleventh-grade students at SMAN 1 Sekincau, Lampung Barat. The findings revealed a significant improvement in the listening skills of students who used Edpuzzle compared to those who received traditional instruction. The experimental group's post-test scores showed notable gains, demonstrating that Edpuzzle is an effective digital tool for enhancing listening skills in language learning.

The study's results imply that integrating interactive digital tools like Edpuzzle can significantly benefit language learning by providing dynamic, engaging, and personalized experiences. This supports the idea that blending digital applications with traditional teaching methods can cater to diverse learning styles and needs, creating a more effective and inclusive learning environment. Educators are encouraged to adopt a mix of digital and traditional approaches to maximize student engagement and learning outcomes.

However, the study has limitations, such as a small sample size from a single school and a focus on short-term effects, which may limit the generalizability of the findings. Future research should involve larger and more diverse samples, explore long-term impacts, and consider students' attitudes toward using digital tools like Edpuzzle. Additionally, further studies could examine how integrating multiple digital tools can create a more comprehensive language learning experience.

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