

**USING AUDIO PODCAST TO ENHANCE SENIOR HIGH SCHOOL
STUDENTS' LISTENING COMPREHENSION**

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ABSTRAK

USING AUDIO PODCAST TO ENHANCE SENIOR HIGH SCHOOL STUDENTS' LISTENING COMPREHENSION

oleh

Rahma Dhea Agustina

Penelitian ini meneliti peningkatan signifikan mengenai pemahaman menyimak siswa setelah mereka diajarkan melalui media audio podcast. Penelitian ini dilakukan pada satu kelas siswa kelas sepuluh sekolah menengah atas dengan menggunakan pendekatan kuantitatif dan desain one-group pre-test and post-test. Selama lima pertemuan, siswa menerima pembelajaran menyimak menggunakan podcast berbahasa Inggris yang telah dipilih. Intervensi ini bertujuan untuk meningkatkan berbagai sub-keterampilan menyimak, meliputi: 1. mengidentifikasi ide pokok, 2. mengenali informasi rinci, 3. membuat inferensi, 4. memahami kosakata dalam konteks, dan 5. membedakan kata dari bunyi. Kemampuan menyimak siswa diukur sebelum dan sesudah perlakuan melalui tes listening terstruktur. Hasil penelitian menunjukkan adanya peningkatan yang signifikan pada nilai post-test siswa; nilai rata-rata meningkat dari 70,83 menjadi 83,56, menunjukkan peningkatan sebesar 12,72 poin. Hal ini menunjukkan bahwa pembelajaran menggunakan podcast memiliki dampak positif terhadap kemampuan menyimak secara keseluruhan. Berdasarkan hasil analisis data, diketahui bahwa nilai Asymp. Sig. (2-tailed) sebesar $0,000 < 0,005$, yang berarti terdapat peningkatan yang signifikan antara hasil pre-test dan post-test.

ABSTRACT

USING AUDIO PODCAST TO ENHANCE SENIOR HIGH SCHOOL STUDENTS' LISTENING COMPREHENSION

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This study investigates the students' listening comprehension significant improvement after they have been taught through audio podcast. Conducted on one class of tenth-grade high school students, the research used a quantitative approach with a one-group pre-test and post-test design. Over five meetings, the students received listening instruction through selected English-language audio podcasts. The intervention aimed to improve various listening sub-skills, including 1. identifying main ideas, 2. recognizing detailed information, 3. making inferences, 4. understanding vocabulary in context, and 5. distinguishing different sounds. Listening comprehension was measured before and after the treatment using structured listening tests. The results showed a significant improvement in students' post-test scores across, the mean score increased from 70.83 to 83.56, reflecting an improvement of 12.72 points. suggesting that podcast-based learning has a positive impact on overall listening ability. The results that have been obtained, it is known the value in the results of this study is Asymp. Sig. (2-tailed) of $0.000 < 0.005$. This indicates that there is a significant improvement between the pre-test and post-test results.

Key word: *podcast, listening, listening comprehension, audio podcast,*

Research Title : USING AUDIO PODCAST TO ENHANCE
SENIOR HIGH SCHOOL STUDENTS'
LISTENING COMPREHENSION

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Menyatakan bahwa skripsi ini adalah karya dari pelaksanaa penelitian saya sendiri. Sepanjang pengetahuan saya, karya ini tidak berisi materi yang ditulis orang lain, kecuali bagian bagian tertentu yang saya gunakan sebagai acuan. Apabila ternyata terbukti bahwa pernyataan ini tidak benar, sepenuhnya menjadi tanggung jawab saya.

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MOTTO

“builds tomorrow dreams. Today”

-mulyanto

DEDICATION

By the name of Allah Aubhanahu Wa Ta'ala, she would like to proudly dedicate this script to Rahma dheagustina and her dream her late father Mulyanto, her dear mother Ida Porani, all teachers, friends, and her alma mater – Lampung University, her lecturers in English Education Study Program.

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Alhamdullilahirabbil'alamin. Praise is only for Allah SWT., the almighty God, the most gracious and the most merciful, for giving the writer an ability to finish this script with tittle "mmm"

Immeasurable appreciation and deepest gratitude for the help and support are extended to the following persons who have contributed in making this script possible.

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Finally, the writer believes that the writing if still far from perfection. There might be weakness in this research. Thus, comments, criticism, and suggestions are always open for better research. Somehow, the writer hopes this research would give a positive contribution to the educational development, the readers and to those who wants to conduct further research.

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I. INTRODUCTION

Some points are mentioned in this chapter as prior knowledge from the study. Those consist of: background, research question, research objective, uses of the research, scope of the research, and definition of terms.

1.1 Background

There are four language components to learning English: grammar, vocabulary, pronunciation, and language skills such as listening, speaking, reading, and writing. A student must develop the skills to become a good English speaker. Many students have a problem with listening during the learning process. Some researchers such as Afifah (2018) and Arsyida (2018) found that students find listening to English words difficult since the learning environment is uncomfortable and unappealing.

Wallace (2004:13) wrote that listening skill is an important skill because this skill may humans acquire perception, knowledge, information, and success in communicating with others. Therefore, listening skill is a very crucial skill in learning English. However, listening is not a simple process. One can listen means they can differentiate between sounds, comprehend and understand vocabulary and grammar, interpret intonation and meaning, consider everything at the same time, and also adjust to the social-cultural context from utterances that are listened to (Vandergrift, 2012).

In real-life contexts, the reality of teaching listening falls short of expectations. Listening remains a significant challenge for learners, who often struggle to understand the meaning or purpose of what they hear. Several factors contribute to these difficulties. Firstly, English is a foreign language rarely used by students in

their daily lives. Additionally, listening materials often feature various accents, idioms, and uncommon vocabulary. Another issue is that students are accustomed to hearing non-native speakers in class but are expected to comprehend listening tests in native accents. Moreover, the length and speed of listening materials, along with a lack of concentration, affect students' comprehension (Bingol et al., 2014). To address this, teachers can use various media to support language learning, particularly listening skills. Technology facilitates the maintenance of traditional education systems involving teachers, schools, and parents while enabling interactive learning through various tools (Retnawati, 2019).

Listening becomes more difficult than reading because students find it easier to identify the written words than to identify the spoken words. Further, students while reading can reread a phrase or sentence which is different from listening in which the students only get one chance to comprehend the information. In reading, if we still do not understand the essence of reading, we can reread it. This is very different from listening which can be done with one occasion without being able to repeat it. (Pratiwi & andriyanti, 2019)

Richards (2008) argues that students must develop the ability to use the language in the real world rather than only to make grammatically correct, and propositional sentences. EFL students need lots of practice using English, especially orally, get them speaking in the classroom, teach them where to find opportunities to practice speaking English outside class, and reward them for doing so, exposure to living English, and never lead them to believe that English is a set of rules and words to memorize (Richards, 2008).

The innovative and effective medium supporting this integration is needed. Rashtchi (2001, as cited in Sze, 2006) mentions that Podcasts are an innovative media that can meet the students and classroom needs. Edisitingha (2007) found that by using Podcasts the students found it easier to access listening practice, and Podcasts helped them to improve their oral presentation skills, too. These are in line with Chan, et al (2011) who found that Podcast covers a wide range of subject matters so Podcasts can be used for intensive and extensive listening activities, and they can match the student's needs and interests too.

A podcast is an audio recording available online and serves as a learning resource (Asmawati, 2017). It is a recent innovation for enhancing students' listening and speaking abilities (SZE, 2006). Podcasts offer diverse content forms, including audio, video, and images (Rosell-Aguilar, 2007). Nowadays, radio, television, and social media use podcasts to share interesting information (Scutter et al., 2010). Podcasts as learning materials fall into two categories: authentic content from native speakers not intended for learning, such as sports or television themes, and learning content specifically designed for educational purposes, often provided by teachers (Fernandez et al., 2009).

Podcasts benefit both students and teachers. For students, podcasts provide up-to-date content and authentic native voices, enhancing listening practice (Kohler et al., 2010). They are easy to access and download, available anytime and anywhere. Podcasts also help students practice pronunciation (Ducate & Lomicka, 2009) and are convenient for learning (Nataatmadja & Dyson, 2008; Stanley, 2006). For teachers, podcasts support teaching materials, especially listening skills, and help build students' self-confidence and create an enjoyable learning environment. Repeated listening helps students understand specific topics, boosting their confidence. Podcasts can also serve as a support tool in EFL classrooms (Hasan, 2013).

Moreover, podcasts enhance the connection between teachers and students, allowing teachers to vary their teaching approaches and fostering a sense of community among students (Palenque, 2016). Although using resources with authentic native speakers like podcasts is not a pedagogical approach, it provides an authentic language context. Podcasts can be used in test preparation to help students learn English. They combine e-learning with audio, video, and text files, potentially replacing traditional language lab equipment and making language learning more engaging for students.

A study by Hasan (2013) reviewed twenty journal articles on the impact of podcasts on ESL students' language skills and attitudes, finding that podcasts support language learning. Heilesen (2010) reviewed literature from 2004 to 2009 on podcast use in higher education, concluding that many students saw podcasts as a

valuable enhancement to their study environment and used them sensibly to supplement their studies. Another study by Yoestara and Putri (2019) found that podcasts can improve listening and speaking skills among Indonesian students.

1.2 Research Question

In line with the problem above, the research specified the following research question:

1. Is there any significant improvement in students' listening achievement after the students have been taught listening by using podcasts?

1.3 Research Objective

Referring to the problems and research question above, the purpose of the research is as follows:

1. To find whether there is any improvement in students' listening achievement after the students have been taught by using podcast.

1.4 The Use of the Research

The research might be beneficial for some purposes both theoretically and practically. The uses of this research are as follows:

1. Theoretically, it can support the previous studies that prove the effectiveness of using podcasts to help student improve their listening abilities.
2. Practically, it may help teachers to provide sufficient material and activity in teaching podcasts.

1.5 Scope of the Research

This research used a quantitative approach to examining the data. It focuses on using podcasts in teaching listening. The population of the research was the first-grade of students SMAN 1 Cilegon.

1.6 Definition of Terms

Listening

Listening is the first of the four main language skills. Listening is an active process by which we make sense of, assess, and respond to what we hear. Listening involves identifying the sounds of speech and processing them into words and sentences.

Podcast

A podcast is a digital medium consisting of audio (or video) episodes that relate to a specific theme. Podcasts combine elaborate and artistic sound production with thematic concerns ranging from scientific research to slice-of-life journalism.

Learn English Podcast

The Learn English Podcast is an app from the British Council that helps improve English listening, reading, and understanding. The app offers podcasts on a variety of topics, including general English, business English, and language learning tips.

II. LITERATURE REVIEW

Some theories that are considered in a framework are presented in this chapter. Those are: The concept of listening, aspects of listening, process of listening, the uses of podcast to improve listening, advantages and disadvantages of using podcast for studying listening, previous study, theoretical assumption, and hypothesis.

2.1 Concept of Listening

In our language, listening is usually the first language skill that we learn. Listening is receiving language through the ears, listening involves identifying the sounds of speech and processing them into words and sentences. When we listen, we use our ears to receive individual sounds (letters, stress, rhythm, and pauses) and we use our brain to convert these into messages that mean something to us.

Listening is the ability to identify and understand what others are saying. This involves understanding a speaker's accent or pronunciation, his grammar, and his vocabulary, and grasping his meaning (Howatt and Dakin, 1974). An able listener is capable of doing these four things simultaneously.

Listening is the foundational skill that learners should develop first, as it is the most fundamental among the four key language development skills. It is the initial skill learners use when they start learning a language, particularly a spoken one. Furthermore, listening is more frequently utilized in classroom settings than other skills, often without learners being aware of it. On average, people spend 9% of their time writing, 16% reading, 30% speaking, and 45% listening. This demonstrates the high frequency and importance of listening in educational environments.

Effective communication in the classroom heavily relies on listening. During the listening process, learners receive and interpret spoken messages. If they can

understand these messages accurately, communication becomes more effective, leading to better learning outcomes. Therefore, developing strong listening skills is essential for learners to enhance their language development and academic success.

In face-to-face interactions, listening involves complex interpretive processes. A network of situational variables interacts to shape the meanings derived from conversation. Factors such as the reciprocity of perspectives between speakers, the etcetera principle (using knowledge of language and the world to fill in gaps), and the combination of retrospective and prospective meanings are all at play. This multifaceted processing places a significant demand on individuals, especially when communicating in a foreign or second language.

2.2 Aspects of Listening

According to Tyagi (2013). Listening involves a sender, a message and a receiver. It is the psychological process of receiving, attending to constructing meaning from and responding to spoken and/or non verbal messages.

Listening comprises of some key components, they are:

- discriminating between sounds
- recognizing words and understanding their meaning
- identifying grammatical groupings of words,
- identifying expressions and sets of utterances that act to create meaning,
- connecting linguistic cues to non-linguistic and paralinguistic cues,
- using background knowledge to predict and to confirm meaning and
- recalling important words and ideas.

Based on Tyagi's (2013) theory, the researcher focuses on five listening sub-skills: main idea, detail information, inference, vocabulary, and sound discrimination. Each sub-skill corresponds to specific listening processes as outlined in Tyagi's model. Main idea relates to the listener's ability to comprehend the overall message or central thought of a spoken text, which reflects a higher-level cognitive process involving judgment and summarization. Detail information involves identifying specific facts or pieces of information presented in the audio, requiring both

understanding and the ability to recall what has been heard. Inference refers to the listener's skill in interpreting implied meanings or reading between the lines, which demands evaluative thinking and the use of prior knowledge. Vocabulary focuses on recognizing and understanding words in context, which is essential for constructing meaning during the listening process. Lastly, sound discrimination is the ability to distinguish between different sounds, such as phonemes, stress patterns, and intonation, which is fundamental for accurate perception and comprehension in listening activities. These five sub-skills are used in this study to measure the effectiveness of podcast-based learning on students' listening comprehension.

2.3 Process of Listening

In the listening process, the students were involved in five stages: hearing, understanding, remembering, evaluating, and responding (Tyagi, 2013).

- **Receiving (Hearing)**

The first stage of the listening process is the receiving stage, which involves hearing and attending. Hearing is the perception of sound waves; the students must initially hear to listen, but the students do not need to listen to hear.

- **Understanding (Learning)**

In the Figure of the listening process, stages two, three, and four are represented by the brain because it is the primary tool involved in these stages of the listening process. In the understanding stage, the students attempt to learn the meaning of the message; comprehend/examine the meaning of the stimuli they have perceived.

- **Remembering (Recalling)**

Remembering means that the students have not only received and clarified a message but have also added it to the brain's stockpile. If the students do not remember what they have heard, they are probably not effectively listening. Even a minor distraction can cause misinterpretation of the message. The remembering stage of listening helps us move forward with communication.

- Evaluating (Judging)

The fourth stage in the listening process is evaluating or thinking critically about the message. The students determine whether the information spoken is well-constructed or muddled, partial or impartial, invalid or valid.

- Responding (Answering)

Responding is the fifth and final stage of the listening process. The students was provided verbal and/or nonverbal reactions. Nonverbal responses such as nodding or eye contact allow the listener to communicate his or her level of interest without interrupting the speaker, thereby preserving the speaker/listener roles. When the students respond verbally to what they hear and remember—for example, with a question or a comment.

2.4 Teaching Listening

To teach Listening to students, there are three steps:

- Pre-listening activity: students are asked what they are going to listen to, create the discussion to help the atmosphere, using examples and showing some relevant material
- During listening activities: students are asked to listen to the podcast, students are asked to take notes, and repeat the podcast a few times.
- Post-listening activities: students are asked about what they have learned so far, the teacher asks questions based on the material in the podcast, and students are expected to discuss and answer them.

2.5 Podcast as Teaching Media

Listening to podcasts that use English can make learning English listening fun. This is one of the efforts approached to improve our skills in English listening, and also to motivate students in improving English listening skills. (Suwartono, 2012) states that. “In a previous study on a connected speech by the author, it was revealed that podcasts helped students learn English connected speech”.

Using podcasts to teach listening and speaking is highly effective when combined with Task-Based Learning (Brown, 2007). This method allows students to solve

problems, write, perform role-plays, or reach a consensus either individually, in pairs, or in groups, all aimed at fostering meaningful communication. As a result, students become more active participants and are more engaged in the teaching and learning process.

Using podcasts in teaching listening and speaking can be effectively achieved through Task-Based Learning (Brown, 2007). This approach encourages students to solve problems, write, perform role-plays, or reach an agreed conclusion individually, in groups, or in pairs, with the goal of fostering meaningful communication. As a result, students become more active and engaged participants in the teaching and learning process.

Podcasts have become an increasingly popular medium in education due to their flexibility, accessibility, and authenticity. As a form of digital audio content, podcasts allow teachers to deliver materials in an engaging way and give students the opportunity to learn beyond the classroom setting.

2.5.1 Concept of podcast

A podcast is a digital audio program that primarily delivers audio content, often supported with text, visuals, or even video, and distributed through digital platforms for flexible, on-demand access. Podcasts can be categorized into two main types. The first is the audio podcast, which consists of spoken content, music, or sound effects without visuals. The second is the video podcast, which combines both audio and visual elements, enabling audiences to listen while also engaging with images, interviews, or demonstrations. Podcasts are usually produced in series or episodes, covering a wide range of topics such as education, entertainment, news, culture, or personal interests. They are distributed through streaming platforms, allowing easy access on mobile devices, computers, and media players.

In education, podcasts have been recognized as a flexible and engaging learning medium, particularly for language learning. They provide authentic listening materials, expose learners to different accents and speech styles, and can be replayed as needed. Because of this, podcasts support autonomous learning, multimodal engagement, and improvement in listening comprehension skills.

2.5.2 Procedure of applying Podcast for Teaching Listening

Procedure for applying podcasts to improve Listening Skills in a school setting (Nemtchinova, 2013):

Preparation and Assessment:

Assess Students' Technological Skills, evaluate the students' familiarity with the required technology (podcast) and select appropriate materials, choose listening materials that match the students' proficiency levels and learning objectives.

Pre-Listening Activities:

The objectives of this session is to define clear learning objectives for the listening, activate their prior knowledge, and discussing the topic and vocabulary to prepare students for what they will hear. Engage students in predicting what they might hear based on the topic or a brief introduction.

During-Listening Activities:

playing the audio, possibly in manageable segments, and have students focus on specific tasks (e.g., identifying key information, transcribing sentences, or repeating after the speaker for pronunciation practice). Use recordings to create activities where students need to collaborate to fill in missing information.

Post-Listening Activities:

Asking questions to ensure understanding of the material, discussing the content and any challenges faced during listening. Assigning tasks that extend the listening activity, such as summarizing the passage, creating dialogues, or conducting further research on the topic.

2.5.3 Advantages and Disadvantages of Using Podcast as Media for Listening

Advantages

- Variety of Topics, Podcast can offer a wide range of subjects, allowing students to find topics that interest them and relate to the curriculum.

- **Authentic Language Exposure, Podcast** Provide exposure to natural speech, including everyday language, idiomatic expressions, and varying accents.
- **Flexibility and Accessibility, Podcast** can be accessed anytime and anywhere, making them a flexible tool for listening practice.
- **Length and Pacing, Podcast** come in varying lengths, so teachers can choose episodes that fit the class schedule. The pacing is often slower and more deliberate than in movies.
- **Focused Listening, because podcast** Encourage students to focus solely on auditory input without visual distractions, enhancing their listening skills.

Disadvantages

- **Language Complexity, Podcast** Some podcasts may use complex language, fast speech, or technical jargon, making them challenging for beginners.
- **Content Appropriateness, not all podcasts** are suitable for all age groups or educational levels, requiring careful selection by the teacher.
- **Limited Visual Cues, due to Podcast** that lack visual context, which can make it harder for some students to understand the content, especially for those who rely on visual aids.
- **Content Density, Podcast** can sometimes be dense with information, which might overwhelm some students if not broken down into manageable segments.

Using podcasts as a medium for listening practice can be highly beneficial, especially when paired with activities that promote active listening and comprehension. Selecting appropriate content and providing support materials can help maximize the advantages while mitigating the disadvantages.

2.6 Previous Study

The first study, conducted by Artikasari and Anugerahwati (2023), explored the implementation of podcasts combined with transcripts using a reading while listening strategy to improve students' listening comprehension. Conducted as classroom action research, the study involved undergraduate EFL students and applied a pre- and post-test design. The results showed a significant increase in

students' average listening scores, reaching 81.95 by the end of the intervention. Furthermore, 86% of the students successfully reached the minimum mastery level. The study concluded that combining podcast audio with readable transcripts enhances student engagement and improves their ability to comprehend spoken English, especially for those with lower proficiency levels.

The second study by Damayanti and Hadi (2022) investigated the effectiveness of podcasts in improving listening skills through a descriptive qualitative approach. The researchers collected data through interviews and classroom observations involving EFL undergraduate students. The findings revealed that students perceived podcasts as helpful in understanding spoken English, particularly because of the authentic input and the flexibility podcasts offer for repeated listening. The study emphasized that podcasts can serve as a valuable supplementary strategy in language learning, contributing positively to students' listening development.

The third study, written by Fadhilatun Nisa, Izzah, and Hadi (2023), adopted a pre-experimental design to assess the impact of podcasts on junior high school students' listening comprehension. Using a pre-test and post-test format, the study found a statistically significant improvement in students' scores, with a post-test mean of 89.4 and a t-observed value of 17.986. The findings confirmed that podcasts are an effective medium for improving listening skills, increasing both student comprehension and motivation in learning English.

Based on the three studies, it can be concluded that the use of podcasts is an effective strategy to improve students' listening comprehension. All three studies demonstrated positive outcomes, whether through a structured reading-while-listening approach, descriptive analysis of student perceptions, or statistical improvements in test scores. Podcasts provided students with authentic language input, allowed repeated exposure to spoken English, and helped enhance engagement during listening activities.

2.7 Theoretical Assumption

Listening is an important material in English because we have to know what the people say to us. To be able to master listening we must really understand the words

we hear, whether it is directly or through media like a podcast. There are many reasons for the problem of the student's listening ability, it can be caused by the students, the teacher, the material that is given, technique, method, etc.

It can be reported that the student motivation in learning listening was low because most of the students could not understand or comprehend what the speaker said. Using podcasts as a text in the English classroom helps to level the playing field as most students are equally inexperienced.

Knowing that the student's perception of the use of podcasts in listening class was positive, it was better for the teachers to continue using podcasts in class since it brought many advantages for the students. However, there were three suggestions that need to be considered in order to optimize and improve the use of podcasts in listening classes. The first suggestion is the selection of the Podcast, teachers usually have difficulty in selecting the most appropriate podcast to be used in class.

The researcher found that some students had difficulty understanding the word because the pronunciation in the podcast was unclear and sometimes the podcast was too fast, so they could not hear the words. In order to overcome this problem, teachers also should be able to select podcasts that are not too slow or too fast. The podcast that contained simple words and clear pronunciation could also help the students so they would not spend much time recognizing the words.

If the podcast is not appropriate for the students, they might be sleepy or get bored easily. Some students also prefer if the podcasts are popular or familiar to them. Teachers can select new or popular podcasts that are familiar to the students, as long as the pronunciation is clear and it does not have a negative theme. Podcasts with any type of negative theme should be avoided. The podcast should have an appropriate theme. The podcast must carry some sort of message or it could tell students an interesting story so the students will pay attention to it.

2.8 Hypothesis

Based on the theoretical assumption above, the problem that was found out in the first chapter, the hypothesis which was proposed in this research is concerned with:

H₀: There is no significant improvement in students' listening comprehension after being taught using Podcast.

H₁: There is a significant improvement in students' listening comprehension after being taught using the Podcast.

Thus, the theories that have been discussed in this chapter are the concept of listening, aspects of listening, process of listening, the uses of podcast to improving listening, advantages and disadvantages of using Podcast as media for studying listening, theoretical assumption, and hypothesis.

III. METHODS

The research design, variable of the research, population and sample, validity and reliability, data treatment, data analysis, hypothesis testing are all cover in this chapter.

3.1 Research Design

In conducting this research, the researcher conducted a quantitative study using a one-group pretest-posttest design based on Setiyadi (2018). This design was used to answer the research question: Was there any significant improvement in students' listening comprehension after using podcasts as their learning tools. The students were given a pretest before the treatment and a post-test after the treatment. The research design was as follows:

T1 X T2

T1 refers to the pre-test that is given before the researcher teaches using a podcast as the learning tools in order to measure the students' achievement before they are given the treatment.

X refers to the treatments given by the researcher using podcast as their learning tool to improve students' listening comprehension.

T2 refers to the post test that is given after implementing the use of collaborative learning and to measure how far the students' improvement after they get the treatment.

3.2 Research Variables

According to Setiyadi (2013). Variable is a noun that stands for variation within a class of objects, such as gender, achievement, motivation, behaviour, or environments. There are two kinds of variables namely independent variable (X) and dependent variable (Y). In this research the variables are describes as follow:

1. The independent variable is the use of using podcast as learning tools.
2. The dependent variable is listening performances.

3.3 Data Source

The population of this research was the first-grade students of SMAN 1 Cilegon in academic year of 2024/2025. There was one class. For the sample of this research, the researcher took one class as the experimental class.

3.4 Instrument of the Research

The instrument of this research is a listening test in the form of multiple-choice questions. The researcher used two series of the test which is pre-test and post-test. The pre-test is designed to assess ability of the students before they got the treatment. The post-test is to know students' listening achievement after getting treatment.

1) Try Out

Try out test was administered to find out the quality of listening test as an instrument of research such as validity, reliability, level of difficulty and discriminating power. Try out test consisted of 40 multiple-choice items with four options (a, b, c, and d) of each item. One of the options was the correct answer and the others were distractors. The sample were the randomly selected class (try-out class) from the experimental class. They were given 60 minutes to complete the try-out test.

2) Items of Listening Test (Pre-test and post-test)

The items of listening test that the researcher use in collecting the quantitative data were pre-test and post-test, where the pre-test was given in the first session before the treatments and the post-test was given after the students received the treatments. The type of pre-test and post-test were multiple choice test. The purpose of the pre-test is to know the students' ability of listening comprehension at the first step before the treatments given. On the other hand, the purpose of the post-test is to find out if there is any improvement in the students' listening comprehension after the students received the treatments.

3.5 Data Collecting Technique

The aim of this research is to gain the data on the students' listening score before the treatment and after the treatment. The data was obtained from:

1. Pre-test, was conducted before the students were taught by using podcast. It was to see the basic quality of students' listening comprehension before the students were given the treatments. The pretest was a listening test.
2. Post-test, was conducted after the students were taught by using podcast. It was used to known the improvement of student's listening comprehension.

3.6 Procedure of Data Collection

In conducting this research, the researcher was using the following steps:

- Determining Problems

The problem was identified by the researcher from observing students at SMAN 1 Cilegon. Since she joined the Kampus Merdeka program, namely MBKM, at the school, she found that most of the students had difficulty expressing their ideas when completing listening assignments during listening tests. In addition, time constraints resulted in a lack of feedback from both teachers and peers. As a result, students had poor listening skills. Based on these reasons, the researcher attempted

to use collaborative learning strategies to improve students' listening comprehension.

- Population

The researcher determined the population by selecting one of the first-grade classes at SMAN 1 Cilegon. The population was taken from class X MIPA 5 of the first-grade students at SMAN 1 Cilegon.

- Preparing the materials

After the population was determined and the sample was randomly selected, the researcher prepared the materials for the pre-test, treatments, and post-test based on the course objectives in the syllabus for the first-grade students at SMAN 1 Cilegon.

- Giving a pre-test

The researcher gave the pre-test in order to measure the students' listening performance before they received the treatment. The pre-test was conducted in the form of a listening test. The students in the experimental class were asked to complete a multiple-choice test.

- Conducting treatments

After the researcher gave the pre-test to the students in the experimental class, the treatments were delivered from 25th February to 15st April of 2025. The goal was to improve the students' listening comprehension. After these treatments, the students were expected to show improvement in their listening comprehension.

- Giving a post-test

The researcher gave the post-test in order to assess the improvement in students' listening comprehension. The post-test was aimed at evaluating the improvement in students' listening comprehension after being taught using podcasts.

- Analyzing the test results (pre-test and post-test)

After the researcher scored the pre-test and post-test, the data was analysed by using SPSS software program. It is to find the means of the pre-test and post-test and how significant the improvement will be.

This structured data collection procedure allowed the researcher to measure the effectiveness of learning by using podcasts for listening abilities.

3.7 Quality of Research Instrument

The instruments that was used for this research are pre-test and post-test. The pre-test was given at the beginning of the session before the students' get the treatment, while the students got the post-test after the students get the treatment. In order to achieve the criteria of a good test, validity, reliability, level of difficulty and discriminating power of the test should be considered. They are as follows:

3.7.1 Validity

Setiyadi (2013) defined validity as an instrument that has to show well that instrument measures is supposes to be measured. Setiyadi (2013) also stated that there are five types of a valid instrument namely: face validity, content validity, predictive validity, construct validity and concurrent validity. In this research, the researcher was using three types of validity that provided evidence to achieve the validity of the test. The types of validity as below:

- A. Content validity refers to indicators of the assessment instrument whether it is fully representative the material that was being measured. A test has content validity because it covers an appropriate sample of the content structure relevant to the test objectives. That is, the material used must be in accordance with the basic competencies in the syllabus of grade ten high schools. This material is appropriate because compiled the material based on the learning objectives in the Tenth grade high school syllabus.
- B. Construct validity refers to the accuracy of an assessment instrument to existing theory and knowledge of the concept being measured. This means that both the pre-test and post-test measure distinct elements of listening based on predetermined criteria. Moreover, the instrument's relationship validity is tied to its construct validity because the test questions are crafted to represent five skills in listening such as: main idea, deatil information, inference, vocabulary, and sounds discrimination.

Table 3.1 listening skills

No.	Objective	Item number	Percentage
1.	Main idea	2, 6, 11, 15, 19, 22, 26, 32	20%
2.	Detail Information	1, 5, 9, 10, 17, 20, 29, 30	20%
3.	Inference	4, 8, 12, 21, 24, 28, 31, 38	20%
4.	Vocabulary	5, 7, 16, 18, 25, 27, 36, 37	20%
5.	Sounds Discrimination	3, 13, 14, 23, 33, 34, 39, 40	20%
Total		40 items	100%

- C. Face validity refers to the degree to which an assessment or test subjectively appears to measure the variable or construct that it is supposed to measure. In other words, face validity is when an assessment or test appears to do what it claims to do.

3.7.2 Reliability

According to Setiyadi (2006), an instrument is considered reliable if it produces consistent outcomes when administered to the same subjects under similar circumstances. In this study, the reliability of the r test was assessed using Cronbach's Alpha coefficient, calculated through IBM SPSS Statistics version 26.

Cronbach's Alpha (α) is a measure of internal consistency, indicating how closely related a set of items is as a group. The formula for Cronbach's Alpha is as follows:

$$\alpha = k \frac{\sum \sigma_i^2}{k-1} - 1 \times \left(1 - \frac{\sigma_{i2}}{\sigma_{t2}} \right)$$

Where:

- α : Cronbach's Alpha coefficient
- k: number of items
- σ_i^2 : variance of each item
- σ_{t2} : total variance of the overall test scores

A Cronbach's Alpha value above 0.70 is considered acceptable, while values above 0.80 or 0.90 indicate high to very high reliability. High reliability means that the items in the test consistently measure the same construct.

3.7.3 Difficulty Level

The difficulty level indicates how challenging a test item is for students. It is calculated by dividing the number of correct responses by the total number of students. The result is interpreted as follows: items with an index below 0.30 are considered difficult, those between 0.30 and 0.70 are of medium difficulty, and those above 0.70 are considered easy.

(see appendix 10)

Table 3.2 difficulty level

No	Number Item Test	Computation	Criteria
1.	5, 7, 20, 22, 24, 30, 34	>0.70	Easy
2.	1, 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 23, 25, 26, 27, 28, 29, 31, 32, 33, 35, 36, 37, 38, 39, 40	0.30-0.70	Average

3.7.4 Discrimination Power

Discrimination power assesses an item's ability to differentiate between high-achieving and low-achieving students. This is an important feature because a good test item should be answered correctly by students who understand the material and incorrectly by those who do not. The discrimination index is usually interpreted as follows: 0.40 and above is considered good, 0.30–0.39 is acceptable, 0.20–0.29 is marginal, and below 0.20 is poor. Items with good discrimination power help ensure that the test can clearly distinguish between different levels of student performance.

3.7.5 Normality of Test

A normality test is used to determine whether the distribution of data follows a normal distribution pattern. This is important because many statistical tests, particularly parametric tests such as the t-test, assume that the data are normally

distributed. The most common methods to test normality are the Kolmogorov-Smirnov and ShapiroWilk tests. If the significance value (p-value) is greater than 0.05, it indicates that the data are normally distributed; if it is less than 0.05, the data are considered not normally distributed.

3.8 Try Out of the Instrument

Based on the results of the try-out test administered to class X Mipa 6, the researcher analyzed the quality of the instrument used for the pre-test and post-test. The test consisted of 40 multiple-choice questions, but only 30 items were selected for the actual research. The selected items were question numbers: 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 21, 22, 23, 25, 26, 27, 29, 31, 32, 34, 35, 37, 38, 39. These items were chosen based on the following criteria:

1. Validity Test

From the validity test results, all 30 selected items were valid, as their Sig. (2-tailed) values were less than 0.05, and their Correlation coefficients ranged from moderate to high. For example, item 2 correlated 0.770 (high), item 10 had 0.595 (moderate), and item 15 had 0.741 (high), all with significant values ($p < 0.05$). This indicates that the items correlated well with the total score and were appropriate for measuring students' listening comprehension.

(see appendix 7)

2. Reliability Test

The reliability test showed a Cronbach's Alpha of 0.736 for the 30 selected items, which falls into the category of very high reliability. This means that the test items were consistent and reliable for use in both pre-test and post-test stages.

Table 3.3 Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.736	41

3. Discrimination Power

All selected items had acceptable discrimination indices. Many items, such as number 2 (0.812), 4 (0.569), and 19 (0.772) were categorized as high in discrimination power, while the rest like number 11 (0.363), 18 (0.391), and 39 (0.331) were in the moderate category. No selected items had very low or negative discrimination, which implies that the questions could effectively differentiate between high and low achievers.

(see appendix 9)

4. Difficulty Level

The difficulty index of the selected items mostly fell within the medium category, with only seven items categorized as easy. For instance, item 5 had a difficulty index of 0.79, item 7 had 0.73, and item 20 had 0.73, which are classified as easy. The remaining items, such as item 1 (0.67), item 16 (0.58), and item 37 (0.55), had medium-level difficulty. This indicates that the majority of the items were appropriately challenging for the students, making them suitable for evaluating listening comprehension in this research.

(see appendix 10)

5. Normality Test

The normality test was conducted using the Kolmogorov-Smirnov and Shapiro-Wilk tests to determine whether the distribution of try-out scores was not normal. The results are presented below:

Table 3.4 Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TOTAL	.182	33	.007	.875	33	.001

Based on the output, the Kolmogorov-Smirnov significance value is 0.200 and the Shapiro-Wilk significance value is 0.066, both of which are no more than 0.05. This indicates that the try-out score data are not normally distributed.

In conclusion, the selected 30 items used in the pre-test and post-test were valid, reliable, had good discrimination power, appropriate levels of difficulty, but not normally distributed.

3.9 Scoring System

Before calculating the scores, the researcher first established the scoring procedure or technique. Arikunto's formula was adopted, using an ideal maximum score of 100. Both pre-test and post-test results were computed based on the following formula:

$$S = \frac{R}{N} \times 100$$

Where:

S: The score of the test

R: The total right answer

N: The total of test items

(Arikunto, 1999)

3.10 Data Analysis

After conducting both pre-tests and post-tests, the researcher analyzed the data using a T-test to determine whether the podcast effectively improved students' listening comprehension or not. This analysis is performed using SPSS, following these steps:

1. Scoring the pre-test and post-test.
2. Tabulating the result of the test and calculating the mean of the pre-test and the post-test. The mean was calculated using the following formula:

$$M = \frac{\sum X}{N}$$

Notes:

M = Mean (average score)

$\sum X$ = Total Students score

N = Total Students

(Hatch & Farhady, 1982)

3. Drawing conclusions from the tabulated test results by statistically analyzing the data using computerized statistical methods, namely the paired sample t-test in the Statistical Package for the Social Sciences (SPSS), to determine whether the improvement in students' scores was statistically significant. The level of significance was set at $p < 0.05$.

3.8 Data Analysis

This research analyzed the student's listening comprehension after being taught using podcast.

The research computed the student score based on their test result in order to find out students increasing their listening abilities by podcast as tools for learning using the following steps:

- a) Scoring the pre-test and post-test
- b) Tabulating the results of the test and calculating the score of the pre-test and post test.
- c) Drawing a conclusion to answer the research Question. It was developed from the result of statistical computerization which is repeated measure T-test in SPSS.

3.9 Data Treatment

Using t-test for hypothesis testing has 3 basic assumptions, they are: 1. The data is interval or ratio. 2. The data is taken random sample in population 3. The data is distributed normally

3.10 Hypothesis

The hypothesis testing is used to prove whether the hypothesis in this research is accepted or not. The formula of the hypothesis as follow:

$H^1 = \text{Sig.} < 0.05$

H_0 : (Null Hypothesis) There is no significant improvement in students' listening comprehension after being taught using Podcast.

H_1 : (Alternative Hypothesis) There is a significant improvement in students' listening comprehension after being taught using Podcast.

In short, this chapter covers the methods of the research that consist of research design, variable of the research, population and sample, data collecting technique, research procedures, research instrument, reliability and validity, rubric scoring system, data analysis and hypothesis testing.

V. CONCLUSION AND SUGGESTIONS

This chapter presents the conclusion of the researcher findings and suggestions from the researcher to English teachers who are teaching in class, especially when teaching listening by using podcast as an additional step in the teaching and learning process, and to those who want to conduct the research.

5.1 Conclusion

Based on the data analysis and the discussion of the research findings, the researcher draws the following conclusions:

The findings of this study show a significant improvement in students' listening comprehension after the use of podcasts as a learning tool. The average score increased from 70.83% in the pre-test to 83.56% in the post-test, with the highest score rising from 87 to 100 and the lowest from 47 to 63. These gains were observed across all aspects of listening comprehension—main idea, specific information, references, inferences, and sound discrimination. Statistical analysis using a Paired Sample t-test confirmed the significance of these improvements ($p = 0.000$, $p < 0.05$), demonstrating that podcasts contributed positively to students' listening performance.

Despite these encouraging results, several limitations were identified. The study was conducted in a single class without a control group, limiting its generalizability and making it hard to conclude that podcasts were the sole cause of improvement. The short treatment period, technical issues with classroom audio equipment, and challenges in maintaining students' focus also presented obstacles. Nevertheless, most students remained engaged, and the overall outcomes suggest that podcasts are a promising medium for enhancing listening skills when supported with appropriate materials and activities.

5.2 Suggestions

Based on the conclusion mention above. There are several suggestions that can be put forward from this research;

5.2.1 Suggestion for English Teacher

- a. Teachers are encouraged to select podcast materials that are not only appropriate for the students' proficiency level but also cover topics that are interesting and relevant to their daily lives, to make the students more engage with the material. Engaging themes such as entertainment, lifestyle, technology, or youth culture can help students feel more motivated and comfortable when listening.
- b. Given these results, it is strongly recommended that English teachers integrate podcasts into their regular listening instruction. Podcasts provide authentic language exposure, diverse accents, engaging content, and flexible learning opportunities, because they combine real-world communication, interesting topics, and learning flexibility. all of which contribute to a more enjoyable and effective learning experience for students.

5.2.2. Suggestion for further researcher

- a. This research was conducted among tenth-grade high school students and focused specifically on the use of podcasts to enhance listening comprehension. While the results clearly show the effectiveness of podcast-based instruction in improving listening skills, future researchers are encouraged to explore this topic using different sample populations. This could include students from various educational levels, such as junior high school, or even adult learners, to gain a broader understanding of the impact across age groups and proficiency levels.
- b. This study focused solely on the effect of podcasts on listening comprehension. Future research is encouraged to expand the scope by investigating the impact of podcasts on other language skills, such as speaking, or vocabulary.

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