IMPROVING STUDENTS' LISTENING ACHIEVEMENT USING DUOLINGO AT SMP NEGERI 10 KOTABUMI

(Undergraduate Thesis)

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ABSTRACT

IMPROVING STUDENTS' LISTENING ACHIEVEMENT USING DUOLINGO AT SMP NEGERI 10 KOTABUMI

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This study aims to examine whether teaching using Duolingo can improve students' listening achievement. A quantitative approach was applied through a one-group pretest-posttest design. The study was conducted at SMP Negeri 10 Kotabumi. The population of this study involved eighth grade students of SMP Negeri 10 Kotabumi. The total number of participants in this study was 30 students. The data were gathered using listening achievement tests administered before and after the use of Duolingo. The results were analyzed using a paired sample t-test to assess the impact of the media. The results showed that there is improvement in students' listening achievement, with the average score rising from 61.6 on the pretest to 73.4 on the posttest, indicating an increase of 11.8 points. The statistical analysis yielded a significance value of $0.00 < 0.05$, indicating that teaching using Duolingo had a significance effect on listening achievement. Therefore, it can be concluded that Duolingo is an effective media for improving students' listening achievement and encouraging active participation in listening activities.

Keywords: Duolingo, improving, listening achievement

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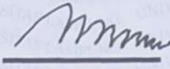**Faculty of Teacher Training and Education**

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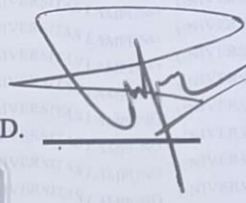**LAMPUNG UNIVERSITY**
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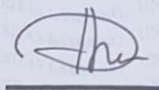1. Examination Committee

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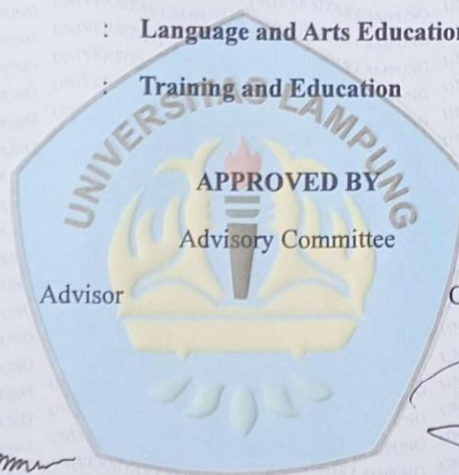| Research Title	:	**Improving Students' Listening Achievement Using Duolingo at SMP Negeri 10 Kotabumi**
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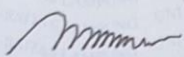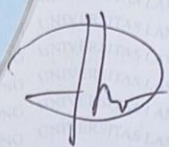
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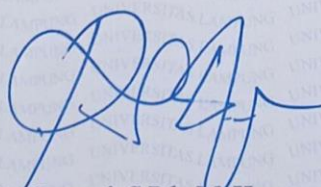
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Menyatakan bahwa skripsi ini adalah karya dari pelaksanaa penelitian saya sendiri. Sepanjang pengetahuan saya, karya ini tidak berisi materi yang ditulis orang lain, kecuali bagian bagian tertentu yang saya gunakan sebagai acuan. Apabila ternyata terbukti bahwa pernyataan ini tidak benar, sepenuhnya menjadi tanggung jawab saya.

Bandar Lampung, 29 Juli 2025

Yang membuat pernyataan,

Januar Dwi Putra

2113042060

CURRICULUM VITAE

Januar Dwi Putra, the second child of Abdul Wahab and Nur Palita, was born on 19 January 2002 in Kotabum. He started his education at SD Negeri 3 Tanjung Aman and moved to SD Negeri 6 Kelapa Tujuh graduated in 2014. After that, he continued his education at SMP Negeri 10 Kotabumi and graduated in 2017, then continued to SMK Negeri 1 Kotabumi and graduated in 2020. A year later in 2021, he was accepted at the English Education Study Program, Faculty of Teacher Training and Education, University of Lampung. During his time as a student of the English Education Department, he was active in student organizations, including being a member of the Human Relations Division of SEEDS in 2022, where he further honed his ability to develop communication skills and gained valuable insights into communication. His academic journey included conducting research for his undergraduate thesis, focusing on the effectiveness of Duolingo in improving listening achievement.

MOTTO

"Maybe you don't need to wait until you overcome your fears to take the first step forward. Maybe you just need to know there's something more important than fear. Something greater. Something worth fighting for. And maybe overcoming your fears is the least important part of your story anyway. Maybe what matters is that you're scared but still determined. Shaky but still standing. Afraid but still willing to try."

Zanna Keithley

"Yesterday is history, tomorrow is a mystery, but today is a gift, that is why it is called the present"

Master Oogway

"It does not matter how slowly you go so long as you do not stop."

Andy Warhol

DEDICATION

This undergraduate with gratitude and love is dedicated to my beloved family - especially to my father and mother who never stop pouring out their love, prayers, and moral and spiritual support; to my sister, and my beloved nephew who is always a source of confidence and motivation. Thank you for the love and sincerity that always strengthen the writer in every step of this journey.

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I. INTRODUCTION

This chapter outlines the background of the study, the research question, the objectives, the significance of the research, the scope of the study, and the definitions of key terms.

1.1 Background

Listening is a fundamental skill in language learning, as it plays an important role in effective communication and overall language proficiency. Listening is one of the four fundamental English skills. Along with writing, reading, and speaking, these core skills are essential for language learning. They are typically grouped into two categories: receptive skills, which include listening and reading, and productive skills, which include speaking and writing. Junior high Students often struggle with this skill due to various challenges, such as understanding different accents, varying speaking rates, and complex vocabulary.

Being a good listener is essential for becoming a good speaker, as it allows us to focus on the topics being discussed and ensures that we comprehend them fully. To achieve this, practicing concentration while listening is crucial (Simanjuntak and Uswar, 2021). According to Brown (2001) listening is the major component in language learning and teaching because in the classroom learners do more listening than speaking. In classroom settings, many junior high school students often struggle to understand or misinterpret the material presented by teachers due to a lack of concentration during listening activities. This emphasizes that listening is not just about receiving information from speakers but also requires focused attention. Additionally, many junior high school teachers face challenges in teaching English because traditional lessons can be monotonous, resulting in passive and unresponsive students. To address this issue, it is recommended to develop more interactive ways of teaching listening.

Considering different learning styles is also essential when designing lessons, presenting material, and fostering effective listening achievement.

To enhance listening achievement, educators are increasingly turning to innovative mediums. One such media is Duolingo, a gamified language learning application. Duolingo provides an effective combination of accessibility, interactivity, and structured practice, making it a valuable resource for improving listening achievement.

According to Sari and Octaviani (2022) Duolingo's gamification features can help students learn more flexibly. this research shows that the Duolingo mobile application can be an effective alternative means for improving English listening skills for vocational school students. (Putri and Islamiati, 2018)States that using the Duolingo application can improve students' English listening skills. Apart from that, this application can also motivate students to learn English. This research shows that the Duolingo application is effective for increasing the English vocabulary of junior high school students. (Hernadijaya, 2020) This research shows that the Duolingo application is effective for increasing the English vocabulary of junior high school students. Sukarya, Kamil and Utami (2022) provides evidence that Duolingo can be an effective tool for improving students' listening skills and overall English language proficiency. Positive student experiences suggest that Duolingo can be a valuable addition to language learning instruction.

The previous research has provided valuable insight into the effect of Duolingo on English teaching. however, there is a lack of studies on its impact on junior high school students' listening achievement. Previous research tends to focus more on Vocabulary mastery. Therefore, research is needed that specifically examines the impact of Duolingo on junior high school students listening achievement. Therefore, the title of this research is "Improving Students' Listening Achievement Using Duolingo at Junior High School"

The objective of this research is to investigate the impact of using Duolingo to improve junior high school students' listening achievement. To achieve this, a pre-

test and post-test design was employed to measure students' listening achievement before and after they were taught using Duolingo.

1.2 Research Question

Based on the background, the researcher framed the research question as follows:

Is there any significant improvement of students' listening achievement after being taught by using Duolingo?

1.3 Objectives of the Research

Based on the Background and the research question, the objectives of the research is:

To find out whether using Duolingo significantly improved listening.

1.4 Uses of the Research

The results of this study may offer valuable contributions from both theoretical and practical perspectives.

1. Theoretically, the findings of this research could potentially lend support to the theory of listening.

2. Practically, it is hoped that the results of this research can provide new insights to teachers which can be used as guidelines in teaching listening so that the students are able to comprehend English through Duolingo.

1.5 Scope of the Research

The scope of this research focuses on improving junior high school students' listening achievement through the use of Duolingo, a widely recognized language learning application. This study will explore how Duolingo's interactive and gamified approach to language learning can enhance students' ability to comprehend spoken language. Specifically, it will examine the effectiveness of the app's listening exercises, which incorporate real-life dialogues and native speaker pronunciations, in helping students develop better auditory comprehension. The research will involve a selected group of junior high students, tracking their

progress over a set period and comparing their listening achievement before and after the intervention with Duolingo. By analyzing the data collected, the study aims to determine the app's potential as a supplementary tool in language education and its impact on students' overall listening proficiency.

1.6 Definition of Terms

In order to prevent misunderstandings, certain terms used in this research have been defined.

1. (Rost, 2011) Listening: Listening is the act of giving one's attention to sounds or spoken words in order to hear, understand, and process the information being conveyed.

2. (Perez, 2020) Duolingo is a language-learning platform that offers a variety of interactive activities such as translation, matching, dictation, fill-in-the-blank, speaking, listening, multiple-choice exercises, and competitive tasks to support students in learning English.

3. (Brown, 2001) Listening achievement refers to the level of proficiency or success someone attains in the skill of listening.

This chapter provide explanation related to the research, which consists of background, research questions, research objectives, uses of research, scope of research, and definition of terms.

II. LITERATURE REVIEW

This chapter presents a review of the literature relevant to the research. It is divided into three sections: the first reviews previous related studies, the second summarizes the theoretical assumptions underlying the study, and the third outlines the research hypothesis.

2.1 Definition of Listening

English consists of four skills: speaking, reading, writing and listening. In learning English, there are four basic skills that students must master, one of these basic skills is listening. Listening is an essential part of communication, as humans engage in various listening situations daily. When listening, we pay attention to what others are saying and trying to understand what it means. There are many definitions of listening by experts. According to Rost (2002) listening is a complex interpretative process where listeners align what they hear with their existing knowledge.

Listening involves understanding spoken language, usually accompanied by other sounds and visual input, with the help of relevant prior knowledge and the context in which we listen (Schmitt and Rodgers, 2020, p. 236). they also said that, rather than considering listening as a single process, it would be more accurate to think of it as a group of related processes – recognition of the sounds spoken by a speaker, perception of intonation patterns that indicate the focus of information, interpretation of sounds. The relevance of what is being discussed to the current topic and so on. For example: In a cooking show, the host might say, "Next, we add a pinch of salt." The word "pinch" has a specific meaning in cooking that differs from its literal use. Interpreting "pinch" correctly requires understanding that it refers to a small amount of salt, not the physical act of pinching.

2.2 Teaching of listening

Teaching is inseparable from learning, as the two are fundamentally interconnected. It involves guiding and supporting the learning process, enabling students to engage in learning, and fostering an environment conducive to their development (Brown, 2001).

According to Brown (2001) Teaching entails demonstrating or assisting someone in learning how to accomplish a task, providing guidance in the study of a subject, imparting knowledge, and cultivating comprehension.

Listening is essential for language learning, as it provides learners with the information needed to develop the knowledge required for language use. Once this foundation is established, learners can start speaking. The initial phase of listening is a time for observing and absorbing knowledge, which then supports the development of other language skills. teacher plays a central role in guiding the learning process (Yasin, Mustafa and Permatasari, 2018).

Concisely, teaching listening involves guiding and helping students develop their listening achievement. Teachers should provide authentic materials to help students effectively acquire these skills.

2.3 Process of Listening

Listening is an active process that involves interpreting, evaluating, and responding to what we hear. According to (Kline, 1996) the process of listening occurs in five stages, which can be categorized into two groups:
1. The initial three steps involve the essential processes of receiving, attending, and understanding.

a. Receiving is the first step in the listening process. According to Kline (1996), this step involves the listener receiving the message from the speaker. Without successfully receiving the message or showing interest in it the next step in the listening process cannot proceed.

b. Attending is the process where the listener focuses on the speaker who is delivering the message. In this process, the listener actively filters out other sounds to concentrate solely on the speaker's words. This process is influenced by three key factors: selectivity, strength, and sustain. Selectivity refers to the reason the listener chooses to focus on a particular sound. Strength involves the listener's effort and internal motivation to pay attention to specific sounds. Finally, sustain means the ability to maintain focus on the chosen sound over time. The last condition that Kline (1996) identified is sustain. This refers to the duration of time the listener can maintain attention. Over time, the listener's attention may gradually decrease as their strength or energy wanes. For instance, at the start of a lesson, all students may be fully attentive to the teacher's explanation. However, as time passes, some students might begin to feel sleepy or start chatting with their friends, indicating that they are losing focus on the teacher's explanation.

c. Understanding occurs when the listening process leads to effective communication. Listening is not truly effective until the listener Understand the message. For this to happen, the listener must grasp the meaning of the verbal (spoken) sounds as conveyed by the speaker.

2. The secondary process involves two steps: responding and remembering.

a. Responding is an essential step in the listening process that follows after understanding and remembering the speaker's message. Without the act of responding, the listening process might end prematurely, resulting in one-way communication. Providing a response not only serves as feedback to the speaker but also confirms that the message was received, attended to, and understood.

b. Remembering is the step where the listener stores the complete message or specific aspects of it in their memory, allowing them to recall it later.

According to Hughes (1991:134), listening comprehension can be divided into two terms:

1. Macro skill

   In the context of macro listening skills, effective comprehension requires listeners to extract specific information, discern the main idea, and interpret the overall meaning of the spoken message.

2. Micro skill

   In the context of macro listening skills, comprehension involves the ability to interpret intonation patterns—such as stress and rhythm—recognize the functional use of grammatical structures (e.g., interrogatives as requests or imperatives like 'Sit down!'), identify cohesive devices (e.g., 'such as', 'which'), analyze sentence components (e.g., subject, verb, object, prepositions), and recognize discourse markers (e.g., 'Well', 'Oh', 'Another thing is', 'Now', 'Finally')."

2.4 Aspects of Listening

According to (Tyagi, 2013) listening comprises several key elements or components.

1. According to Ophelia Hancock (1987), the main idea is the central point or core message of a text, which the speaker intends to deliver to the listener. Recognizing meaning refers to the ability to understand or grasp this main idea from what is being heard.

2. Understanding vocabulary refers to the ability to recognize and comprehend words spoken by a speaker. It is a fundamental skill in listening, requiring the listener to accurately identify spoken words and grasp their intended meanings. This skill plays a crucial role in helping listeners understand the overall context of a conversation.

3. Identifying grammatical structures involves recognizing sentence patterns, grammatical forms, and structures to grasp the overall meaning. This skill helps listeners understand how words are connected and how each element contributes to the meaning within a given context.

4. Interpreting expressions and functions refers to the ability to understand and make sense of various language expressions and their purposes. This includes recognizing idiomatic phrases and commonly used expressions that carry specific meanings in communication.

5. Making inferences, as stated by Kathleen (1986), is the act of making a guess or prediction about something that is not directly stated, based on known facts and information. It requires using reasoning skills to understand implied meanings within a conversation.

6. Using background knowledge is an important aspect that helps improve understanding by connecting the information heard with the listener's existing knowledge or previous experiences.

7. Identifying key information is an essential part of listening skills, involving the ability to remember significant words and ideas from what is heard. In other words, it allows the listener to detect and comprehend important points or specific details conveyed by the speaker.

2.5 Media for Teaching Listening

The word "Media" comes from the Latin word Medius, which literally means middle, intermediary, and deliverer. Therefore, media can be interpreted as a means to deliver or convey a message from the sender to the recipient (Sadiman as cited in Daniyati *et al.*, 2023). According to (Daradjat, 1995), Both inside and outside of the classroom, educational or learning media are objects that can be interpreted, particularly sight and hearing, and are used as a connecting tool (communication media) in the teaching and learning interaction process to increase the efficacy of student learning outcomes. Meanwhile, according to Zuhri (2022) In the book titled Learning Media, it is explained that media is something that conveys messages and can stimulate the thoughts, feelings, and desires of the audience (students), thereby encouraging the learning process within them. Therefore,

learning media is all teaching tools used to convey subjects' material in the teaching and learning process, making it easier to achieve formulated learning objectives. Teaching media in listening refers to the use of various forms of media, such as audio recordings, video clips, podcasts, news broadcasts, and music, as educational tools to enhance students' listening achievement.

Nowadays, technological developments are increasing significantly. Innovations in this field are inevitable and bring about major changes in our lives, such as in the aspects of industrial, communicational, and also educational. In education, teaching traditions have drastically changed due to the advent of technology. It assists teachers in various tasks such as teaching, assessment, evaluation, and more. Technology, like computers and smartphones, can also serve as educational media. (Smaldino, Lowther and Russell, 2014) Media is anything that conveys information to facilitate communication between source and recipient in learning. Media can be categorized into three types: textual, auditory, and visual. These types of media are used as tools in learning to make the process easier, more engaging, and interactive.

Digital media, the most modern form of media, is commonly used today as a technological tool. According to (Shelly, 2010) , digital media refers to any computer-based platform or application that incorporates multimedia elements to deliver content or information. The most effective way to integrate technology into the curriculum is by providing trained teachers with easy access to it and empowering them to determine the most suitable ways to incorporate it into their classroom instruction.

In listening instruction, teachers can enhance students' listening achievement and knowledge by utilizing various media. One effective media is the Duolingo application, which was launched in June 2012. Duolingo is a game-based platform designed for learning foreign languages, created by Luis von Ahn, PhD, and Severin Hacker, PhD. With over 500 million downloads and more than 74.1 Monthly Active Users, Duolingo has quickly become one of the most popular ways to learning languages online.

2.6 Concept of Duolingo application

Duolingo, developed by Luis von Ahn and Severin Hacker, is a free app for learning languages. It can be accessed not only via the web but also on Android, iOS, and Windows Phone platforms. Vesselinov and Grego (2012), Interactive exercises on Duolingo offer immediate feedback, aiding students in improving their English skills in real-time. The app includes both written and voice-based learning, with speaking exercises available for more advanced users. Both teachers and students can utilize Duolingo.

Duolingo offers two versions: one for students and one for teachers. The student version provides exercises and quizzes focused on grammar and vocabulary, organized by different contexts. The teacher version, known as Duolingo Classroom, allows for managing students and the English curriculum, creating assignments, tracking class activities, and administering tests, assessments, and online feedback.

These features giving the teacher advantages. First, we can reduce the time spent on assessment activities. Unlike traditional paper-based assessments, using Duolingo is much quicker, and students receive immediate feedback on their phone or computer screens as soon as they complete the test.

Second, content limitation can be effectively managed using Duolingo. The platform provides a curriculum page that outlines what will be included in student assessments, allowing teachers to control the material. This feature highlights the learning objectives and requires teacher approval before any content is published. In addition, Duolingo supports efficient time management by allowing teachers to set specific dates and durations for tests.

The exercises to be used are the 'Duolingo exercise' type, which are interactive exercises that combine various language skills such as listening, reading, writing, and speaking in a fun and accessible format. In this context, students will be provided with vocabulary and sentences related to a particular topic, such as the topic of Asking Questions.
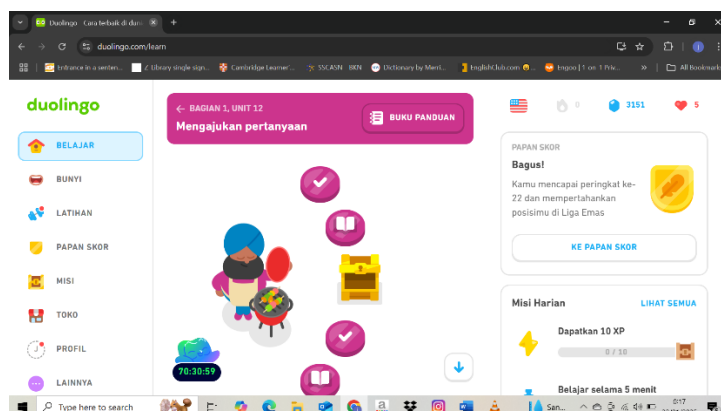
Figure 2 1 User Interface of Duolingo

The exercises include activities such as choosing the correct translation, completing sentences, as well as listening to audio and retyping or answering questions based on what is heard. The materials presented are organized in stages, starting from basic to more complex levels, to help students build English understanding and skills gradually and enjoyably.

2.7 Duolingo in Teaching Listening

Several researchers have previously studied the improvement of listening using the Duolingo application. Jumbrowati, Permana and Anggraini (2023) Shows a significant increase in students' listening abilities between the pre-test and the post-test. This study also used a questionnaire to determine students' responses to the use of Duolingo. The results showed that 86% of students agreed that the application could enhance their learning motivation. In other words, Duolingo can be a useful tool for improving students' listening skills and learning motivation. Tuong and Dan (2024) It states that the Duolingo mobile application is effective in improving the listening skills of EFL students. This study found that elements within Duolingo, such as listening exercises, audio-style podcasts, and real-life scenarios, contribute to the improvement of listening skills.

Kilani and Bataineh (2023) examine the effect of using the Duolingo application to improve the listening skills of sixth grade EFL students in Jordan. The research results showed that students who used Duolingo in learning

(experimental group) had better listening skills compared to students who did not use Duolingo (control group). therefore, the Duolingo application is effective for improving the listening skills of sixth grade EFL students in Jordan.

Inayah, Yusuf and Fibula (2020) found that undergraduate students mostly have a positive view of the Duolingo application for learning English. These findings were obtained through questionnaires and interviews with the research participants. The participants rated Duolingo as enjoyable and motivating for their learning. However, the study also found a possible discrepancy between the students' positive perceptions and their actual usage habits of the application. This means that although they believe Duolingo is beneficial, it does not necessarily mean they use it regularly.

Irzawati and Unamo (2023) This study shows that students have positive perceptions and attitudes towards the use of Duolingo in learning English. The students find learning English with Duolingo to be easy, enjoyable, engaging, and motivating. In other words, the findings of this study support the use of Duolingo as an effective English learning resource. Jiang, Peters, Plonsky and Pajak (2024) State that Duolingo's English courses are effective in improving reading and listening skills. These findings are based on reading and listening proficiency tests, which showed that participants' scores were equivalent to those of students who had been studying a foreign language for several semesters. This study adds to the evidence that Duolingo is a valuable tool for learning foreign languages. Mulya and Refnaldi (2016) concluded that the website School.duolingo.com can be an attractive alternative for online learning for high school students. The website's interesting features can enhance students' interest and motivation in learning English.

The research above shows that Duolingo can be used for English teaching. It indicates that Duolingo as a tool for education can be an engaging and enjoyable way for learners to practice their language skills. Although, the previous research has provided valuable insight into the effect of Duolingo on English teaching. There is a lack of research on its impact on junior high student's listening achievement. Previous studies tend to focus more on other skills and grade levels. Therefore,

research is needed that specifically examines the impact of Duolingo on junior high school students listening achievement.

2.8 Procedure of Teaching Listening Using Duolingo Application

Salsabila (2024) Procedures that teachers can use to teaching listening through Duolingo:

Pre-Listening Stage

- The teacher engages the learners' interest in what they would be doing.

- The teacher must prepare the learner to do listening activity successfully.

- The teacher instructs the students to read material related to personal information that will be covered in the lesson.

- The teacher instructed the students to listen to a topic related to personal information on the Duolingo website.

- The teacher gave instructions to the students to listen to the audio played from the Duolingo website.

While-Listening Stage

- The teacher asked the students to listen to the dialogue carefully.

- The teacher asked the students to answer the question.

- The teacher asked the students to identify the main idea, important details, and make an inference.

- The teacher asked the students what they understood from the audio on the Duolingo website.

- The teacher asked the students to review the part where they were asked to discuss new vocabulary from the audio.

Post-Listening Stage

- The teacher and students reviewed the answers together.

- The teacher asked the students which vocabulary words they were unfamiliar with.

- The teacher provided feedback and gave a summary of the material.

- The students can continue learning the personal information material outside of class hours by pressing the stone button on Duolingo.

Based on the steps above, the teaching procedures—pre-listening, while-listening, and post-listening—assisted the teacher in structuring the lesson to give students clear, step-by-step guidance. In this study, the researcher was tried to applied it in the classroom when using Duolingo to Listening.

2.9 Advantages and Disadvantages of Duolingo Application

There are several advantages to studying in class using the Duolingo application.
The advantages include:

1. Duolingo is an effective tool for enhancing student engagement in the learning process. By incorporating gamification into its language learning platform, Duolingo motivates and involves students in a more interactive way (Munday, 2015, p. 88). The game-like nature of the learning materials makes them memorable, as the engaging and enjoyable format helps to retain information better.

2. Duolingo is also effective for helping students practice and expand their listening at home. According to Munday's research (2015, p. 93-94), 84.8% of students agree that Duolingo is more effective than other types of homework.

3. The Duolingo application is adaptive, able to adapt to the abilities of participants due to the availability of beginner and advanced features.

4. Duolingo is easy to access anytime and anywhere, making it convenient for teachers to implement both indoor and outdoor learning without any difficulties (Muddin, 2018).

5. The application uses different speakers, helping students get accustomed to speech variations.

Each learning medium has its own advantages and disadvantages depending on the learning conditions. Some disadvantages of the Duolingo application include:

1. Duolingo is an online learning platform, so its use in classroom settings requires an internet connection.

2. Duolingo does not provide explanations regarding grammar usage, which may be a weakness as grammar is an important aspect of language learning.

3. Duolingo focuses more on vocabulary and reading comprehension. Listening exercises are shorter and less frequent compared to other skills.

2.10 Theoretical Assumption

There are many factors that make listening a difficult skill to master. One of the factors is students' lack of engagement and interest in the content, causing them to become passive during class. Therefore, teachers must use more innovative methods to facilitate enjoyable and motivating learning experiences for students.

By the previous study, Duolingo as an instructional tool can enhance students' listening achievement because Duolingo Gamification can boost motivation and enjoyment during lessons due to their easy-to-follow nature. The positive impact of using Duolingo on students is anticipated to lead to improved listening achievement.

2.11 Hypotheses

Based on the theoretical assumption and research hypothesis in this study are as follows: H_1: There is a significant improvement in students' listening achievement as a result of the implemented intervention. achievement after being taught using Duolingo.

This chapter has presented a review of literature relevant to the research. The first part reviewed previous studies, the second part summarized the theoretical assumptions, and the final part outlined the research hypotheses.

III. METHODS

This chapter discusses the research methods, including the research design, variables, data sources, instruments, data collection procedures, hypothesis testing, data treatment, data analysis, and validity and reliability.

3.1 Design

The research design used in this study is quantitative. The aim of the research is to determine whether there is an improvement in students' listening achievement through the use of Duolingo in a junior high school setting. This design involves comparing students' listening achievement scores from the pre-test and post-test conducted before and after the treatment. The pre-test and post-test design proposed by Setiyadi (2018).

$$T1 \ X \ T2$$

Description:

T1= pre-test

X= treatment

T2= post-test

The research design described above begins with administering a pre-test to the students. A pre-test is conducted before any treatment is given, to assess the students' initial level of listening achievement. The treatment in this study involves the use of Duolingo as a learning tool. After the treatment, a post-test is administered to the students. The post-test is conducted to evaluate their listening achievement after the intervention. The purpose of the post-test is to analyze whether there is any improvement in students' listening skills as a result of using Duolingo in the learning process.

3.2 Research Variable

Variables are objects used for research, and their forms are abstract and real. Additionally, a variable is something that is measure, control, or manipulate by the researcher in research.

In statistical approaches to language research, variables are generally classified into five categories: dependent variables, independent variables, moderating variables, power variables, and intervention variables. This study, however, concentrates specifically on the independent and dependent variables.

3.2.1 Independent variable

The independent variable is the variable that causes or influences changes in the dependent variable. This variable affects another variable. In the context of this study, the independent variable is the implementation of the Duolingo application as a learning Media.

3.2.2 dependent variable

The dependent variable is defined as the outcome that is influenced by the independent variable. In the context of this study, it pertains to the students' listening achievement.

3.3 Data Source

Research requires data sources, including the population and the sample. The population refers to the entire group of individuals or objects under study, from which data may be collected. The population of this research is VIII grade students of SMP Negeri 10 Kotabumi. A sample, on the other hand, is a subset of the population selected for the actual study. For this research, Class VIII B was chosen as the sample, comprising 30 students.

3.4 Instrument of the Study

1. Pre-test

The pre-test was administered to determine the students' initial listening achievement before the treatment was given to the experimental class. Prior to the test, the researcher introduced himself to the students and provided simple instructions on how to complete the test. In this step, students are assigned to practice English listening achievement and students are given 40 minutes of location time.

2. Post-test

The purpose of this test is to evaluate the students' listening achievement following the treatment. The format of the post-test is similar to that of the pre-test. Students were given 40 minutes to complete the post-test, after which the researcher compared the results of the pre-test and post-test scores.

3.4.1 Validity of the Test

1. Content Validity

Content validity examines whether the test content adequately represents the subject matter it is intended to assess. In this study, content validity is ensured by developing test materials that align with the current curriculum. To maintain consistency with the syllabus for eighth-grade junior high school students, the listening test materials are designed based on the stated teaching objectives. The focus of the material "asking for and giving information" is appropriate and relevant to the students' level and learning needs.

To ensure the study's validity, the researcher must ensure that the subject matter aligns with the school curriculum. According to Hatch and Farhady (1982: 251), content validity should include a representative sample of the subject matter, focusing primarily on the appearance of the test. In this study, the researcher carefully developed the test based on the curriculum used for eighth-grade students at SMP Negeri 10 Kotabumi.

The following specifications, adapted from (Tyagi, 2013), can be outlined as follows:

Table 3 1 Listening Test Specifications for the Try-Out

No	Test Objectives	Items Numbers
1.	Undestanding Vocabulary	1, 2, 3, 4, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 31, 32, 33, 34, 35, 36
2.	Identifying Key Infomation	8, 9, 18, 19, 27, 28, 29, 30, 37, 38
8	Making Inference	10, 20, 39, 40

2. Construct Validity

Validity refers to the extent to which a test aligns with the theoretical framework it is intended to measure—in this case, listening performance. It examines whether the test items truly reflect the skills they are designed to assess. A test that possesses construct validity can effectively measure specific characteristics based on a theory of listening. This form of validity assumes the presence of underlying learning theories or constructs that support the development of certain abilities and skills.

According to Setiyadi (2006:26), when an instrument is intended to assess a single skill - such as listening in this study - its construct validity can be determined by examining the test items. If the test items are appropriately designed to measure that particular skill, then the instrument is considered to have good construct validity. In this study, the researcher used only the listening test as an instrument, with each item specifically created to evaluate listening achievement. As a result, the construct validity of the instrument was successfully achieved.

Table 3 2 Listening Test Specifications for the pretest and posttest

No	Test Objectives	Items Numbers	
		Pre-test	Post-test

1.	Undestanding Vocabulary	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 17, 18, 19, 20, 24, 25, 26, 27, 28	1, 3, 4, 6, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 20, 22, 23, 24, 25, 26, 29
2.	Identifying Key Infomation	7, 14, 15, 21, 22, 23, 29	2, 5, 7, 14, 19, 27, 30
8	Making Inference	16, 30	21, 28

In conducting this study, the researcher selected three of the seven key developmental components outlined by Tyagi (2013) as the foundation for creating the instrument items. This selection was made based on several considerations. Firstly, these three components were identified as the most relevant and aligned with both the educational setting and the students' level of English proficiency. Secondly, focusing on only three components allowed the researcher to design a more targeted, efficient, and effective assessment instrument. Lastly, the selected components were considered the most supportive for the development of English learning tools for eighth-grade junior high school students, particularly in the context of using Duolingo as a learning medium.

3.4.2 Reliability of the Test

Listening Test

To measure the consistency of the listening test, the researcher used SPSS for Windows and applied the Intraclass Correlation Coefficient to determine the test's reliability by analyzing the pre-test and post-test scores. The reliability of a test can be interpreted based on the following standard classifications:

The formula of Product Moment:

$$r = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}}$$

Where:

R = reliability

X = score of first variable

Y = score of second variable

(Hughes, 1991:32)

Once the reliability of a half-test has been established, researchers can use the Spearman-Brown Prophecy Formula (Hatch and Farhady, 1982) to estimate the reliability of the full test, which is represented by Rf.

$$r_{full} = \frac{2(r_{half})}{1 + r_{half}}$$

r_f = The estimated reliability coefficient of the entire test.

r_h = The reliability coefficient obtained from half of the test

The criteria for interpreting reliability coefficients are as follows:

0.90 – 1.00 = High

0.50 – 0.89 = Moderate

0.00 – 0.49 = Low

(Hatchy, and Farhady, 1982:247)

3.4.3 Level of Difficulty

The difficulty level of a test item indicates how easy or hard it is for participants to answer. Ideally, items should be balanced—not too easy or too challenging for the students. To determine the difficulty level of the test, the researcher applied the following formula.

$$FV = \frac{(CU+CL)}{2n}$$

FV = The index of difficulty for the test item being calculated.

CU = The number of students in the upper group who answered the item correctly.

CL = The number of students in the lower group who answered the item correctly.

$2n$ = The combined total number of students in both the upper and lower groups.
(Heaton, 1975)

To determine the item difficulty level, the researchers referred to the guideline provided by Sudjana (1991).

0.0 – 0,30 = Difficult

0,31 – 0,70 = Medium

0,71 – 1.00 = Easy

3.4.4 Discrimination Power

Discrimination power refers to the ability of an item to distinguish between high-ability and low-ability test takers in relation to the skill being assessed. To measure this, the researcher divided the trial class into two groups: the upper group and the lower group. The following formula was used to calculate discriminating power:

$$DP = \frac{(CU - CL)}{N}$$

DP = Discriminating power.

CU = The number of students in the upper group who answered the item correctly.

CL = The number of students in the lower group who answered the item correctly.

N   = The total number of students in each group (upper or lower).

(Heaton, 1975)

To determine whether an item possesses adequate discriminating power, the following criteria can be used:

0.0 – 0.20   = Poor

0.21 – 0.40   = Satisfactory

0.41 – 0.70   = Good

0.71 – 1.00   = Excellent

3.5 Data collection procedure

In this research, there were some steps that need to be done by the researcher as the procedure to collect the data, such as:
1. Selecting and Determining the Population and Sample.

The researcher began by determining the population and selecting the sample for the study. The research was conducted at SMP Negeri 10 Kotabumi, focusing on eighth-grade students in the 2024/2025 academic year. A sample of 30 students from a selected class was determined based on specific criteria.

2. Selecting the Materials

The researcher developed suitable listening materials for the treatments, pre-test, and post-test. These materials consisted of internet-sourced audio recordings on descriptive topics, supplemented with the researcher's original content, and were designed to match the syllabus for the relevant grade level.

3. Administering the Pretest

The pre-test was administered prior to the treatment with the aim of assessing the students' listening achievement before the intervention. Before giving the test, the

researcher explained the topic to ensure student understanding. The pre-test was conducted only once.

4. Conducting the Treatments

In this research, the treatment was conducted over two meetings, with each session lasting approximately 120 minutes.

After that, the researcher asked them to answer questions in their worksheet and to pair up to create a dialogue related to asking questions.

5. Administering the Post-test

Following the treatment, the post-test was administered.The post-test aims at knowing the progress of listening achievement through using Duolingo.

The test was administered once, following two instructional sessions or treatment meetings.

6. Analyzing the test result (Pretest and Post-test)

Following the administration of a pre-test and post-test, the researcher analysed the data using a t-test to determine whether there was a statistically significant effect on students' listening achievement after the treatment. The analysis was conducted using the SPSS software. After scoring the students' test, the researcher got the result of the student's responses.

3.6 data analysis

This study analyzed students' listening achievement by assessing their performance scores to measure the improvement of their listening achievement through audio exercises in Duolingo. The process involved the following steps:

a) Evaluating the pre-test and post-test results.

b) Organising test results into tables and calculating scores for pre-test and post-test.

c) Once the data was collected, the researcher proceeded with data analysis. The analysis involved performing all necessary calculations using SPSS, following several steps, such as testing data normality and conducting hypothesis testing.

The assessment criteria were as follows:

0.00 – 0.19 = Poor

0.20 – 0.39 = Satisfactor

0.40 – 0.69 = Good

0.70 – 1.00 = Excellent

(Heaton, 1975:182)

This indicates that the students' scores varied between zero and a maximum of 100, based on the study's findings. As stated by Irana (2021: 20), the assessment of the students' worksheets was carried out using the following rating criteria:

Table 3 3 Rating scored for listening test

Score	Category
86 -100	Very good
71-85	Good
56-70	Average
46-55	Poor
0	Very poor

Arikunto's (1993, p. 240) formula for scoring both pre-test and post-test results is utilized in this study. The scoring system calculates the score by multiplying the number of correct answers by the total number of questions and then by 100.

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

S : Score of the test

R : The right answers

N : The total items

3.7 Data treatment

The researcher examined the results of the listening test by using a normality test to determine the improvement that occurred after using Duolingo in the class.

3.7.1 Normality Test

The Kolmogorov-Smirnov test was used to assess the normality of the data in the experimental class. This test helped determine if the data followed a normal distribution. For the analysis, the researcher employed SPSS (Statistical Package for Social Science) software to perform the statistical computations. The steps for conducting the normality test on each set of score data were as follows:

a) Formulation of the Hypotheses:

H_0 (Null Hypothesis): The sample data come from a population that follows a normal distribution.

H_1 (Alternative Hypothesis): The sample data come from a population that does not follow a normal distribution.

b) Criteria for Acceptance or Rejection of the Normality Test:

H_0 is accepted if the significance value (Sig.) is greater than $\alpha = 0.05$, indicating that the data are normally distributed.

H_1 is accepted if the significance value (Sig.) is less than $\alpha = 0.05$, indicating that the data are not normally distributed.

3.8 Hypothesis Testing

After collecting the data, the researcher analyzed it using a one-group pre-test and post-test design to determine whether there was a significant improvement in students' listening achievement before and after the implementation of Duolingo. The hypothesis of this research is stated as follows: H_0: There is no statistically significant difference in students' listening achievement before and after receiving instruction through Duolingo.

H_1: There is a statistically significant improvement in students' listening achievement following instruction through Duolingo.

The criteria for accepting the hypothesis are as follows:

H_0 is accepted when the significance level (α) is greater than 0.05.

H_1 is accepted when the significance level (α) is less than 0.05.

This chapter explained in detail the research methods that were used in this study. It also described the steps that were taken to collect data, the analysis that was carried out, and the tools and techniques that were used. With carefully developed methods, the researcher was confident that this study would provide reliable and relevant results to answer the research questions.

V. CONCULUSION AND SUGGESTIONS

5.1 Conclusion

Based on the research conducted in Grade VIII B at SMP Negeri 10 Kotabumi, the data analysis and discussion led to the following conclusion:
There was a significant improvement in students' listening achievement after being taught using Duolingo. The use of Duolingo proved effective in enhancing students' listening Achievement, as evidenced by the increase in their average post-test scores, which increased from 61.6 to 73.4—resulting in a gain of 11.8 points. The integration of Duolingo in the learning process helped students better understand listening because they found the activities enjoyable and engaging.

5.2 Suggestions

Considering the results of the research, the researcher would like to propose the following suggestions:

5.2.1 Suggestion for the teacher:

Teachers are encouraged to incorporate Duolingo or similar language learning apps as supplementary tools to make listening achievement lessons more engaging and interactive.

5.2.2 Suggestion for further research:

1. Further studies might investigate the long-term impact of using language learning apps on students' overall language proficiency.
2. Future research in different educational settings is necessary to determine whether these results can be applied more broadly.

3. Future research could also compare the effectiveness of Duolingo with other digital learning platforms or traditional teaching methods to assess which approach yields better outcomes in listening achievement.

REFERENCE

Azhima, F. and Halim*, A. (2024) 'The Integration of Duolingo in Classroom Setting: A Case Study of its Impact on English Language Learning.', *Riwayat: Educational Journal of History and Humanities*, 7(3), pp. 877–890. Available at: https://doi.org/10.24815/jr.v7i3.39326.

Bhutto, M.A. and Kazmi, A.B. (2024) 'Effectiveness of English language textbook in developing Oral communicative competence of high school students', *Journal of Social & Organizational Matters*, 3(3), pp. 151–176. Available at: https://doi.org/10.56976/jsom.v3i3.108.

Brown, H. D. (2001). Teaching by Principle and Interactive Approach to language pedagogy. Longman Inc.

Daniyati, A. *et al.* (2023) 'Konsep Dasar Media Pembelajaran'.

Daradjat, Z. (1995) *Metodik khusus pengajaran agama Islam*. Jakarta: Bumi Aksara.

Hancock, J. 1987. How To Teach English. London: Longman.

Hatch, E., & Farhady, H. (1982). Research Design and Statistics for Applied Linguistics. Newbury House Publishers.

Heaton, J. B. (1975). Writing English Language Tests. London: Longman.

Hernadijaya, N.S. (2020) 'The use of duolingo application to enhance junior high school student's English vocabulary', 8.

Hughes, A. 1991. Testing for Language Teachers. New York: Cambridge University Press.

Kathleen. 1986. Reading Skills for College Students. Engelwood Clipps, New Jersey: Prentice Hall, Inc.

Kline, J.A. (1996) *Listening Effectively:* Fort Belvoir, VA: Defense Technical Information Center. Available at: https://doi.org/10.21236/ADA421888.

Molesworth, B.R.C., Burgess, M. and Kwon, D. (2013) 'The use of noise cancelling headphones to improve concurrent task performance in a noisy environment', *Applied Acoustics*, 74(1), pp. 110–115. Available at: https://doi.org/10.1016/j.apacoust.2012.06.015.

Niah, S. and Pahmi (2019) 'The Utilization of Duolingo to Improve the Speaking and Listening Skills of Junior High School Students in Pekanbaru', in *Proceedings of the International Conference of CELSciTech 2019 - Social Sciences and Humanities track (ICCELST-SS 2019). Proceedings of the International Conference of CELSciTech 2019 - Social Sciences and Humanities track (ICCELST-SS 2019)*, Pekanbaru, Indonesia: Atlantis Press. Available at: https://doi.org/10.2991/iccelst-ss-19.2019.12.

Perez, L.C.D. (2020) 'English Language Acquisition Via Duolingo Application: Effectivity and Challenges', (2).

Putri, L.M. and Islamiati, A. (2018) 'TEACHING LISTENING USING DUOLINGO APPLICATION', *PROJECT (Professional Journal of English Education)*, 1(4), p. 460. Available at: https://doi.org/10.22460/project.v1i4.p460-465.

Rost, M. (2002). Teaching and Researching Listening. London: Longman. Rost, M. (2011) *Teaching and researching listening*. 2. ed. Harlow, England:Pearson Longman (Applied linguistics in action).

Sari, A. and Octaviani, S.K. (2022) 'Duolingo Mobile Application for English Listening Skill Improvement of Vocational School Students', *Journal of English Language and Education*, 7(2), pp. 84–95. Available at: https://doi.org/10.31004/jele.v7i2.306.

Schmitt, N. and Rodgers, M.P.H. (2020) *An introduction to applied linguistics*. 3rd ed. London New York (N.Y): Routledge.

Setiyadi, Ag, B. 2006. Metode Penelitian untuk Pengajaran Bahasa Asing. Pendekatan Kuantitatif dan Kualiatif. Yogyakarta: Graha Ilmu.

Setiyadi, Ag, B. 2018. Metode Penelitian untuk Pengajaran Bahasa Asing. Pendekatan Kuantitatif dan Kualiatif EDISI, 2. Yogyakarta: Graha Ilmu.

Shelly, G.B. (2010) *Teachers discovering computers: integrating technology and digital media in the classroom*. 6th ed. Boston, Mass.: Thomson/Course Technology.

Simanjuntak, M.M. and Uswar, Y. (2021) 'IMPROVING STUDENTS' LISTENING SKILLS BY USING SONG', *Journal MELT (Medium for English Language Teaching)*, 5(2), p. 142. Available at: https://doi.org/10.22303/melt.5.2.2020.142-160.

Smaldino, S.E., Lowther, D.L. and Russell, J.D. (2014) *Instructional technology and media for learning*. Tenth edition. Harlow: Pearson Education Limited.

Sukarya, D., Kamil, A.B. and Utami, P.P. (2022) 'Students' Experiences in Implementing Duolingo-Assisted Listening Learning', 5.

Tuong, N.K. and Dan, T.C. (2024) 'A STUDY ON DUOLINGO MOBILE APPLICATIONS TO IMPROVE EFL STUDENTS' LISTENING COMPREHENSION PERFORMANCES', *European Journal of Alternative Education Studies*, 9(1). Available at: https://doi.org/10.46827/ejae.v9i1.5342.

Tyagi, B. (2013). Listening: an important skill and its various aspects. The Criterion: An International Journal in English, 12, 1–8.www.the-criterion.com.

Yasin, B., Mustafa, F. and Permatasari, R. (2018) 'How Much Videos Win Over Audios in Listening Instruction for EFL Learners', *The Turkish Online Journal of Educational Technology*, 17(1).

Vesselinov, R., & Grego, J. (2012). Duolingo effectiveness study: Final report. New York: City University of New York.

Zuhri, S. (2022) 'PEMBELAJARAN SEJARAH KEBUDAYAAN ISLAM BERBASIS MULTIMEDIA', 2(1).