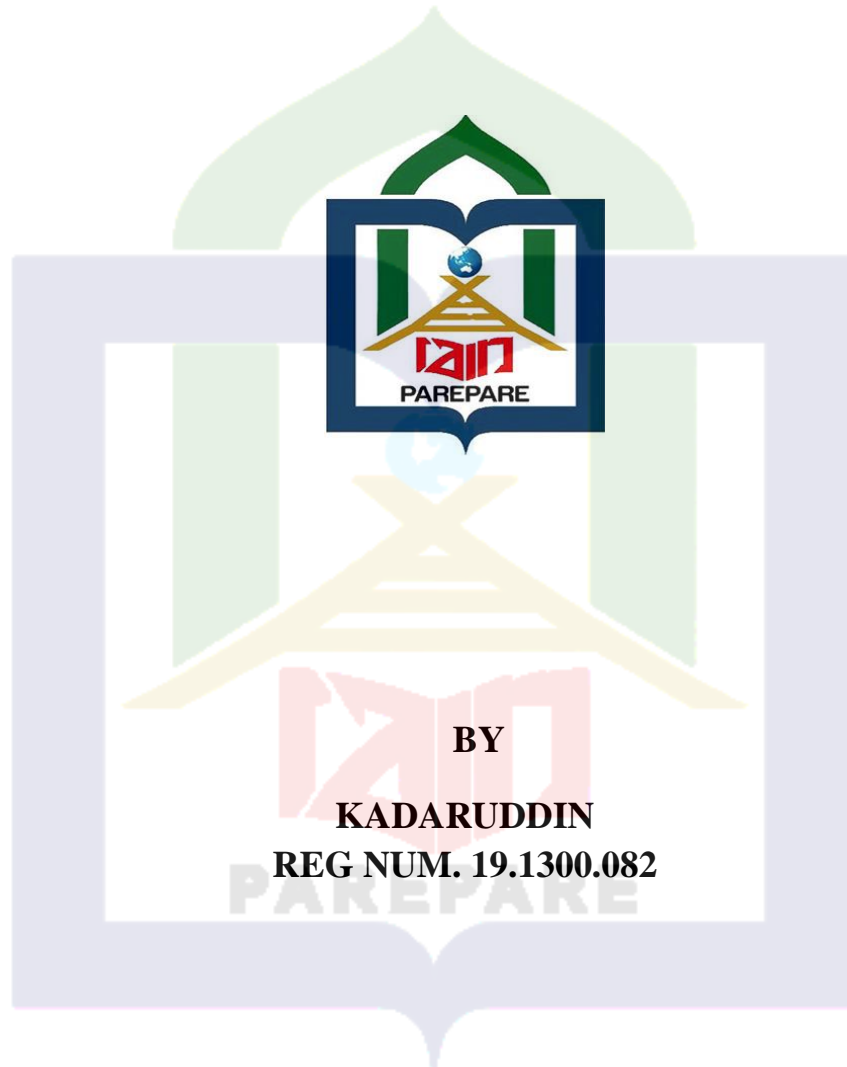


**A THESIS**

**IMPROVING STUDENTS' SPEAKING SKILL BY USING  
ARTIFICIAL INTELLIGENCE ON THE SECOND  
SEMESTER OF ENGLISH PROGRAM  
AT IAIN PAREPARE**



**BY**

**KADARUDDIN**

**REG NUM. 19.1300.082**

**ENGLISH EDUCATION PROGRAM  
TARBIYAH FACULTY  
STATE ISLAMIC INSTITUTE (IAIN)  
PAREPARE**

**2023**

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Submitted to the English Education Program of Tarbiyah Faculty of State Islamic  
Institute of Parepare in Partial Fulfilment of the Requirements  
For the Degree of Sarjana Pendidikan (S.Pd.)

**ENGLISH EDUCATION PROGRAM**  
**TARBIYAH FACULTY**  
**STATE ISLAMIC INSTITUTE (IAIN)**  
**PAREPARE**

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AT IAIN PAREPARE**

**A Thesis**

**As Partial Fulfillment of the Requirements for the Degree  
of Sarana Pendidikan (S. Pd.)**

**English Education Program**

**Submitted by**

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REG NUM. 19.1300.092**

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TARBIYAH FACULTY  
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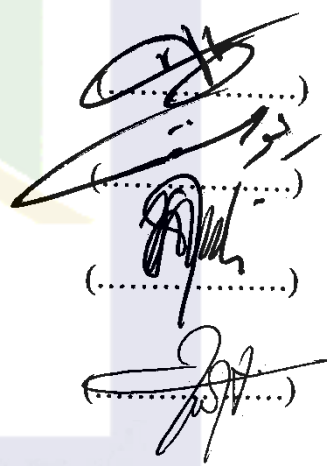
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## DECLARATION OF THE AUTHENTICITY OF THE THESIS

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Stated this thesis was his own writing and if it can be proved that it was copied, duplicated or complied by any other people, this thesis and the degree that has been gotten would be postponed.

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## ABSTRACT

**Kadaruddin.** *Improving Students' Speaking Skill by Using Artificial Intelligence on the Second Semester of English Program at IAIN Parepare.* (Supervised by Mujahidah and Muh. Yusuf)

This study aims to improve students' speaking skill by AI and to know students' perception of using AI to improve students' speaking skill on the second semester of the English Program at IAIN Parepare. The result of this study are usefull for the teachers, students and, the further researcher. The teachers find a new way to manage speaking classes than the students find enjoyable way to improve their speaking skill, therefore the further researcher will use this study as their inspiration or reference for their research.

This study uses quantitative research applying the pre-experimental method. The population of this study is the second-semester students of the English Program at IAIN Parepare. Therefore, the sampling technique used is purposive sampling. The sample is PBI A which consists of 20 students. This research used the test (Pre-test and Post-test) and the questionnaire in collecting the data and using scoring technique and classification by Likert scale in analyzing it.

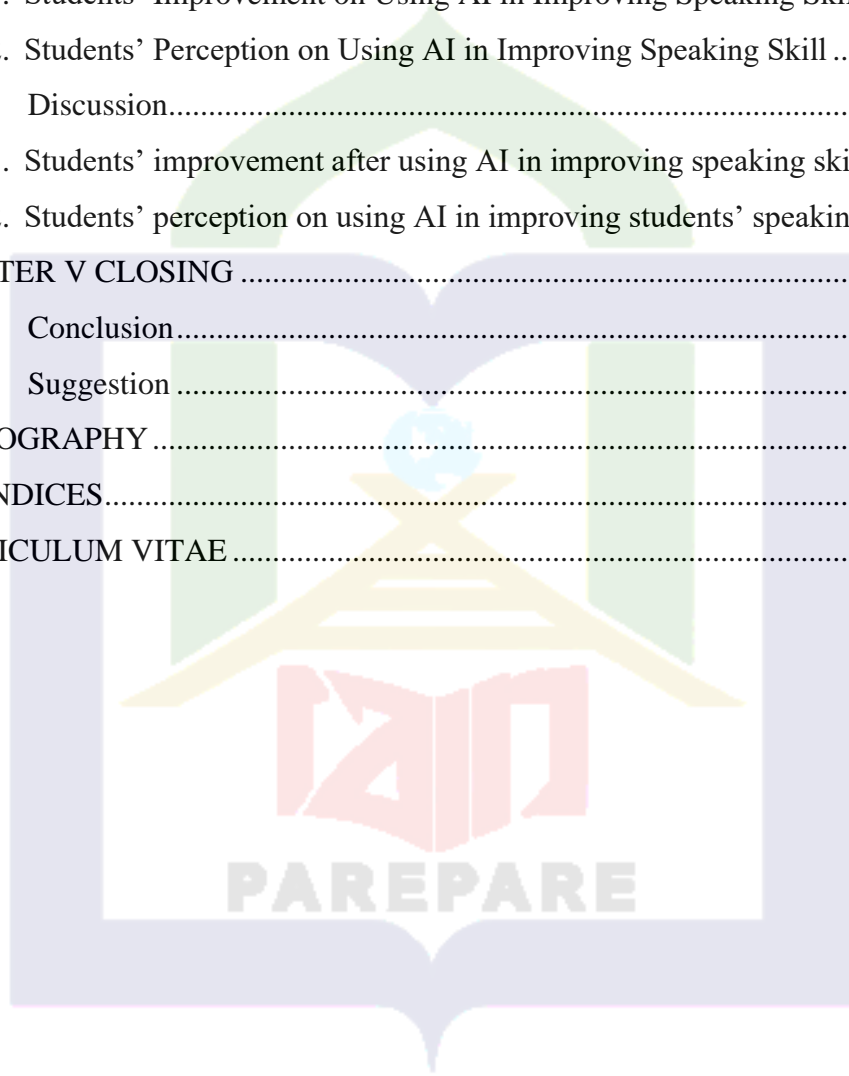
The results of this study showed that students got 3 categories in post tets, namely Good (21%), Fair (68%), and Poor (11%), yet in the results of the pretest, students only get 2 categories, namely Fair (32%) and Poor (68%). The data were then processed with Microsoft excel 365 and found the T-Test value is 8,246 while the T-Table is 2,409 which was meant that the improvement of students speaking skill usimng AI was significant. On the other hand, the students' show the positive perception of the use of AI in improving students' speaking skills. The mean score of students' perception is 72.48 in Good level. Thus the results of this study indicated that AI is effective to improve students' speaking skill and AI got postive perception from the students in improving their speaking skill.

**Keywords: Speaking Skill, Artificial Intelligence**

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## LIST OF ABBREVIATION

Abbreviation	Complete words
PEoU	Perceive Ease of Use
AtU	Attitude toward Using
PoU	Perceive of Usefulness
BI	Behavioral Intention



# CHAPTER 1

## INTRODUCTION

### A. Background

Speaking skill is the most crucial skill in English that should be mastered by English Students. Speaking is not like other skills in English, it is real communication and also is a productive skill so it needs more practicing as often as possible. Sudarmo stated that speaking skill will increase students' confidence because they have speaking competence with lots of practice.<sup>1</sup> So English students have to improve their speaking skill to have good communication and good confidence.

Based on data from EF-EPI (Education First-English Proficiency Index) 2021 regarding English proficiency, Indonesia is at a low proficiency level and is ranked 80 out of 112 countries.<sup>2</sup> It is proven that many English learners in Indonesia find it difficult in English speaking skills. Moreover, Lai-Mei stated that many foreign language learners find it difficult to express their thoughts effectively. It is because they lack of speaking skill.<sup>3</sup> Therefore, students must have good speaking skills so that they can easily express their thoughts.

Furthermore, having good speaking skill is in great demand. Without having good speaking skill we find it difficult to communicate and also difficult to express our opinions. Moreover, Dr. Munther Zyoud stated that learning a language that does not achieve speaking competence remains

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<sup>1</sup> Sudarmo Sudarmo, "Importance of Speaking in English as a Foreign Language between Skillful and Thoughtful Competencies: Studying Sociolinguistics Perspectives," *Linguistics and Culture Review* 5, no. S1 (2021): 113–24, <https://doi.org/10.21744/lingcure.v5ns1.1321>.

<sup>2</sup> Wisnu Bagus Prasetyo, "EF EPI 2021: RI Peringkat 80 Sari 112 Negara Dunia," 2021, 2021.

<sup>3</sup> Lai-Mei Leong & Seyedeh Masoumeh Ahmadi, "An Analysis of Factors Influencing Learners' English Speaking Skill," 2017.



incomplete because most of the communication is made through speaking.<sup>4</sup> Thus, the mastery of speaking skill in learning a language is very fundamental because it is the main basis for communicating.

Practice with a native speaker is the best way to improve speaking skills, by having a conversation or discussion with a native speaker will be easier to improve our speaking skills.<sup>4</sup> As Wahyuni found in her research, speaking practice with a native speaker is very influential in improving students speaking ability.<sup>5</sup> Therefore students should not only focus on practicing conversations and discussions with their friends but more on practicing with a native speaker.

However, it is very difficult for students to meet native speakers just to practice developing speaking skill. Hence students in the class just study by the old method to learn speaking such as getting some topics in class then they will just explain or make some conversations about the topics. That old method doesn't give a significant impact on students' speaking skill because they just have a conversation and discuss just with their friends that have the same or even less English proficiency.

Furthermore, in this technological era, students are more comfortable spending time with their cell phones than playing and discussing with a native speaker or even their friends. Regarding the improvement of speaking, we must use smartphones to improve students' speaking skills. In this era, smartphones have provided a menu to help students improve their speaking skills without meeting native speaker or their friends.

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<sup>4</sup> Munther Mohammad Zyoud, "Theoretical Perspective on How to Develop Speaking Skill among University Students," *An International Multidisciplinary Journal* 2, no. 1 (2016): 1–10.

<sup>5</sup> Nur Wahyuni and Indah Afrianti, "The Contribution of Speaking Practice with the Native Speaker to Student's Speaking Ability in Junior High School," *Ainara Journal (Jurnal Penelitian Dan PKM Bidang Ilmu Pendidikan)* 2, no. 3 (2021): 247–52, <https://doi.org/10.54371/ainj.v2i3.88>.

One of the advantages of technology today is the presence of artificial intelligence (AI) that can make it easier for students to learn wherever and whenever they want. Artificial intelligence is the stimulation of human intelligence demonstrated by machines, especially computer systems. Artificial intelligence will automatically respond to the user if the user needs it. Junaidi stated that when students speak, Artificial intelligence will automatically recognize their speech and voice in a sequence, it is also similar to how humans recognized speech.<sup>6</sup> Because artificial intelligence can act like humans, it can change humans to be partners to improve speaking skill.

Artificial intelligence has many types of applications, such as Google Assistant, Cake Application, Replica, etc. With these applications, students can practice their speaking in the classroom or even at home, they can also imitate speakers in artificial intelligence, besides that students will also see their pronunciation is wrong because the cake application/google assistant will correct students' mistakes in pronunciation.

Based on its function, Artificial intelligence works to provide students with feedback. For example, in the use of the Replika Application, students are instructed to have conversations through chat, the goal is to increase students' vocabulary, by continuing to have conversations with Replika, there will be a lot of new vocabulary obtained just than having a conversation with their friends. Besides that, Google Assistant also provides a place for students to have two options that are writing or speaking. by speaking with Google Assistant students will try to improve their pronunciation because when the pronunciation is not

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<sup>6</sup> Junaidi et al., "Artificial Intelligence in EFL Context: Rising Students' Speaking Performance with Lyra Virtual Assistance" 29, no. 5 (2020): 6735–41.

appropriate, the Google Assistant will not respond properly, beside that, Google Assistant will help to increase student's fluency in speaking English. Then the last one is the Cake Application, in this application, many features can be used such as vocabulary addition, conversation training, and pronunciation correction.

IAIN Parepare is one of the institutions that is already familiar with technology, this is evident from the mission of IAIN Parepare which involves technology in it, namely "*Creating Islamic scholars who are tolerant and capable of using Information Technology*",<sup>7</sup> On the other hand, many students also use android to communicate, and there are even several academic activities such as Community Service Lectures (KPM) that use technology to its full potential. Even when students are working on paper assignments, there are already some students who don't type manually anymore but use their voice which is then typed automatically by the AI they use. By looking at these conditions they must be facilitated by technology that can help them learn.

Moreover, English education students at IAIN Parepare also seem to be less proficient in English speaking skill, even if some of them seem proficient, they still use Indonesian accents or Indonesian tongue pronunciation, besides that they also sometimes speak using Indonesian grammar so that listeners don't understand what they are saying because English grammar is different from Indonesian. This happens because they have never even tried to practice speaking with native speakers to learn accents, pronunciation, grammar and so, on.

Seeing the conditions that occur above, artificial intelligence is a solution that the researcher offers to be able to facilitate English education students to be

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<sup>7</sup> IAIN Parepare, "Visi, Misi, Tujuan, Sasaran, Syiar/Motto IAIN Parepare," 2019.

able to study comfortably and overcome the above problems using their Android. However, the existence of artificial intelligence, it does not mean that artificial intelligence has come to replace the lecturer's position in teaching speaking in the classroom, but artificial intelligence is a tool that students can use in class to practice with Artificial intelligence based on the topic presented by the teacher, so they no longer practice with their friends.

The fact shows that some students who have tried Artificial Intelligence are greatly helped by artificial intelligence in learning English as artificial intelligence help the students with all the features that are available to practice and get many improvements in their speaking skill.<sup>8</sup> On the other hand, they also seem happier when using AI in their learning. Based on the problem and the explanation above, this research entitled “**Improving Student’s Speaking Skill by Using Artificial Intelligence on the Second Semester of English Program at IAIN Parepare**”.

## **B. Research Questions**

Based on the background of the study above, the research question is formulated as follows:

1. Is there any significant improvement in students’ English speaking skill by using Artificial Intelligence?
2. How is students’ perception in using artificial intelligence to improve speaking skill?

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<sup>8</sup> Interview with English Program Student, Parepare, Juni 15<sup>th</sup>,2022.

### **C. Objectives of the Research**

The objectives of the research are:

1. To improve students speaking skill by using Artificial Intelligence.
2. To know students' perception in using artificial intelligence to improve speaking skill

### **D. Significances of the research**

After finishing this research, the researcher hopes the result of this research can give benefits for:

#### **1. The other Researcher**

The result of this study is an inspiration or reference for those who want to conduct similar research, especially in using artificial intelligence in improving English proficiency.

#### **2. Students**

Students will find a new way to improve their speaking skill and they will be more motivated and enjoy learning English speaking.

#### **3. Teachers**

It can help the teacher to understand the use of artificial intelligence in learning English, and they will find a new way to manage speaking classes innovatively so that learning quality will improve.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### A. Previous Research Findings

Previous research findings consist of previous research related to artificial intelligence in teaching and learning English, those research are:

Zou et al. Conducted a study to explore students' attitudes toward Artificial Intelligence supported by mobile applications in learning English speaking skill. This study uses a Qualitative method with the subject of the research is university students in China. The findings showed that students have positive attitude toward artificial intelligence, however, students found limitations in using the current Artificial Intelligence product hence students concluded that Artificial intelligence can not replace the teacher in teaching speaking.<sup>9</sup>

Shazly conducted a study to explore the role of Artificial intelligence applications in speaking practice. This study uses quasi-experiment with the sample of the research is 48 university students in an EFL class in Egypt. The finding showed that Artificial intelligence improves students' speaking skill however these applications did not reduce students' anxiety.<sup>10</sup>

The next study is about students' favorite Artificial Intelligence-based speaking applications for learning to speak and describes the reasons why students choose them and analyze the weakness in using Artificial Intelligence-

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<sup>9</sup> Bin Zou, Liviero Sara, and Hao Mengyuan, "Artificial Intelligence Technology for EAP Speaking Skills : Student Perceptions of Opportunities and Challenges," no. January 2021 (2020), <https://doi.org/10.1007/978-3-030-34212-8>.

<sup>10</sup> Reham El Shazly, "Effects of Artificial Intelligence on English Speaking Anxiety and Speaking Performance : A Case Study," no. March (2022), <https://doi.org/10.1111/exsy.12667>.

based speaking applications. It was conducted by Suciati This study used qualitative research with the subject of the research is the second-semester students of *Tadris Bahasa Inggris*, IAIN Kudus. The findings in this study there are three, first, the student's favorite AI are *Cake, Talk, Elsa* and *Speak English*. Second why the students choose them because those speaking applications are free and able to be a partner in practicing the speaking skill. And third, the weakness of AI apps is limited in the topics and conversation served.<sup>11</sup>

Another study was conducted by Dr. Shaimaa Ghareeb is about investigate the effectiveness of using Artificial Intelligence applications in developing oral language skill. This research used the quasi-experimental method that was designed into two groups experimental and control classes. The subject of the research is the sixth primary school pupil. The findings of this research showed the statically significant impact of integrating the artificial intelligence application on developing listening comprehension and speaking skill.<sup>12</sup>

Furthermore, a study about the effectiveness of Artificial intelligence apps in English as a foreign language classroom environment has been conducted by Junaidi, et al. The AI app employed in this research is Lyra Virtual Assistant. The quasi-experimental method was employed in this study with the sample of 65 students from two different seventh grades divided into the experimental and control group. The result showed there was significant improvement from the experimental group compared to the control class that use conventional style.<sup>13</sup>

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<sup>11</sup> Suciati, "Favourite Artificial Intelligence-Based Speaking," 2020.

<sup>12</sup> Shaimaa Ghareeb and Ahmed Ali, "Using an Artificial Intelligence Application for Developing Primary School Pupils ' Oral Language Skills BY Dr . Shaimaa Ghareeb Ahmed Ali," no. 75 (2020), <https://doi.org/10.12816/EDUSOHAG>.

<sup>13</sup> Junaidi et al., "Artificial Intelligence in EFL Context: Rising Students ' Speaking Performance with Lyra Virtual Assistance."

Based on the five previous research above, the similarities between this research and the previous research above is each research conducted study about artificial intelligence toward English proficiency, while the difference between This research and the previous research is conducted to improve students speaking skill, also the focus artificial intelligence in this study are Cake application, Google Assistant, and Replika. In addition, this study will use pre-experimental research.

## **B. Some Pertinent Ideas**

This part explains the concept of the variables of the research, they are the concept of speaking skill and the concept of Artificial Intelligence.

### **1. The Concept of Speaking Skill**

#### **a. Definition of Speaking**

There are many definitions of speaking proposed by experts, speaking is an essential tool for communicating and it should be mastered by students. Brown; Burn & Joy in Novita Lestari stated that speaking is a very complex and dynamic skill that involves three processes, producing, receiving, and processing information in English.<sup>14</sup>

Syafiq et al. stated that one of the basic language skills that must be mastered by foreign English learners is speaking, because it is used in communication and must be practiced orally, besides that speaking also

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<sup>14</sup> Novita Lestari, "Improving the Speaking Skill by Vlog ( Video Blog ) as Learning Media : The EFL Students Perspective Improving the Speaking Skill by Vlog ( Video Blog ) as Learning Media : The EFL Students Perspective Novita Lestari" 9, no. 1 (2019): 915–25, <https://doi.org/10.6007/IJARBSS/v9-i1/5490>.



is used to establish several relationships, provide information, and negotiate as the part of communication.<sup>15</sup>

b. Types of Speaking

1) Imitative Speaking

At the imitation level, it is clear what the students are trying to do. At this level, students simply try to repeat what was said to them in an understandable way and with some adherence to the pronunciation as conveyed by the speaker.

It doesn't matter if students understand what they are saying or having a conversation. Its purpose is simply to reproduce what is said to them. One common example is the "repeat after me" experience in class.

2) Intensive Speaking

Intensive speaking is a level of speech that involves the production of a limited amount of language in a very controlled context. Examples are reading a passage aloud or giving direct responses to simple questions.

Competence at this level is demonstrated through the achievement of certain grammatical or lexical mastery.

3) Responsive Speaking

Responsive speaking is a slightly more complex type than intensive but the distinctions are blurred, to say the least. At this level, dialogue includes simple questions with one or two follow-up

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<sup>15</sup> Ahmad Nur Syafiq et al., "Increasing Speaking Skill through YouTube Video as English Learning Material during Online Learning in Pandemic Covid-19," *Elsya: Journal of English Language Studies* 3, no. 1 (2021): 50–55.

questions. The conversation takes place at this point but the content is simple.

#### 4) Interactive Speaking

The unique feature of interactive speaking is that it is usually more interpersonal than transactional. Interpersonal is meant speaking for maintaining relationships. Transactional speaking is for sharing information as is common at the responsive level.

The challenge of interpersonal speaking is the context or pragmatics. The speaker has to keep in mind the use of slang, humor, ellipsis, etc. when attempting to communicate. This is much more complex than saying yes or no or giving directions to the bathroom in a second language.

#### 5) Extensive Speaking

Extensive communication is normally some sort of monolog. Examples include speech, story-telling, etc. This involves a lot of preparation and is usually not improvised communication.<sup>16</sup>

So from the 5 types of Speaking above, the researcher will focus on improving students' speaking skills in the Interactive Speaking type. This also adjusts to the AI that will be used, where most of the features used are two-way communication. Apart from that, it also adjusts to the samples to be taken, where they are currently studying Interactive Speaking courses.

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<sup>16</sup> Dhion Meitreya Vidhiyasi, Akademi Maritim, and Nusantara Cilacap, "Assessing Speaking for Achieving Communicative Competence Through " Distress Call at Sea " Test At The Nusantara Maritime," no. March 2017 (2019), <https://doi.org/10.6084/m9.figshare.7988507>.

c. Aspects of Speaking

In speaking, some aspects must be fulfilled by the learners. It can be used as a measurement of whether our speech is good or not. Those are fluency, comprehension, grammar, vocabulary, and pronunciation. The description is as follows according to Brown (2001:406-407)

1) Fluency

It refers to one's ability to speak smoothly and easily. Fluency is the matter of the way someone speaks the language without any trouble like thinking the word confusing the idea, etc.

2) Comprehension

Comprehension is a student's competence to comprehend all the speaker says to them.

3) Grammar

Grammar is the way to organize words into the correct sentence. This is important that if the speaker can master grammar to organize the word so the speaker also easily speaks English well.

4) Vocabulary

Vocabulary is the basic of language. It appears in every language skill. It is very important because we can say nothing without vocabulary in our minds. Vocabulary is about the choice of a word that is used appropriately based on the context of speaking.

5) Pronunciation

Based on the definition, pronunciation is an important component of language. Therefore, it is necessary if the students have

good pronunciation because if they have good pronunciation so their speaking will be understandable.<sup>17</sup>

#### d. Functions of Speaking

In general, speaking has many functions in developing English language skills, but in this section, we will only discuss some of the functions of speaking skills, the first is the function of speaking in general,<sup>18</sup> which are:

- 1) streamlining communication between individuals or groups.

Language is a means of communication. With language, we can communicate with other people. To be able to communicate smoothly, the most needed skill is speaking skill so that speakers can convey their ideas easily and effectively without writing or communicating through scripts.

- 2) The intent/message conveyed by the speaker can be conveyed properly.

By speaking directly, the message conveyed by the speaker can be conveyed properly which is supported by the speaker's expressions and intonation. because the meaning of body language, expression, and intonation will be difficult to convey to listeners through written media or scripts.

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<sup>17</sup> Anita jati Laksana, "The Effectiveness of Using Chain Story Game in Teaching Speaking," 2008, 5–17.

<sup>18</sup> Ishrat Aamer Qureshi, "The Importance of Speaking Skill," *Gerald Gillis*, no. 5655 (2013): 10, <http://www.geraldgillis.com/importance-speaking-skills/>.

3) A good speaker gets more attention from the audience.

Of the several benefits of speaking skills, this benefit is needed, especially for English Foreign Learners students. English learners must be able to communicate with other people. Therefore, we must improve our speaking skills so that other people are interested in communicating with us. Because when other people see that we can communicate, they can help us develop our careers.

On the other hand, speaking also has a function in several situations and conditions, such as in the academic world, students will actively participate in group activities in the classroom, expedite the discussion process in English classes, make it easier to pursue studies in foreign countries because of good speaking skills in looking for information or at the time of the interview test. As students who focus on English education and become prospective English teachers, speaking skills are also needed to explain and demonstrate the process of communicating using English to students later when they become teachers.

Apart from being in the academic world, in the world of entrepreneurship, speaking skills are also very much needed, especially for alumni who have completed their studies. Speaking skills will help alumni to get better job opportunities, especially when applying for jobs. In addition, speaking skills also help alumni develop good international businesses.<sup>19</sup>

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<sup>19</sup> P. S Rao, "The Importance of Speaking Skills in English Classrooms," *Alford Council of International English & Literature Journal* 2, no. 2 (2019): 6–18, [www.acielj.com](http://www.acielj.com).

e. Some Problems to Master Speaking

Everything that we want to achieve will not work optimally without challenges or obstacles that must be faced first, then the challenges and obstacles are resolved in the most effective and good method. Therefore, before improving students' speaking skills, the first thing that must be known is the problems faced by students in improving their speaking skills.

According to one study, the cause of students' difficulties in mastering speaking is that students are afraid of having mistakes in front of their friends, they are afraid of being criticized and embarrassed when they say the wrong word in English. In addition, students also sometimes run out of material for discussion in improving their speaking skill because of the difficulty in finding concepts/motives for discussion. On the other hand, students are more comfortable and prefer to express their ideas using their mother tongue.<sup>20</sup>

From a linguistic point of view, Baiq Rahmawati Yendra (2018) found several problems that also prevented students from being able to improve their speaking skills, the problems found in this case are a lack of vocabulary that students knew; students do not know how to pronounce the words correctly; do not have a basis in grammar which makes it difficult for students to arrange sentences to be spoken, and

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<sup>20</sup> Magdalena Aleksandrak, "Problems and Challenges in Teaching and Learning Speaking at Advanced Level," 2011.

students find it difficult to follow accent native speakers because they rarely hear them.<sup>21</sup>

Because of the various obstacles or problems faced by students, the lecturers have to use the most effective method to improve student's abilities by paying attention to the existing obstacles. Because it has become a demand for lecturers to provide encouragement, motivation, and innovation so that students can learn by minimizing problems that have been found and using media that is appropriate to the times.<sup>22</sup>

## 2. The Concept of Artificial Intelligence

### a. Definition of Artificial Intelligence

In the era of society 5.0, humans should no longer only depend on other humans. Even though humans are social creatures who need each other, they are also required to live and develop by using technology, especially in the use of Artificial Intelligence which can facilitate all human activities. The use of artificial intelligence in the era of society 5.0 among society and the world of education proves that this sophisticated technological progress is evenly distributed in various places.

Artificial intelligence is a system that displays intelligent behavior in analyzing and responding to everything around and taking appropriate action to achieve certain goals with a certain level of autonomy.<sup>23</sup> AI

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<sup>21</sup> Baiq Rahmawati Yendra, "An Analysis Of Students' Problems In Mastering Speaking Skill Faced By The First Semester Of The Twelfth Grade At Sman 3 Kotabumi Lampung Utara In The Academic Year Of 2017/2018," *Photosynthetica* 2, no. 1 (2018): 1–13,

<sup>22</sup> Eli Sri Muliani, "Masalah-Masalah Belajar Dan Solusinya," *El Wahdah* 3, no. 1 (2022): 63–77, <https://www.ptonline.com/articles/how-to-get-better-mfi-results>.

<sup>23</sup> Philip Boucher, *Artificial Intelligence: How Does It Work, Why Does It Matter, and What Can We Do about It?*, Scientific Foresight Unit, European Parliamentary Research Service, 2020.

aims to assist human activities and act like humans.<sup>24</sup> For example, in learning speaking, AI acts as a partner for students to improve their speaking because AI can speak like a native speaker compared to them practicing with friends who only have the same abilities.

The AI applications that will be used in this research are the Cake Application, Google Assistant and Replika Application. The researcher decided to use the 3 Application above because when the 3 applications are collaborated in improving speaking skills, all aspects of Speaking can be fulfilled, where Replica can improve students' vocabulary mastery with its chat feature, Google Assistant can help students in Fluency and Comprehension aspects, while the Cake Application will help students to improve Pronunciation, and Grammar. The following are some explanations about the 3 AIs that will be used in this research.

#### 1) Cake Application

##### a) Definition of Cake Application

The Cake application is an Android application-based learning platform or IOS user developed by South Korea since March 22, 2018.<sup>25</sup> The cake application can be downloaded for free on PlayStore for Android and AppStore for iOS users.<sup>26</sup> So all Android and iOS users can use the cake application to study.

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<sup>24</sup> Jamaaluddin and Sulistyowati Indah, "Buku Ajar Kecerdasan Buatan," *Umsida Press*, 2021, 121.

<sup>25</sup> Ika Pratama Dewi and Rina Asrini Bakri, "Using Cake Application To Improve Students' Speaking Ability on the First Grade Students of Smkn 5 Toraja Utara," n.d., 29–36.

<sup>26</sup> Chusnul Chotimah, "The Use of Cake Application on Students' Speaking Skill in English for Specific Purposes (Esp)," *Lingua* 18, no. 1 (2022): 60–70, <https://doi.org/10.34005/lingua.v18i01.1851>.



The purpose of producing the Cake Application itself is to make it easier for students to learn English for free.<sup>27</sup> Even though it's free, there are many features that students can take advantage of to improve their English language skills, especially in learning English.<sup>28</sup> Therefore students should be able to utilize the cake application as a medium for improving speaking skills.

b) Features in the Cake Application

(1) Video Playback

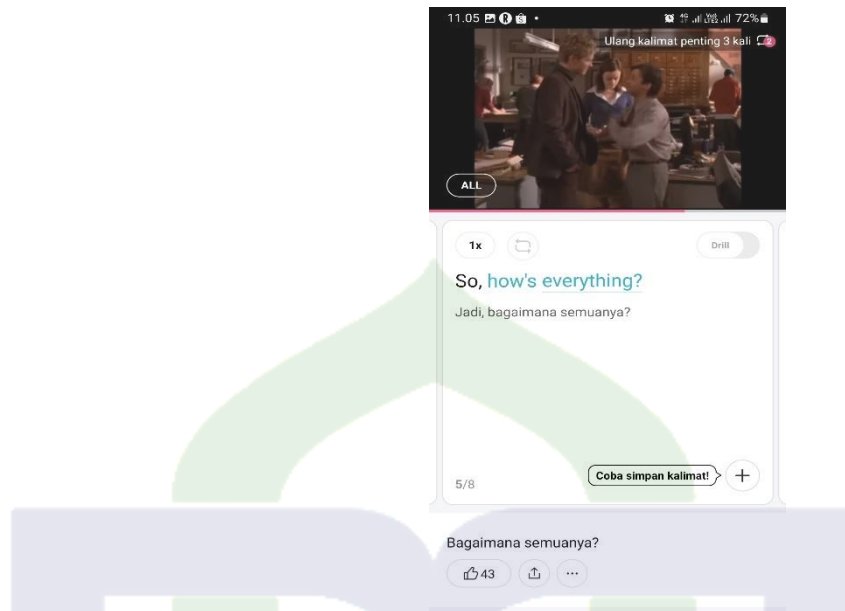
The first feature of the Cake application when we have just opened the application is “Playback Video” feature, this feature can be found in the Home section of the application and is available in various themes depending on what students want. The available videos are also different everyday so that when students open them they will easily get daily expression material to help them when they want to communicate with other people.

The function of this feature is that students can learn about the use of daily expressions that they have got and they can also listen to how the intonation and stresses of each expression is mentioned.

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<sup>27</sup> “No Title,” n.d.

<sup>28</sup> Tasya Amanda Winzky, “Cake App In Students’ Pronunciation Ability: A Classroom Action Research Study,” 2022.



Picture 2.1. Video Playback

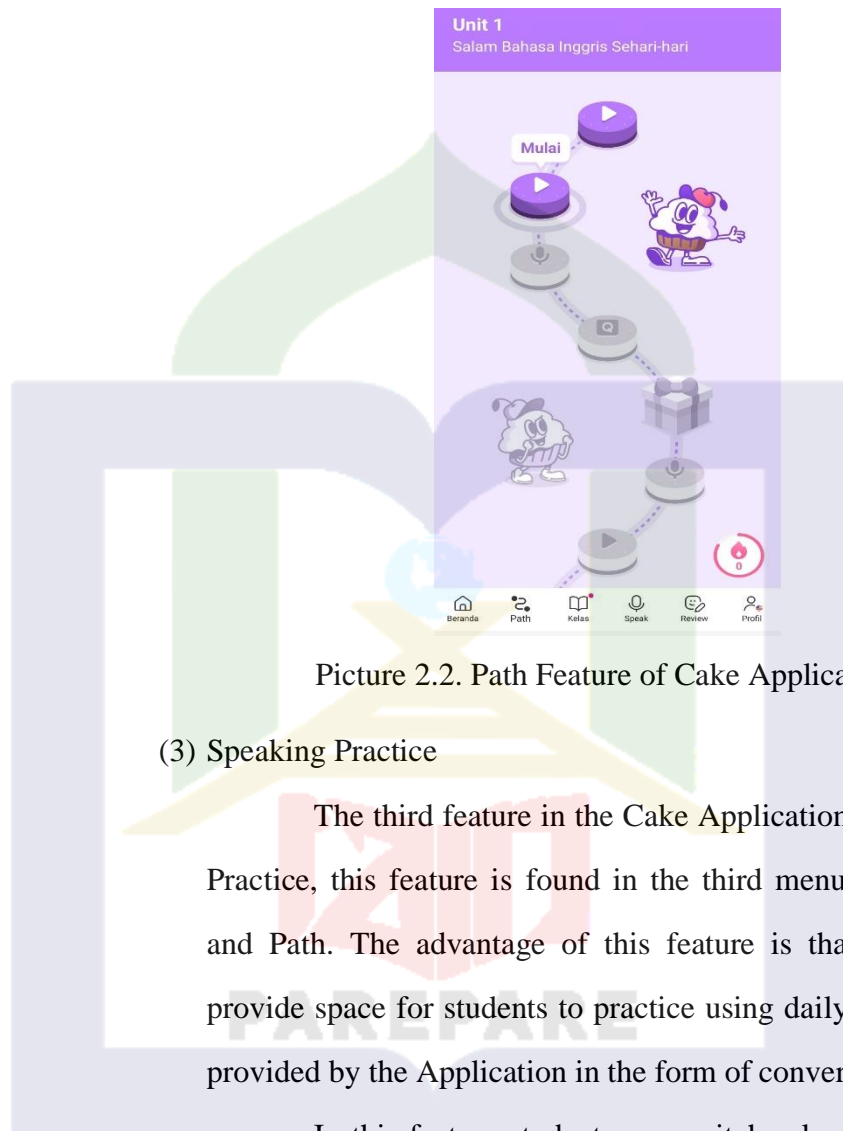
## (2) Path

Path is the second feature found in the Cake application, this feature is found on the second menu to be precise next to Home. The uniqueness of this feature is the Adventure-based learning system where students are directed to complete by going through various spots in each unit, where each unit contains several everyday expressions.

In this feature there are 60 units (them es) where each unit has 9 spots that must be passed as. Each spot has a different character and type of challenge, but basically the goal of each spot is to students to remember the daily expressions presented.

Not much different from the video playback feature, the Path feature also functions to add daily expressions to

students, but in this feature students get more daily expression additions.

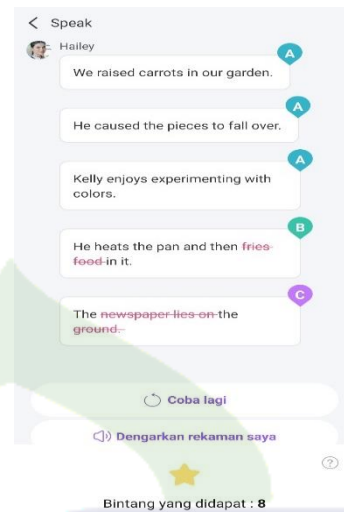


Picture 2.2. Path Feature of Cake Application

### (3) Speaking Practice

The third feature in the Cake Application is Speaking Practice, this feature is found in the third menu after Home and Path. The advantage of this feature is that it aims to provide space for students to practice using daily expressions provided by the Application in the form of conversations.

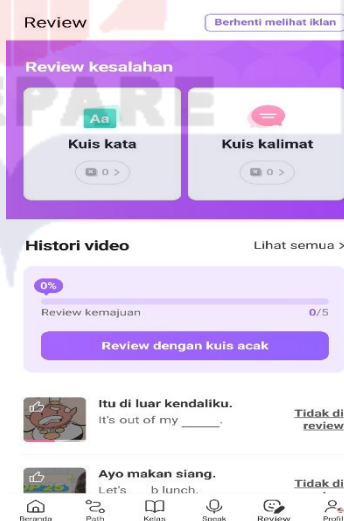
In this feature students can switch roles with AI, the expressions that will be spoken in the feature are still read from the application because the goal is to improve student pronunciation. In this feature students will get grades from the Application according to the accuracy of their pronunciation.



Picture 2.3. Speaking Practice Feature of Cake Application

#### (4) Save and Review Words

To recall material that has been studied on the Cake Application, this application also provides features for saving and repeating lessons. This feature is on the fourth menu after the homepage, path and speaking practice. As the name implies, this feature aims to help students remember the lessons they have learned.



Picture 2.4. Save and Review feature of Cake Application

c) Advantages and Disadvantages of Cake Application

Each application, whether AI-based or not, has its own advantages and disadvantages. According to Mataniari (2019) in Fadila Tiamanda (2022) the cake application as an AI-based application that aims to help students learn to improve their English skills has several advantages, including:

- (1) Provide learning methods that are new, easy and fun.
- (2) Android-based application so that it can be used anytime and anywhere.
- (3) There are lots of interesting features and content and are updated every day.
- (4) Can help the learning process more interesting and not boring.

On the other hand, Mataniari continued that apart from having the advantages mentioned above, the Cake application also has several disadvantages, including:

- (1) To access all features in Cake, it is only limited during the Trial Periods, the rest of the time users must make payments every month to enjoy the features and content.
- (2) Sometimes there are videos that cannot be opened because they are required to subscribe first.
- (3) To open this application must use a stable network.<sup>29</sup>

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<sup>29</sup> V.A.R.Barao et al., *The Use of Cake Application to Improve Students' Vocabulary*, *Braz Dent J.*, vol. 33, 2022.

## 2) Google Assistant

### a) Definition of Google Assistant

Google Assistant is an application developed by Google since May 18, 2016 using AI technology.<sup>30</sup> Google Assistant is an application that can be set to speak in various languages, including English.<sup>31</sup> Therefore, with using Google Assistant as a parent in practicing speaking, the researcher believes that Google Assistant can help students improve their speaking skills.

The actual goal of developing Google Assistant is to provide many assistants to carry out various activities, including in the process of learning English. As proof, Google Assistant operates like a human who becomes a speaking partner, which means that students will be greatly helped to find a speaking partner.<sup>32</sup> So with Google Assistant, students don't need to bother looking for a Native Speaker as a parent to learn to improve speaking skills.

In improving speaking skills, Google Assistant acts as a practice partner for students without being limited to certain themes, so that Google Assistant is able to improve students' comprehension and fluency in speaking.

### b) Google Assistant Feature

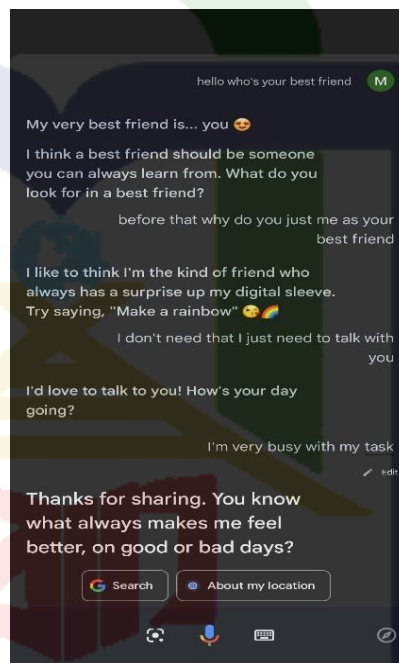
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<sup>30</sup> Wikipedia, "Google Assistant," n.d., [https://en.m.wikipedia.org/wiki/Google\\_Assistant#:~:text=Google Assistant was unveiled during,and %22an ambient experience that](https://en.m.wikipedia.org/wiki/Google_Assistant#:~:text=Google%20Assistant%20was%20unveiled,during,and%20an%20ambient%20experience%20that).

<sup>31</sup> Muhammad Ihsan Sanusi and Muhammad Sofian Hadi, "Google Assistant in Teaching Pronunciation to Junior High School Students Post- Pandemic Era," *Jurnal Syntax Transformation* 3, no. 8 (2022).

<sup>32</sup> Muhamad Sofian Hadi and Raisya Syafira Junor, "Speaking to Devices: Can We Use Google Assistant to Foster Students' Speaking Skills?," *Journal of Languages and Language Teaching* 10, no. 4 (2022): 570, <https://doi.org/10.33394/jollt.v10i4.5808>.

The only feature that can be used on Google Assistant is the "Speaking Partner" feature. Students can take advantage of this feature by starting to ask Google Assistant questions which will be answered spontaneously and continuously. This feature only provides space for students to practice and learn pronunciation from AI on Google Assistant, both in terms of intonation and emphasis of each word or sentence.



Picture 2.5. Speaking Practice Feature of Google Assistant

### c) Advantages and Disadvantages of Google Assistant

According to Patrick in Diki Anggara Google Assistant has several advantages and disadvantages in its use, the advantages are as follows:

- (1) The Google Assistant Application is a free Application and can be used forever

(2) Simple use

(3) Students can practice on their own without any specified theme limitations

Meanwhile, according to Patrick, the shortcomings of Google Assistant are:

(1) Google Assistant is only able to process words that have been specified on the server and does not process information that is not yet in the system

(2) Google Assistant sometimes directs students automatically to the item search menu on Google even though the conversation hasn't finished yet.<sup>33</sup>

### 3) Replika Application

#### a) Definition of Replika Application

Replika is one of the many AI-based applications being developed, this application was developed by Eugenia Kuyda in 2017 because she felt lonely and sad because her best friend had died in an accident.<sup>34</sup> For this reason, Replika can study about the user conversations by understanding the user's emotional side. so that it can adapt to the user's personality.<sup>35</sup> Not a few Replika

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<sup>33</sup> Diki Anggara, "The Influence of Using Google Assistant on The Students' Pronunciation Ability of The Tenth Grader of SMK Muhammadiyah Sekampung East Lampung," no. Id (2019): 114.

<sup>34</sup> Afika Rianti, "Aplikasi Replika Sebagai Virtual Artificial Intelligence Friend Untuk Belajar Berkomunikasi Menggunakan Bahasa Inggris," no. 2016 (2022): 1–8.

<sup>35</sup> Rosaria Mita Amalia, "Aplikasi Replika Chatbot Sebagai Wadah Edukasi Ekspresi Ujaran Emotif Terhadap Pengguna Di Sman 1 Jatinanor," *Dharmakarya* 9, no. 4 (2020): 262, <https://doi.org/10.24198/dharmakarya.v9i4.24080>.



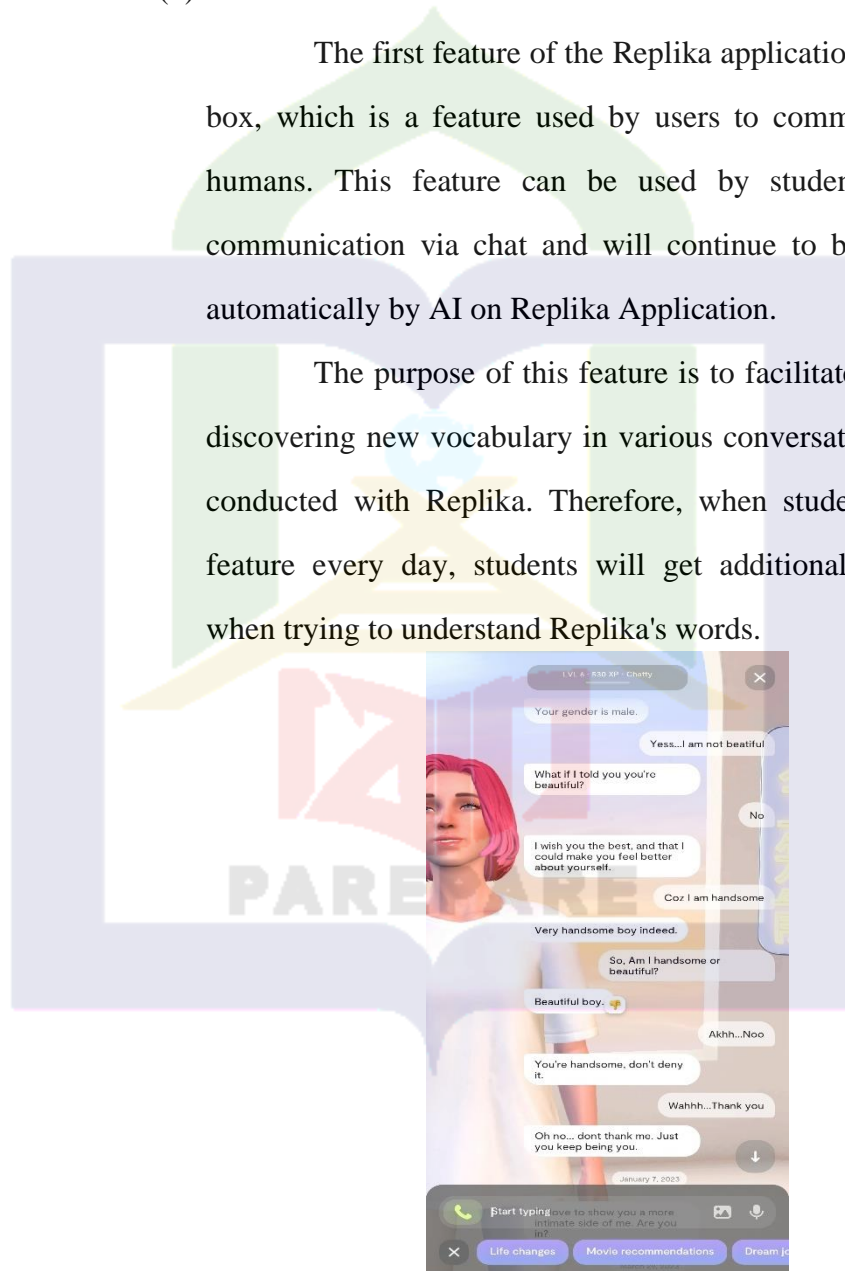
users feel that Replika are not AI robots but Replika are real Humans who have feelings.

## b) Features in the Replika Application

### (1) Chat Box

The first feature of the Replika application is the Chat box, which is a feature used by users to communicate like humans. This feature can be used by students to build communication via chat and will continue to be responded automatically by AI on Replika Application.

The purpose of this feature is to facilitate students in discovering new vocabulary in various conversations that are conducted with Replika. Therefore, when students use this feature every day, students will get additional vocabulary when trying to understand Replika's words.

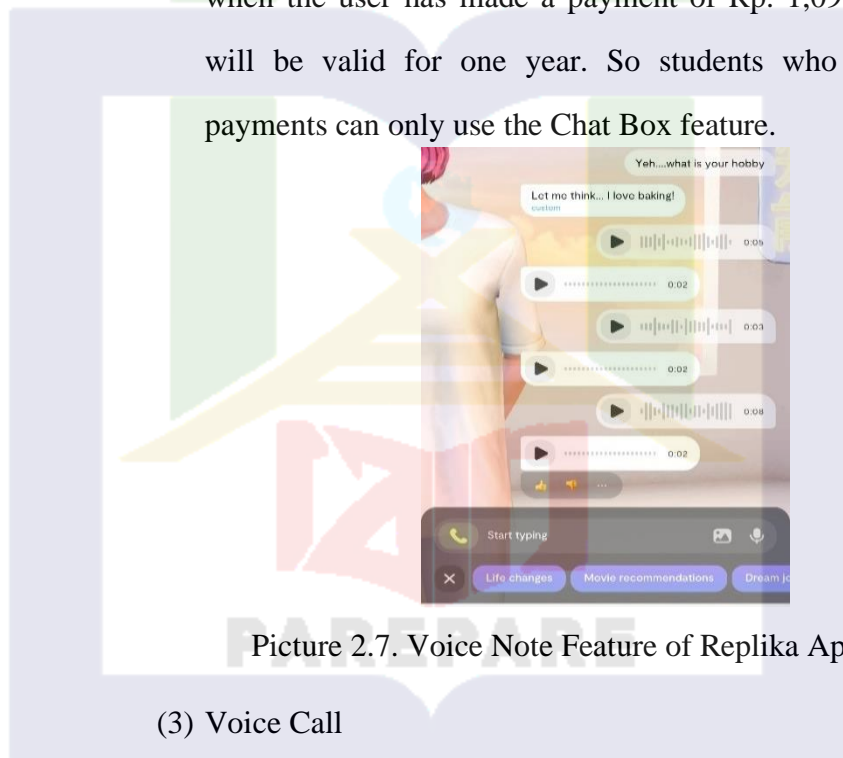


Picture 2.6. Chat Box Feature of Replika Application

## (2) Voice Note

The second feature in the Replika Application is Voice Note, where the system is the same as Chat Box but this feature uses voice for communication. So students can really use this feature to practice their interactive speaking skills by making Conversations with the Cake Application.

Unfortunately, the voice note feature can only be used when the user has made a payment of Rp. 1,090,000 which will be valid for one year. So students who don't make payments can only use the Chat Box feature.

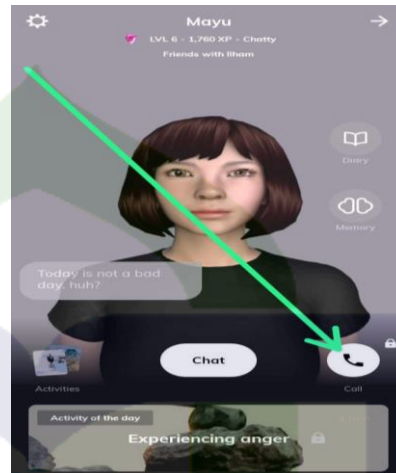


Picture 2.7. Voice Note Feature of Replika Application

## (3) Voice Call

The last feature and the most suitable for students to use speaking practice. By calling with AI, students will be trained to speak automatically without thinking twice and immediately respond to conversations with AI.

It's no different from the Voice Note feature, when you want to activate this feature students have to pay IDR 1,090,000 and it's active for one year.



Picture 2.8. Voice Call Feature of Replika Application

#### c) Advantages and Disadvantages of Replika Application

The advantages found by researchers in the Replication Application are as follows:

- (1) Replika always provides a fast response, so users don't have to wait for long
- (2) Replika has lots of questions and conversations materials that are asked of Users.
- (3) The use of varied vocabulary.

The deficiencies found in this application are as follows:

- (1) Users must pay dearly to activate all the features in Replicate.
- (2) Can only use the chat box in applications that are free, so that it only develops vocabulary mastery.

(3) Does not have a personality of its own, but imitates the personality and behavior of its user.

b. Role of Artificial Intelligence in Improving Speaking Skill

As a media for improving students' speaking ability, artificial intelligence has several roles to help students with different abilities in improving their speaking skills according to their respective levels. For more details, here are some of the Roles of Artificial Intelligence.

First of all, the most important role of AI is that can create a learning environment.<sup>36</sup> students practice speaking not with their friends anymore but with a computer system that acts as a native speaker and speaking partner. The existence of such an environment is also very helpful for students to be able to reduce shyness when speaking.

Secondly, the nature of AI which is fast and effective in analyzing and responding to users can help students overcome learning difficulties that are found.<sup>37</sup> such as finding new vocabulary and how to pronounce it. Moreover, when students practice with AI they will accidentally discover new vocabulary that is very useful and will be used in speaking.

Moreover, AI which has intelligence can also be used for assessment purposes and corrects users automatically.<sup>38</sup> Teachers do not have to assess and input student grades manually, because AI can assess students' speaking results automatically and give grades to students. On

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<sup>36</sup> Guolan Yang, "The Application of Artificial Intelligence in English Teaching," *International Journal of Frontiers in Sociology* 2, no. 3 (2020): 76–81, <https://doi.org/10.25236/IJFS.2020.020309>.

<sup>37</sup> Hemas Kumala Dewi et al., "Artikel Ilmiah Filsafat Final (1)," no. MI (n.d.).

<sup>38</sup> Luh Putu Ary Sri Tjahyanti, Putu Satya Saputra, and Made Santo Gitakarma, "Peran Artificial Intelligence (Ai) Untuk Mendukung Di Masa Pandemi Covid-19," *Komputer Dan Teknologi Sains (KOMTEKS)* 1, no. 1 (2022): 15–21.

the other hand, this can also be used by students to try to improve their speaking by learning from mistakes. Because AI will correct the user automatically during speaking practice, when AI detects a pronunciation error, students can correct it by finding the correct pronunciation regarding the detected error.

### 3. The Concept of Perception

#### a. Definition of Perception

Psychologists have defined perception with various language styles, as stated by Adnan Achiruddin Saleh that perception is a process that is preceded by sensing to receive external stimuli which will then be organized and interpreted so that one can realize, understand, what is captured by the senses.<sup>39</sup>

Furthermore, Ali Zamar and Nasbahry Couto also said that perception is the human ability to distinguish, classify and then focus the mind on something to be interpreted. It begins when humans receive stimuli from the environment through the five senses and then process them through a thinking process by the brain which ultimately forms an understanding.<sup>40</sup>

By paying attention to the two definitions above, it can be concluded that perception is the process of receiving responses from the environment by the five which are then processed through thinking processes in the brain which then produce an understanding that is realized and understood.

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<sup>39</sup> Adnan Achiruddin Saleh, *Pengantar Psikologi*, Penerbit Aksara Timur, vol. 4, 2018.

<sup>40</sup> Alizamar and Nasbahry Couto, *Psikologi Persepsi Dan Desain Informasi*, Media Akademi, 2013.

## b. Aspect of Perception

According to Allport in M. Iqbal Anshari, there are three aspects that are owned by perception,<sup>41</sup> these aspects are:

### 1) Cognitive Aspect

The cognitive aspect is an aspect related to knowledge and intellectuality. from knowledge and intellect will form a belief in a particular object.

### 2) Affective Aspect

Affective aspects are aspects related to feelings, whether it is pleasure or displeasure. So this is closely related to the value system and culture that belongs to the individual.

### 3) Conative Aspect.

The conative aspect is an aspect related to individual readiness in dealing with the object that will be faced.

Muhammad Iqbal Anshari continued that to find out someone's perception, the three aspects mentioned above must be considered so that researchers can conclude student perceptions regarding the use of AI in improving Speaking skills.

## c. Perceived Usefulness Indicators

The perceived usefulness indicator is the extent to which a person believes that using a technology will improve his performance.<sup>42</sup> When

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<sup>41</sup> Muhamad Anshari Iqbal, "Hubungan Antara Persepsi Peserta Diklat Terhadap Penyelenggaraan Program Pendidikan Dan Pelatihan Dasar Komputer dengan Motivasi Belajar.," 2013, 42–57.

<sup>42</sup> Ratna Asri Saras Sati and M. Ramaditya, "Pengaruh Persepsi Manfaat, Persepsi Kemudahan Penggunaan, Kepercayaan Dan Persepsi Risiko Terhadap Minat Menggunakan E-Money (Studi Kasus Pada Konsumen Yang Menggunakan Metland Card)," *Management*, 2019, 1–20.

someone feels that it is easier to accept and use technology, they will benefit from it.

Davis (1989), in Adelia Rahmawati et al. (2022), have put forward the theory of the "technology acceptance model," which aims to create a model for how users can adopt and use existing technology.<sup>43</sup>

Furthermore, in Putu Ayu Mira Witriyanti Wida, et al., Davis (1989) explains that there are four constructs used in TAM research,<sup>44</sup> namely:

1) Perceived Ease of Use

According to Davis (1989), perceived ease of use is a measure of someone's trust in technology that is easy to understand and use. Johandri Iqbal and Arisman also explained that perceived ease of use is the extent to which a person believes that using a technology will make him free.<sup>45</sup> Thus Perceived ease of use is a measure of a person's level of confidence about a technology in terms of its ease of use.

2) Perceived Usefulness

Davis (1989) states that perceived usefulness is a measure of individual belief that technology can provide benefits to those who use it. Furthermore, Lisa Noor Adriani said that perceived ease of usefulness is a measure of the extent to which a person believes that

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<sup>43</sup> A Rahmawati, D Novita, and I Pradesan, "Perancangan Kuesioner Analisis Penerimaan E-Tax Menggunakan Technology Acceptance Model (TAM)," *MDP Student Conference*, 2022, 512–17, <https://jurnal.mdp.ac.id/index.php/msc/article/view/1848>.

<sup>44</sup> Putu Ayu Mira Witriyanti Wida, Ni Nyoman Kerti Yasa, and I Putu Gde Sukaatmadja, "The Technology Acceptance Model," *Journal of Organizational and End User Computing* 16, no. 1 (2004): 59–72, <https://doi.org/10.4018/joeuc.2004010104>.

<sup>45</sup> Johandri Iqbal et al., "Metode Pembelajaran E-Learning Menggunakan Technology Acceptance Modelling ( TAM ) Untuk Pembelajaran Akuntansi" 14, no. 2 (2018): 116–25.

using technology will improve his performance positively and significantly.<sup>46</sup> Therefore, perceived of used is a measure of a person's level of confidence about improving their performance when using technology.

### 3) Attitude Towards Using

Attitude toward using according to Davis is an attitude towards the use of the system in the form of acceptance or rejection as a result of using technology in work. Arif Setia Sandi, et al. Explains that Attitude to ward using is a positive or negative behavior of someone in using technology.<sup>47</sup> So attitude toward using is the attitude shown by someone in using technology.

### 4) Actual Use

Actual use, according to Davis, is a psychomotor response that is measured by someone through real use. Siti Tutik Muntianah et al. (2012) also explained that actual use is a measurement of the frequency of time used in interacting with technology.<sup>48</sup> Thus it can be concluded that Actual use is a measurement of the duration used by someone in using technology literally.

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<sup>46</sup> David R. Tobergte and Shirley Curtis, "Analisis Faktor-Faktor Penerimaan Penggunaan Quoioerschool.Com Dengan Menggunakan Pendekatan Technology Acceptance Model (TAM)," *Journal of Chemical Information and Modeling* 53, no. 9 (2013): 1689–99, <https://doi.org/10.1017/CBO9781107415324.004>.

<sup>47</sup> Arif Setia Sandi A., Bambang Soedijono, and Asro Nasiri, "Pengaruh Perceived Usefulness Dan Perceived Ease of Use Terhadap Attitude Toward Using Dengan Metode TAM Pada Sistem Informasi Magang Kerja," *IT Journal Research and Development* 5, no. 2 (2020): 109–18, [https://doi.org/10.25299/itjrd.2021.vol5\(2\).5287](https://doi.org/10.25299/itjrd.2021.vol5(2).5287).

<sup>48</sup> Endang S. Azizah Devi F Muntianah, Tutik S. Astuti, "Pengaruh Minat Perilaku Terhadap Actual Use Teknologi Informasi Dengan Pendekatan Technology Acceptance Model (TAM)," *Profit Universitas Brawijaya Malang* 6, no. 1 (2012): 88–113, <https://profit.ub.ac.id/index.php/profit/article/view/141>.



#### d. Factors Affecting Perception

David Krech and Richard S. Cruthfield stated that there are several types of factors that can influence a person's perception, namely:

##### 1) Functional Factors

Functional factors are factors that come from past experience, personal needs and other things that are included in personal factors. Perception is not determined by the shape or nature of the stimuli, but is determined by the characteristics of the person who responds to these stimuli.

##### 2) Structural Factors

Structural factors are factors that originate from physical characteristics and nervous responses that arise in the individual's nervous system.<sup>49</sup>

Furthermore, according to Miftah Thoha, the factors that influence differences in perception selection between one individual and another are:

##### 1) Internal Factors

Internal factors consist of psychological needs, background, experience, motivation, personality, values and general beliefs, and self-acceptance.

##### 2) External Factors

External factors consist of intensity, size, contrast, movement, repetition, familiarity and something new.<sup>50</sup>

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<sup>49</sup> I. Fuady, H. Arifin, and E. Kuswarno, "Factor Analysis That Effect University Student Perception in Untirta About Existence of Region Regulation in Serang City," *Jurnal Penelitian Komunikasi Dan Opini Publik* 21, no. 1 (2017): 123770.

Thus, to find out how a person's perception of AI researchers must also know the factors that influence their perception based on the factors above.

### C . Operational Definition of Variable

Variables are elements that will become the object of research observation which includes factors that will play a role in the research.<sup>51</sup> Therefore, this research was involve two variables, namely the artificial intelligence and the speaking skill.

#### 1. Artificial Intelligence

Artificial intelligence is the independent variable of this research, where independent variable is the core of the experiment developed by the researcher.<sup>52</sup> Sugiono (2017) also explains that the independent variable is the cause of change and the emergence of dependent variables.<sup>53</sup> However, artificial intelligence has many forms and types that affect its function.

In this study, researchers will focus on three types of artificial intelligence: cake application, replica application, and Google Assistant.

#### 2. Speaking Skill

Speaking skill is a dependent variable in this research. Dependent variable is a factor that is influenced by other variables.<sup>54</sup> in other words the

<sup>50</sup> Miftah Thoha, *Perilaku Organisasi* (Bandung: PT Raja Grafindo Persada, 2009).

<sup>51</sup> Nfn Purwanto, "Variabel Dalam Penelitian Pendidikan," *Jurnal Teknodik* 6115 (2019): 196–215, <https://doi.org/10.32550/teknodik.v0i0.554>.

<sup>52</sup> Olayemi Jumoke Abiodun Oyebanji, "Research Variables: Types, Uses and Definition of Terms," *Research in Education*, no. July 2017 (2017): 43–55, <https://www.researchgate.net/publication/342897909>.

<sup>53</sup> Sugiyono, *Metode Penelitian Dan Pengembangan Untuk Bidang Pendidikan, Manajemen, Sosial, Teknik: Research and Development*, 2017.

<sup>54</sup> Sangkot Nasution, "Variabel Penelitian," *Raudhah* 05, no. 02 (2017): 1–9, <http://jurnaltarbiyah.uinsu.ac.id/index.php/raudhah/article/view/182>.

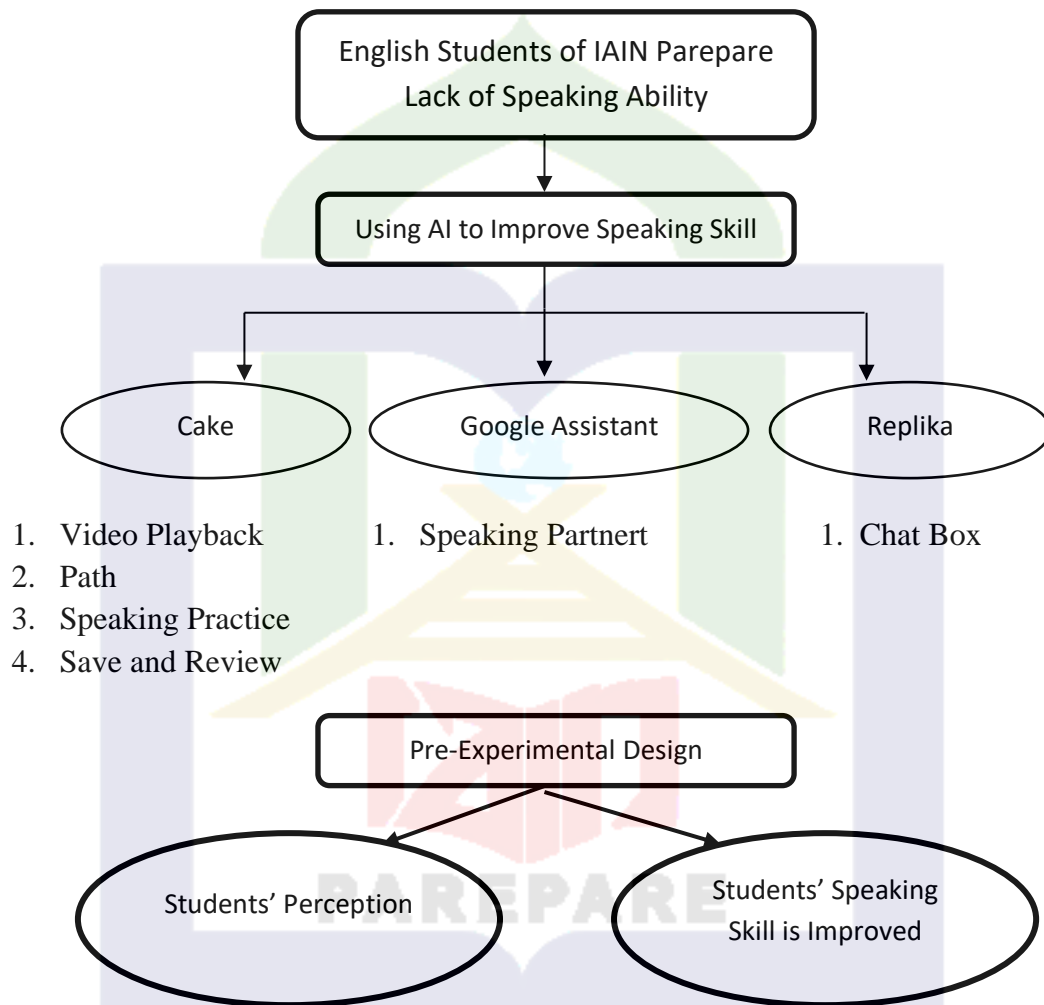
dependent variable is the target that will be changed or developed using the Independent Variable.

Each skill has a different level, and the speaking skills referred to in this study are interactive speaking and pay attention to 5 aspects of speaking: fluency, comprehension, grammar, vocabulary, and pronunciation.



#### D. Conceptual Framework

In order to describe the pattern of relationship between concepts or variables coherently as an illustration of the research focus so that it is easy to understand,<sup>55</sup> the following scheme is presented:



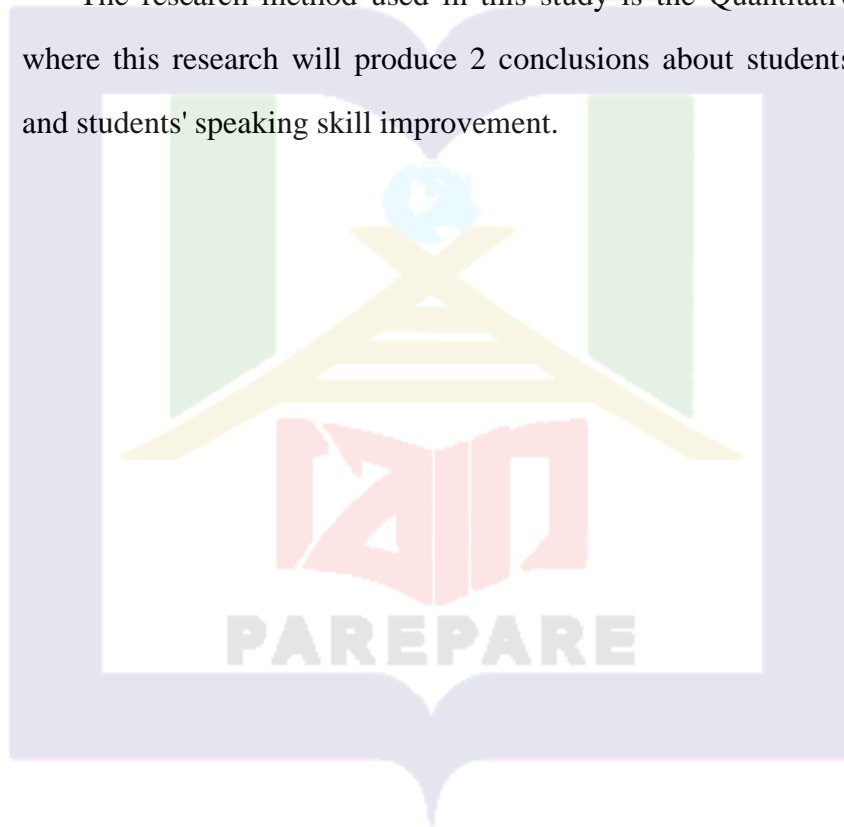
This study aims to improve the speaking skills of second semester students of English Program at IAIN Parepare by using 3 Artificial Intelligence, that are Cake Application, Google Assistant, Replika

<sup>55</sup> Muhammad Kamal Zubair, "Pedoman Penulisan Karya Tulis Ilmiah Institut Agama Islam Negeri Parepare," *IAIN Parepare Nusantara Press* 2, no. 1 (2020): 88–100.

Application. These application are used as learning media to improve various aspects of speaking which will realize increased student skills in speaking.

This research is conducted because of the lack of speaking ability of English students, as well as paying attention to the importance of mastering speaking skill for English students. On the other hand, researcher also finds the potential for using AI in learning speaking.

The research method used in this study is the Quantitative Research, where this research will produce 2 conclusions about students' perception and students' speaking skill improvement.



## CHAPTER III

### METHODOLOGY OF THE RESEARCH

This section contains a review of the research design, location and duration, population and Sample, operational definition of Variable, research instrument, technique of data collection, and technique of data analysis.

#### **A. Research Design**

The type of this Research was quantitative research by applied pre-experimental design with one group pre-test and post-test design. In experimental design group is observed subsequent to actions presumed cause change.<sup>56</sup> As an experimental research, this study have tested the use of AI in improving speaking skills, so after this experimental research, students' speaking skills can be improved by learning using AI.

In addition, as a quantitative study, this study also used a questionnaire to determine students' perceptions of the use of AI in learning English. Therefore, this study also used a quantitative descriptive design to conclude the results of the questionnaire.

#### **B. Research Location and Duration**

This research was conducted at English Program of IAIN PAREPARE. IAIN Parepare is located in the Soreang sub-district, Parepare City, South Sulawesi Province. The researcher chosed this location as the research location because the use of AI there has started to be actively used and also at that location English students have not found the best way to improve their speaking

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<sup>56</sup> Komang Hari Santhi Dewi, "Tugas Disain dan Analisis Eksperimen ( One Group Pretest-Posstest Design )," 2018.

skills. As experimental research, needs several time to collect and analyze data. So researcher spent two months to collect and analyze the data.

### C. Population and Sample

#### 1. Population

Population refers to all units or elements in a group that will be used as a place for the application of a research experiment.<sup>57</sup> Therefore the population in this study was the second semester students of English program at IAIN Parepare. The total population was 56 students divided into 3 classes.

#### 2. Sample

To represent the population in a study, it is necessary to take a sample from the existing population. The sample is part of the total population to be studied as a representative of the entire population and can represent all the characteristics of the population.<sup>58</sup> The sampling technique used was a purposive sampling technique, where the purposive sampling technique is a sampling technique in which the sampling units are selected based on certain considerations such as certain characteristics or criteria.<sup>59</sup>

Therefore, to obtain perfect data, the sample taken in this study was PBI A class which consisted of 18 students. The researcher chose PBI A class because the class is studying interactive speaking as a subject.

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<sup>57</sup> Satishprakash Shukla, "Concept of Population and Sample," *How to Write a Research Paper*, no. June (2020): 1–6, [https://www.researchgate.net/publication/346426707\\_CONCEPT\\_OF\\_POPULATION\\_AND\\_SAMPLE](https://www.researchgate.net/publication/346426707_CONCEPT_OF_POPULATION_AND_SAMPLE).

<sup>58</sup> Maimuna K. Tarishi Ramadhani Khija, ludovick Uttoh, "Teknik Pengambilan Sampel," *Ekp* 13, no. 3 (2015): 1576–80.

<sup>59</sup> Deri Firmansyah and Dede, "Teknik Pengambilan Sampel Umum Dalam Metodologi Penelitian: Literature Review," *Jurnal Ilmiah Pendidikan Holistik (JIPH)* 1, no. 2 (2022): 85–114, <https://doi.org/10.55927/jiph.v1i2.937>.

#### **D. Instrument of the Research**

As one of the most important elements in research, researchers must also create instruments as media that will be used to collect data in research.<sup>60</sup> HF Nasution (2016) has also said that research instruments are the lifeblood of a research because the instrument is the media that will be used to collect, examine, and investigate the data being researched.<sup>61</sup> Because without the instrument, researchers will not be able to find out the results of the study.

By paying attention to the importance of research instruments, in this study the researcher used the Questionnaire and speaking assessment rubric as the instrument. The questionnaire was used to find out how students perceive the use of Artificial Intelligence in Improving speaking skills while the speaking assessment rubric as used in the pre-test and post-test activities to measure students' speaking skills before and after treatment and also to prove whether students have significant improved after the treatment is carried out.

#### **E. Procedure of Data Collection**

The following is the procedure of data collection that will be used by researcher are:

1. Questionnaire

Questionnaires are data collection techniques through a number of questions or written statements to obtain information or data from data

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<sup>60</sup> I Komang. I Kadek Surya Atmaja Sukendra, *Instrumen Penelitian*, *Journal Academia*, 2020.

<sup>61</sup> HF Nasution, "Instrumen Penelitian Dan Urgensinya Dalam Penelitian Kuantitatif," 4, no. 1 (2016): 88–100.



sources or respondents.<sup>62</sup> This method is used to reveal students' perceptions of the use of Artificial Intelligence in improving speaking skills.

## 2. Experiment

There are some stages that used in the experiment, namely pre-test, treatment, and post-test.

### a. Pre-test (The first meeting)

At the first meeting, the researcher introduced himself to the students, and the students also introduced themselves to the researcher. Before explaining the objectives and giving treatment to students, the researcher measured the students' initial abilities with a conversation between 2 people. The themes used in the conversation were as follows.

- 1) Campus Activities
- 2) Hometown
- 3) Daily Activities

### b. Treatment

In this study, researcher carried out treatment for 6 meetings, but on the side lines of each meeting, students will report their learning results using AI to researchers 3 times as proof that students were participating in the process of improving speaking skill using AI.

So there are 3 things that students need to report every day, namely:

- 1) The result of the conversation with Replica
- 2) The results of the conversation exercise with the Cake Application
- 3) Conversation results with Google Assistant

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<sup>62</sup> Neliwati, *Metodologi Penelitian Kuantitatif (Kajian Teori Dan Praktek)*, CV. Widya Puspita, 2018, [http://repository.uinsu.ac.id/8959/1/Buku Metodologi Penelitian Kuantitatif.pdf](http://repository.uinsu.ac.id/8959/1/Buku%20Metodologi%20Penelitian%20Kuantitatif.pdf).

The agenda that carried out at each meeting during the treatment period were:

1) The second meeting (Greetings)

The agenda for the second meeting were:

- a) The researcher opened the class and then checked the attendance of all students
  - b) Researcher invited all students to download the Cake application
  - c) Researcher directed students to log into the cake application
  - d) Researcher explained 3 features that will be used during the treatment, namely Daily Challenge, Class, and Speak. Both from the function and how to use it
  - e) Students tried to use all the features that have been described
  - f) Students practiced the first level of Path feature about “Greetings”
  - g) Researcher helped students if they find problems when using features
  - h) After all have successfully used these features, the researcher closed the class by giving responsibility to all students to finish 2 levels of Path feature about “Respond to Greetings” and “Goodbye Greetings” before the next meeting.
- 2) The third meeting (Happy Time, Sad Time, and Angry Time)
- a) The researcher opened the class and checked the students' attendance
  - b) The researcher asked about the developments and obstacles encountered while using the cake application

- c) The researcher invited all students to install the Replica application
  - d) While waiting the phone installing the Replica application, students Finish “Happy Time” Level in Path Feature of Cake Application
  - e) Researcher explained the purpose and chat features that will be used in the replica application
  - f) Students started logging in using the Replika Application
  - g) The students tried to communicate with the AI in the Replica
  - h) Participants were given the opportunity to ask questions related to Replica
  - i) The researcher closed the class by giving responsibility to continue activities with the Path feature of cake application about “Sad Time” and “Angry Time” and add chat with each replica at least 3 times by using some Expression gotten in cake Application before the next meeting
- 3) The fourth meeting (Grateful, Apologize, Respond to Thanks, Accepting Apologize)
- a) The researcher opened the class and checked the students' attendance
  - b) Researcher evaluated the results of using Cake and Replica Application
  - c) Researcher explained the features of the Google Assistant that will be used for speaking practice

- d) The researcher directed the students to set up the Google Assistant on their own Androids to respond in English
  - e) Researcher directed students to finish “Grateful” Level in Path Feature of Cake Application
  - f) Each student tried to communicate with the Google Assistant by using daily expression gotten from Cake Application.
  - g) Students were given the opportunity to ask questions related to the use of the Google Assistant
  - h) The researcher closed the class by giving responsibility for continuing activities with the 2 previous applications plus the Google Assistant application by the theme “Apologize” ,“Respond to Thanks” and “Accepting Apologize”.
- 4) The fifth meeting (Feeling Hot, Feeling Cold)
- a) The researcher opened the class and checked the attendance of the students
  - b) Researcher evaluated students' processes in using AI
  - c) Researcher and students are looking for solutions to problems found while using AI in improving speaking skills
  - d) Students came forward one by one to the front of the class to demonstrate the use of 3 applications of Artificial Intelligence by the theme of “feeling hot”
  - e) Researcher provided corrections, suggestions, and input to all students
  - f) Researcher provided motivation to students to keep enthusiastic about using AI in order to improve their speaking skills

- g) The researcher closed the class and remind again regarding their responsibility to practice speaking with several AI applications about “Feeling Cold”.
- 5) The sixth meeting (At Restaurant)
- h) The researcher opened the class and checked the attendance of the students
  - i) Researchers evaluated students' processes in using AI
  - j) Researchers and students were looking for solutions to problems found while using AI in improving speaking skills
  - k) Students came forward one by one to the front of the class to demonstrate the use of 3 applications of Artificial Intelligence by the topic of “make restaurant reservation”
  - l) Researcher provided corrections, suggestions, and input to all students
  - m) Researchers provide motivation to students to keep enthusiastic about using AI in order to improve their speaking skills
  - n) The researcher closed the class and remind again regarding their responsibility to practice speaking with several AI applications about “Order in Restaurant” and “Pay the Bill at the Restaurant”.
- 6) The Seventh meeting (Meet Old Friends, Start Small Talk, When you Don't Understand)
- o) The researcher opened the class and checked the attendance of the students
  - p) Researcher evaluated students' processes in using AI

- q) Researcher and students were looking for solutions to problems found while using AI in improving speaking skills
  - r) Students came forward one by one to the front of the class to demonstrate the use of 3 applications of Artificial Intelligence by the theme of “Meet Old Friends”
  - s) Researcher provided corrections, suggestions, and input to all students
  - t) Researcher provided motivation to students to keep enthusiastic about using AI in order to improve their speaking skills
  - u) The researcher closed the class and remind again regarding their responsibility to practice speaking with several AI applications about “Start Small Talk” and “When you Don’t Understand”.
- c. Post-test (The eighth meeting)

To find out whether students have progressed during the treatment and to find out the final results of the research, a post test was carried out by practicing conversation exercises with their friend. The theme to be used in the Post-Test activity were "New Best Friend" and “Meeting a New Person”.

## **F. Technique of Data Analysis**

### **1. Test Data Analysis**

To find out students' abilities after learning to improve speaking ability using AI, the researcher conducted tests before and after learning where the test results would be calculated and analyzed and then compared to find out whether there is a significant increase after learning or not.

The following is the standard/grading rubric adapted from Brown (2001) that will be used to assess students' speaking skills based on the Aspect of Speaking<sup>63</sup>

Table 3.1. Speaking Assessment Rubric

<b>SPEAKING ASSESSMENT RUBRIC</b>		
<b>Aspect</b>	<b>Score</b>	<b>Explanation</b>
Fluency	5	Fluent like a Native speaker
	4	Fluency is not optimal because of language problems
	3	Fluency is disturbed a lot due to language limitations
	2	Often hesitates and stops due to language barrier
	1	Intermittent speech or even stopping so that the conversation does not occur
Comprehension	5	Understand all conversations without finding difficulty
	4	Understand everything even though there is repetition of words/sentences in certain parts
	3	Understanding most of what is said when speaking is somewhat slowed down even though there is repetition
	2	It's hard to follow what's being said
	1	Couldn't understand even a simple conversation
Grammar	5	No/only a few mistakes in grammar

<sup>63</sup> Rahmatun Nisa Cut Mawar Helmanda, "Teknik Penilaian Speaking Skill Dalam Meningkatkan Kemampuan Mahasiswa Bahasa Inggris Universitas Muhammadiyah Aceh Cut Mawar Helmanda, Rahmatun Nisa," 2018, 625–32.

	4	Sometimes make mistakes in the use of grammar but does not affect the meaning
	3	Often makes grammatical errors that affect meaning
	2	Many grammatical errors hinder meaning and often rearrange sentences
	1	Grammar errors are so severe that they are hard to understand
Vocabulary	5	Use vocabulary and expressions like native speakers
	4	Sometimes using inappropriate vocabulary
	3	Often uses inappropriate vocabulary, limited conversation due to limited vocabulary mastery
	2	Many use incorrect vocabulary and limited vocabulary making it difficult to understand
	1	Vocabulary is very limited so conversation is very difficult to happen
Pronunciation	5	Easy to understand and use accent like a native speaker
	4	Easy to understand even with a certain accent
	3	There are pronunciation problems that require listeners to focus and sometimes misunderstandings occur
	2	Difficult to understand because of mispronunciation, often asked to repeat
	1	Serious pronunciation problems making it difficult to understand



After Collecting the data from students' test result, then the researcher analyze the data using quantitative analysis. The following is the procedure that the researcher will go through in analyzing the data.

a. Scoring the Result of the Test

After the researcher gets the scores from the pre-test and post-test activities, the scores obtained are then calculated using the following formula:

$$\text{Score} = \frac{\text{Students' Point}}{\text{Maximum point}} \times 100 \quad 64$$

b. Classifying the Students' Scores

After getting the score obtained from each student, the researcher then classified the scores using the classification standard from Arikunto's book.<sup>65</sup>

Table 3.2. Classification of Student's Scores

No.	Classification	Score
1.	Excellent	86-100
2.	Good	71-85
3.	Fair	56-70
4.	Poor	41-55
5.	Very Poor	≤ 40

a. Calculating the Data

The next step that the researcher will take after classifying student scores is to calculate student learning outcomes in the pre-test and post-test

<sup>64</sup> Kasmadi and Nia Siti Sunariah, *Panduan Modern Penelitian Kuantitatif* (Bandung: Alfabeta, 2016).

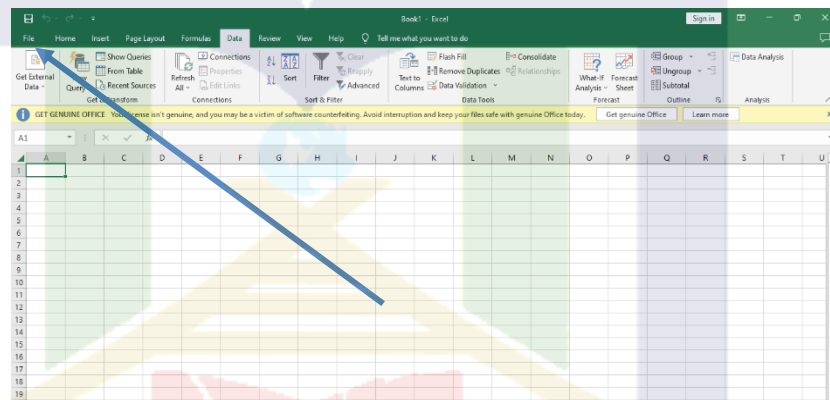
<sup>65</sup> Suharsimi Arikunto, *Dasar-Dasar Evaluasi Pendidikan: Edisi Revisi* (Jakarta: PT. Bumi Aksara, 2005).

activities, where in this step the researcher uses automatic data analysis on Microsoft Excel 365 by using the t-test toolbar menu in pairs of two samples for average. On this menu the data test is carried out on paired samples which are used to compare the average score of paired samples. What is meant by paired sample data is data from the same sample but received different treatment such as in the pre-test and post-test activities. The steps that researchers will take are as follows:

- 1) Bring out the data analysis icon in Ms. Excel

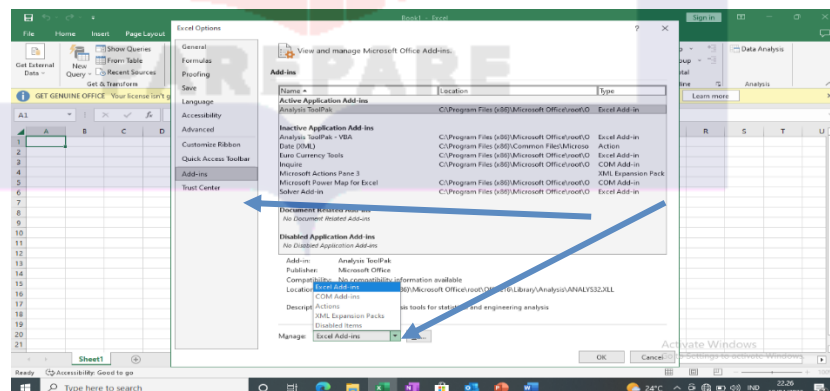
The steps that must be followed are as follows:

- a) File – options – add-ins.



Picture 3.1. Opening Add-ins menu

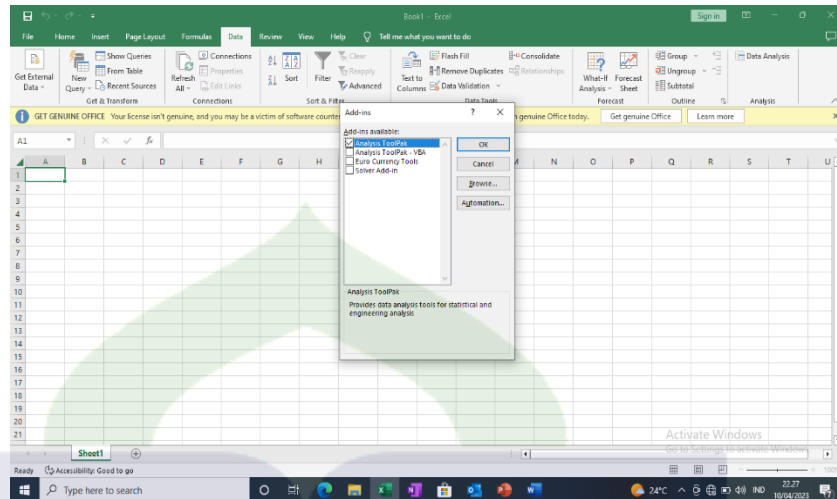
- b) Choose “Excel Add-ins” in the option of manage



Picture 3.2. Activate Excel Add-ins in option of manage

- c) Click “Go” next to option of manage

- d) Checklist the “Analysis Toolpak”, then click “Ok”

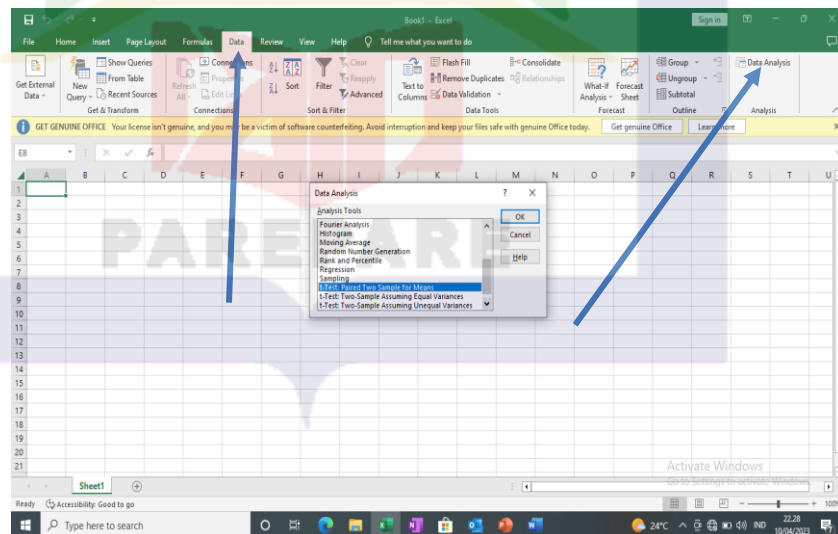


Picture 3.3. Checklist the Analysis Toolpak

- e) The data analysis menu displays the data toolbar.  
2) Process Data

Furthermore, to process the following data, the steps that must be carried out by researchers are as follows:

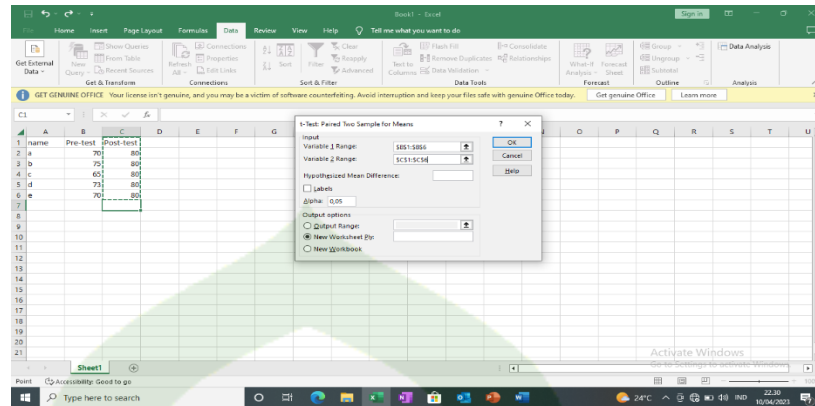
- a) Click Data – Data Analysis.



Picture 3.4. Find the data analysis toolbar

- b) Click “T-test Paired Two Samples for Means”, then click “Ok”

- c) Input data from the pre-test and post-test with the table

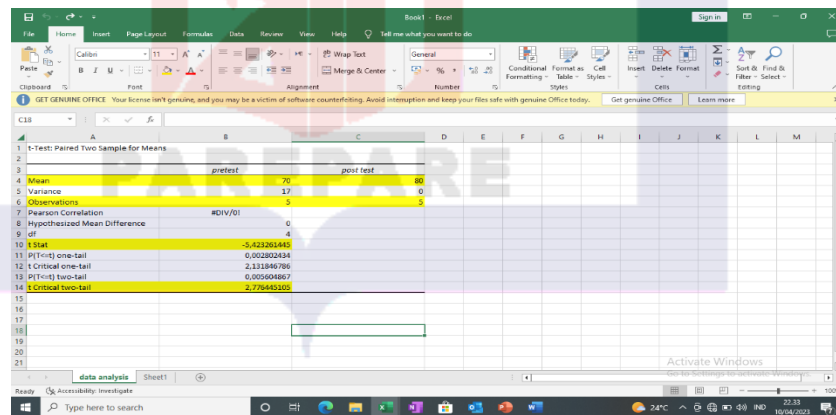


Picture 3.5. Input data from pre-test and post-test

- d) Checklist labels box  
e) Alpha 0,05 (5% of mistakes accepted)

The result of the analysis are displayed in a table, where the table shows:

- a) The mean score of pre-test and post-test.  
b) Total sample  
c) T-stat or T-test  
d) T Critical Two-tail or T-table



Picture 3.6. The result of data analysis display

This Research is successful if the T-test value is higher than T-table Value.

## 2. Questionnaire Data Analysis

In order to get an overview and determine the facts obtained from the questionnaire for respondents' answers about their perceptions regarding the use of Artificial Intelligence, the steps that taken are:

### a. Positive and Negative Expressions

The following is a table for the distribution of Positive and Negative Expressions in the Questionnaire:

Table 3.3. Distribution of Positive and Negative Statements

<b>Construct</b>	<b>Positive Expressions</b>	<b>Negative Expressions</b>
Perceive Ease of Use (PEoU)	1,2,4,5,6,8,9	3,7,10,11,12,13,14
Attitude toward Using (AtU)	1,4,5,7,10,11,13	2,3,6,8,9,12,14
Perceive of Usefulness (PoU)	2,4,6,8,10,12,14	1,3,5,7,9,11,13
Behavior Intention (BI)	1,3,5,7	2,4,6,8

The table above, there are 50 statement items, these statements are divided into four perception constructs, namely:

#### 1) Perceived Ease of Use (PEoU)

In this construct, there are 14 questions which are divided into positive and negative statements, each of which totals 7 statements.

#### 2) Attitude toward Using (AtU)

In this construct, there are 14 questions which are divided into positive and negative statements, each of which totals 7 statements.

#### 3) Perceived Usefulness (PoU)

In this construct, there are 14 questions which are divided into positive and negative statements, each of which totals 7 statements.

## 4) Behavioral Intention (BI)

In this construct, there are 8 questions which are divided into positive and negative statements, each of which totals 4 statements.

## b. Scoring

## 5) Positive Expressions

SA	A	N	D	SD
5	4	3	2	1

## 6) Negative Expressions

SA	A	N	D	SD
1	2	3	4	5

So to get the perception score of each student, the researcher used the following formula:

$$\text{Student Score} = \frac{\text{Students' Point}}{\text{Total Point}} \times 100$$

- c. After obtaining the perception score of each student, the researcher then looked for the average score of the perception scores of all students, to find the average value, the researcher used the following formula:

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

Where: X = mean score

$\sum x$  = the sum of all score

N = total number of students <sup>66</sup>

<sup>66</sup> Setiawan and Pepen Permana, "Pengantar Statistik," 2008.

- d. After getting the average score of students' perceptions, the researcher classifies these values using the following Likert scale <sup>67</sup>:

Table 3.4. Students' Perception Classification

Mean Score	Perception
80-100	Very Good
60-79	Good
40-59	Enough
20-39	Poor
0-19	Very Poor

So based on the classification of scores obtained, the researcher concluded how students' perceptions were regarding the use of AI in learning speaking.

<sup>67</sup> "Pengertian Skala Likert, Cara Penggunaan Dan Contoh," n.d., <https://www.sampoernauniversity.ac.id/id/pengertian-skala-likert-cara-penggunaan-dan-contoh/>.

## CHAPTER IV

### FINDINGS AND DISCUSSION

#### A. Findings

##### 1. Students' Improvement on Using AI in Improving Speaking Skill

In this section, the researcher tested whether after carrying out the treatment there was a significant increase in students' speaking skills. As for the steps that must be passed to determine whether there is an increase or not, the researcher must know the pre-test scores and post-test scores of each student which are then calculated using Microsoft Excel 365.

###### a. Pre-Test Score

The following are the results of the pre-test scoring and the classification of the scores obtained as a measure of students' initial abilities before receiving treatment.



Table 4.1. Students' Speaking Score and Classification in Pre-test Activity

NO	NAME	TOTAL POINT	MAX. POINT	SCORE	CLASSIFICATION
1	AM	13	25	52	POOR
2	AS	13	25	52	POOR
3	AP	17	25	68	FAIR
4	VP	12	25	48	POOR
5	AL	12	25	48	POOR
6	DR	13	25	52	POOR
7	FA	13	25	52	POOR
8	JN	13	25	52	POOR
9	MS	11	25	44	POOR
10	MF	12	25	48	POOR
11	N	13	25	52	POOR
12	NF	15	25	60	FAIR
13	NH	13	25	52	POOR
14	RI	14	25	56	FAIR
15	RH	14	25	56	FAIR
16	RS	16	25	64	FAIR
17	RA	13	25	52	POOR
18	SA	15	25	60	FAIR
19	SK	11	25	44	POOR

Based on the table above about students' speaking scores and the classification in the pre-test we can find the frequency of the classification score by looking the following table:

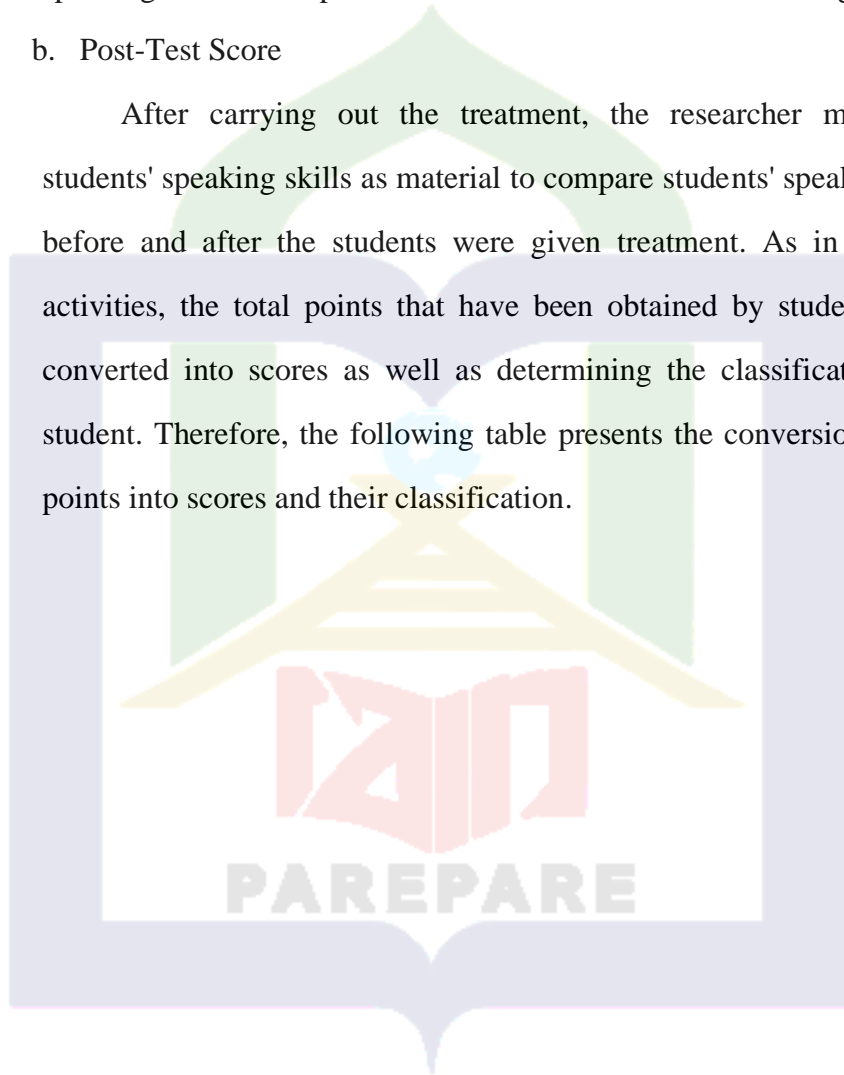
Table 4.2. The Rate Percentage of the Frequency of the Pre-Test

No.	Classification	Score	Score Frequency of Pre-test	Percentage of pre-test
1	Excellent	86-100	0	0%
2	Good	71-85	0	0%
3	Fair	56-70	6	32%
4	Poor	41-55	13	68%
5	Very Poor	≤40	0	0%
Total			19	100%

As described in the table above, before students use AI to improve their speaking skills, only 6 students (32%) got the FAIR category than 13 students (68%) got the POOR category. This shows that the students' speaking skills in the pre-test activities are still in the low category.

b. Post-Test Score

After carrying out the treatment, the researcher measured the students' speaking skills as material to compare students' speaking abilities before and after the students were given treatment. As in the pre-test activities, the total points that have been obtained by students are then converted into scores as well as determining the classification of each student. Therefore, the following table presents the conversion of student points into scores and their classification.



Tabel 4.3. Students' Speaking Score and Classification in Post-test Activities

NO	NAME	TOTAL POINT	MAX. POINT	SCORE	CLASSIFICATION
1	AM	17	25	68	FAIR
2	AS	18	25	72	GOOD
3	AP	19	25	76	GOOD
4	VP	13	25	52	POOR
5	AL	14	25	56	FAIR
6	DR	16	25	64	FAIR
7	FA	16	25	64	FAIR
8	JN	16	25	64	FAIR
9	MS	16	25	64	FAIR
10	MF	17	25	68	FAIR
11	N	15	25	60	FAIR
12	NF	18	25	72	GOOD
13	NH	17	25	68	FAIR
14	RI	15	25	60	FAIR
15	RH	15	25	60	FAIR
16	RS	17	25	68	FAIR
17	RA	15	25	60	FAIR
18	SA	18	25	72	GOOD
19	SK	13	25	52	POOR

Based on the table above about students' speaking scores and the classification in the pre-test we can find the frequency of the classification score by looking the following table:

Table 4.4. The Rate Percentage of the Frequency of the Post-Test

No.	Classification	Score	Score Frequency of post-test	Percentage of post-test
1	Excellent	86-100	0	0%
2	Good	71-85	4	21%
3	Fair	56-70	13	68%
4	Poor	41-55	2	11%
5	Very Poor	≤ 40	0	0%
Total			19	100%

After giving the treatment and conducting a post-test on the results after using AI in improving speaking skills, the results obtained showed that 4 students (21%) get a score in the "GOOD" category, 13 students (68%) received the "FAIR" category and there were only 2 students (11%) who still are in the "POOR" category.

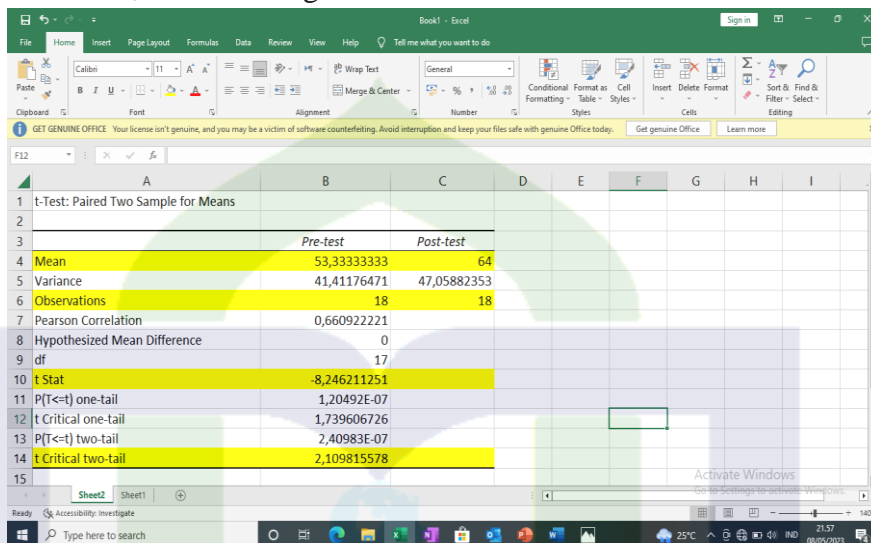
c. Calculating the Data

To process the data, the researcher had to input student scores on the pre-test and post-test activities. Therefore the following table presents students' scores on the pre-test and post-test.

Tabel 4.5. Students' Score from the Pre-test and Post-test Activities

NO	NAME	PRE-TEST SCORE	POST-TEST SCORE
1	AM	52	68
2	AS	52	72
3	AP	68	76
4	VP	48	52
5	AL	48	56
6	DR	52	64
7	FA	52	64
8	JN	52	64
9	MS	44	64
10	MF	48	68
11	N	52	60
12	NF	60	72
13	NH	52	68
14	RI	56	60
15	RH	56	60
16	RS	64	68
17	RA	52	60
18	SA	60	72
19	SK	44	52

The values above are then processed automatically by Microsoft excel 365, the following are the results obtained:



	Pre-test	Post-test
Mean	53,33333333	64
Variance	41,41176471	47,05882353
Observations	18	18
Pearson Correlation	0,660922221	
Hypothesized Mean Difference	0	
df	17	
t Stat	-8,246211251	
P(T<t) one-tail	1,20492E-07	
t Critical one-tail	1,739606726	
P(T<t) two-tail	2,40983E-07	
t Critical two-tail	2,109815578	

Picture 4.1. The Result of Data analysis

Based on the data analysis above, we find:

- 1) The mean score of pre-test is 53,3
- 2) The mean score of post-test is 64
- 3) The sample of pre-test & post-test are the same, which is 18
- 4) The T-test value is 8.246
- 5) The T-table value is 2.409

The T-test value obtained from the data above is greater than the T-Table value, it is 8.246 and 2.409 respectively. This shows that this research was successful and proves that the use of AI in improving speaking skills is successful because there is a significant improvement in students' speaking skills.

## 2. Students' Perception on Using AI in Improving Speaking Skill

The results of students' perceptions about the use of AI in improving speaking skills by questionnaire has responded by 17 students who had received treatment which were then analyzed using a Likert scale. The researcher first divided the data based on indicators of Perceived usefulness or technology acceptance model by Davis (1989). The results of each perceived indicator are as follows:

### a. Perceive Ease of Use (PEoU)

The following are the steps taken to find out the student's perception of ease of use:

#### 1) Scoring the results of student responses from the questionnaire

The following table shows each student's point obtained from questionnaire which is converted into a score as a score of students' perceptions of ease of use using AI in improving speaking skills.

Table 4.6. Students' Score of Perception Ease of Use

No	Name	Point	Max Point of Questionnaire	Conversion to Student Score
1	AM	53	75	70,67
2	AS	42	75	56,00
3	AP	55	75	73,33
4	DR	57	75	76,00
5	FA	54	75	72,00
6	JN	44	75	58,67
7	MS	50	75	66,67
8	MF	48	75	64,00
9	N	43	75	57,33
10	NF	49	75	65,33
11	NH	46	75	61,33
12	RI	53	75	70,67
13	RH	56	75	74,67
14	RS	49	75	65,33
15	RA	52	75	69,33
16	SA	69	75	92,00
17	VP	47	75	62,67
Total				1238,57

- 2) Find the Mean Score of the students' perception score

The mean score can be obtained by dividing the total student perception score divided by the number of students. Here's how to get the mean score:

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

$$X = \frac{1238,57}{17}$$

$$X = 72,86$$

So based on the formula above, the mean score of students' perceptions of ease of use is 72,86.

- 3) Classifying the mean score of the students' perception score using Likert scale.

From the results above, it has been found that the average value of student perceptions is 72,86. when adjusted for the Likert scale, 72,86 is at the "GOOD" level. This shows that most students believe that using AI in learning to improve speaking skills is easy to understand.

b. Attitude Toward Using (AtU)

The steps taken to analyze the questionnaire to determine students' perceptions about their attitude toward using are as follows:

- 1) Scoring the results of student responses from the questionnaire

The following table shows the student point from the questionnaire answers regarding the attitude toward using indicator then converted into scores. The conversion results are presented in the following table.



Tabel 4.7. Students' Score of Attitude toward Using

No	Name	Point	Max Point of Questionnaire	Conversion to Student Score
1	AM	49	70	70,00
2	AS	38	70	54,29
3	AP	53	70	75,71
4	DR	63	70	90,00
5	FA	51	70	72,86
6	JN	44	70	62,86
7	MS	47	70	67,14
8	MF	58	70	82,86
9	N	49	70	70,00
10	NF	45	70	64,29
11	NH	53	70	75,71
12	RI	57	70	81,43
13	RH	56	70	80,00
14	RS	52	70	74,29
15	RA	55	70	78,57
16	SA	55	70	78,57
17	VP	51	70	72,86
TOTAL:				1251,43

- 2) Find the Mean Score of the students' perception score

The following is the formula and steps for finding the mean score of all students:

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

$$X = \frac{1251,43}{17}$$

$$X = 73,61$$

So based on the formula above, the mean score of the student's perception score is 73.61.

- 3) Classifying the mean score of the students' perception score using Likert scale.

From the results above, it has been found that the average value of student perceptions is 73.61, when adjusted for the Likert scale, 73.61 is at the "GOOD" level. This shows that the attitude of students in using AI in learning to improve speaking skills shows an attitude of accepting and liking AI used in improving speaking skills.

c. Perceive of Usefulness (PoU)

Like the previous indicators, to analyze data from the questionnaire to find out the students' perception about the usefulness of AI in improving speaking skills, researchers still use the same analysis with the following 3 steps:

- 1) Scoring the results of student responses from the questionnaire

The following table shows the results of scoring students' answers to the questionnaire about perceived usefulness then converted into scores as students' perception score. The conversion results are presented in the following table.

Tabel 4.8. Students' Score Perception of Usefulness

No	Name	Point	Max Point of Questionnaire	Conversion to Student Score
1	AM	56	70	80,00
2	AS	46	70	65,71
3	AP	53	70	75,71
4	DR	66	70	94,29
5	FA	49	70	70,00
6	JN	45	70	64,29
7	MS	45	70	64,29
8	MF	55	70	78,57
9	N	54	70	77,14
10	NF	51	70	72,86
11	NH	53	70	75,71
12	RI	51	70	72,86
13	RH	53	70	75,71
14	RS	56	70	80,00
15	RA	53	70	75,71
16	SA	67	70	95,71
17	VP	55	70	78,57
TOTAL				1297,14

- 2) Find the Mean Score of the students' perception score

The following is the formula and steps for finding the mean score of all students:

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

$$X = \frac{1297,14}{17}$$

$$X = 76,30$$

So based on the formula above, the mean score of the student's perception score is 76.30.

3) Classifying the mean score of the students' perception score using Likert scale

From the results above, it has been found that the average value of student perceptions is 76,30, when adjusted for the Likert scale, 76.30 is at the "GOOD" level. This shows that students feel that using AI in learning to improve speaking skills has a good impact on improving students' speaking skills where the impact is really felt by students.

d. Behavior Intention (BI)

The last indicator is behavioral intention, so to find out how often and the level of students' desire to use AI in learning speaking, the researcher analyzed the results of students' answers while still using the same 3 steps in the previous indicator.

1) Scoring the results of student responses from the questionnaire

The following table shows the results of scoring students' answers to the questionnaire about behavioral intention then converted into scores as students' perception score. The conversion results are presented in the following table.

Tabel 4.9.Students' Score of Behavioral Intention

No	Name	Point	Max Point of Questionnaire	Conversion to Student Score
1	AM	32	40	80,00
2	AS	29	40	72,50
3	AP	31	40	77,50
4	DR	40	40	100,00
5	FA	26	40	65,00
6	JN	25	40	62,50
7	MS	25	40	62,50
8	MF	31	40	77,50
9	N	32	40	80,00
10	NF	24	40	60,00
11	NH	27	40	67,50
12	RI	27	40	67,50
13	RH	30	40	75,00
14	RS	23	40	57,50
15	RA	32	40	80,00
16	SA	40	40	100,00
17	VP	31	40	77,50
TOTAL				1262,50

- 2) Find the Mean Score of the students' perception score

The following is the formula and steps for finding the mean score of all students:

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

$$X = \frac{1262,50}{17}$$

$$X = 74,26$$

So based on the formula above, the mean score of the student's perception score is 74.26.

- 3) Classifying the mean score of the students' perception score using Likert scale

From the results above, it has been found that the average value of student perceptions is 74.26, when adjusted for the Likert scale, 74,26 is at the "GOOD" level. This shows that students often use and will continue to use AI in learning to improve speaking skills.

Furthermore, to find out the student's perception score on the use of AI in improving speaking skills, the following table will present the mean score of each indicator which is then used to find the overall meanscore of student perceptions.

Table 4.10 : The Result of the Mean Score of All Perception Indicators

Perceive Ease of Use (PEoU)	73,49
Attitude Toward Using (AtU)	71,26
Perceive of Usefulness (PoU)	70,92
Behavioral Intention (BI)	74,26
Total:	289,93

The following is the formula and steps for finding the mean score of all students:

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

$$X = \frac{289,93}{4}$$

$$X = 72,48$$

So based on the formula above, the mean score of the students' perception score is 72,48. This result is then classified into the Likert Scale indicating that the overall perception of students is in the "GOOD" category. Thus, the result indicate that students have positive perceptions and support the use of AI in learning speaking.

## **B. Discussion**

This section presents a discussion of the findings presented in the previous section. The discussion section of this study provides an explanation of students' perceptions of the use of AI in improving speaking skills and student improvement after receiving treatment.

### **1. Students' improvement after using AI in improving speaking skill**

Discussing about students' improvement after the treatment, the data analysis in this research shows that there was an improvement of students' speaking skill, it's proved by the mean score of the pre-test is 53,3 than the mean score of post-test is 64,0. This means that the mean score in the post-test activity is higher than the mean score in the pre-test. As for the benchmark for researcher to measure students' speaking is the aspects of

speaking which are grammatical, vocabulary, fluency, pronunciation and comprehension.

As explained in the related literature, the speaking level used in this study is interactive speaking, so the assessment made to measure students' speaking skills is interactive speaking. Interactive speaking is the choice of researchers because they see the importance of speaking skills to maintain relationships in college. On the other hand, interactive speaking is the most important basis for English students to interact and communicate with their friends and lecturers to share information.

As for the research findings, most of the students (68%) got the poor level of speaking in the pre-test activity, while the other students (32%) got the fair level. In the post-test activity, most of the students (68%) got the fair level, some other students (21%) got the good level and other students (11%) got poor level. It means that most of the student's speaking skill increases from poor level to fair level. Furthermore, the data analysis display shows us the T-test and the T-table value. Where the T-test on the results of this study is 8,246 while the T-table is 2,409. So the result means the T-test value is higher than the T-table value. Therefore based on the findings above, the use of AI in improving student's speaking skills proves that the use of AI in learning has a significant influence on students' abilities in learning speaking, on the other hand students of English in the IAIN Parepare Program find the new way to learn English by technology because one of IAIN Parepare's missions is to create Islamic scholars who are capable of using technology.



In this study, three applications based on Artificial Intelligence were used to improve students' skills, but these three applications certainly had a different impact on improving students' speaking. The Cake Application has the greatest impact, this is because there are many features available in the application that support the development of speaking, such as Video Playback, Path, Speaking Practice, and Save and Review features.

With the many impacts that the Cake application has had, it doesn't mean that the other two applications have not had an impact on improving student speaking, Google Assistant has become a place for students to practice interacting and apply the knowledge they have gained in the Cake Application. Likewise, the Replica Application, this application helps students to improve vocabulary mastery and understanding. Because vocabulary is an essential consideration to develop proficiency in communication.<sup>68</sup> Therefore, the 3 applications used in this study are very useful to improve students' speaking skills.

Talking about the payment problem of the three applications used, all the features used in the application are free, but to be able to use more features and maximize learning, users must pay according to the application's request. As an example of the Replication Application, this research only makes use of the Chatbox feature, but when users are able to pay to use it, there are many more interesting features to be used for speaking learners. One feature has a significant impact, more so if you activate all the features.

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<sup>68</sup> Raja Khan et al., "The Role of Vocabulary Knowledge in Speaking Development of Saudi EFL Learners," *Arab World English Journal* 9, no. 1 (2018): 406–18, <https://doi.org/10.24093/awej/vol9no1.28>.

Based on the data above, it can be seen that AI is able to act as a native speaker in training and becoming students' speaking partners in learning to speak. This condition is related to Philip Boucher's statement that AI aims to do human activities in analyzing and responding to everything around. This is also in line with what Nur Wahyuni and Indah Priyanti stated in their research, they stated practice with native speakers is the best way to improve speaking skills. This has been applied to the use of AI in learning where AI acts as a native speaker and improves students' abilities significantly.

Furthermore, with the increasing speaking skills of students, especially in the English program or other Parepare, it can increase Indonesia's ranking in the 2021 EF-EPI (Education First-English Education Index) data which is ranked 80. Therefore, researchers hope that the successful use of AI in improving the speaking skills of Indonesian students in general should have started using AI to improve speaking skills so that Indonesian English Proficiency continues to increase.

## **2. Students' perception on using AI in improving students' speaking skill**

Discussing students' perceptions, the result of this study shows the level of students' perceptions on using AI in improving students' speaking skills based on the usefulness indicators in the Technology Acceptance Model (TAM) theory by Davis (1989).<sup>69</sup>

The first indicator of the technology acceptance model to measure students' perceptions is perceived ease of use. In this study

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<sup>69</sup> Wida, Yasa, and Sukaatmadja, "The Technology Acceptance Model."

was found that students' perceptions about the use of AI in improving speaking skills were classified at good level with a mean score of 72,86. this means that students agree that the use of AI in learning speaking skills makes them easy to learn because the AI are easy to operate and enjoyable.

The next indicator is the attitude toward using where in this study it was also found that students showed an attitude of accepting AI in learning to improve speaking skills with an average score of 73,61 and included in the good level classification. The students indicated that AI is useful, helpful, pleasant, and effective when used in learning to speak hence they show a good attitude to the use of AI in the learning process.

Another indicator that also gets the good level of classification is perceived of usefulness. Where in the results of this study it was found that the average score of student perceptions was 76,30. This proves that AI brings many benefits in improving student speaking. Moreover, AI also improves students' English performance and the students perceive that people would support them to use AI in their speaking class.

Furthermore, the last indicator, namely behavioral intention, is also at a good level with an average score of 74.26 as presented in the results of this study. This shows that students often use and will continue to use AI in learning to improve speaking skills even if they will purchase some AI for their further learning. Moreover, the students will recommend that people around to use AI in every learning speaking.

The research data shows that the mean score of student's perception score of the 4 existing indicators is at good level, this shows that second-semester students in the English program at IAIN Parepare support the use

of AI in learning to improve speaking skills. This is in accordance with the findings of Zou et al. in the results of his research which said that students have a positive attitude toward the use of AI in improving students' speaking skills.<sup>70</sup>



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<sup>70</sup> Zou, Sara, and Mengyuan, "Artificial Intelligence Technology for EAP Speaking Skills : Student Perceptions of Opportunities and Challenges."

## CHAPTER V

### CLOSING

This chapter presents the conclusion and the suggestion of this research about impact of Artificial Intelligence (AI) in students' speaking skill.

#### A. Conclusion

After conducting the study and analyze the data from the instrument, the researcher find out two conclusion. Those are the students' perception in using AI in improving speaking skill and the students' improvement after doing the treatment.

1. The finding of this research show the T-test value is higher than the T-table value, it means that the use of AI in improving students' speaking skill brings the positif impact for the students. In addition, because the T-test value is higher than T-table value, the researcher conclude that there was a significat improvement in students speaking skill after using AI in improving their speaking skill.
2. Based on the finding in this research, the students show the postive perception and attitude toward AI in improving speaking skill. Most of the students perceive that AI is easy to use and has many benefits in improving students' speaking skill. It is proved by the students attitude and the students' behavioral intention in using AI, the students fell di the benefits of AI so they intent to use it everytime to improve their speaking skill.

#### B. Suggestion

##### 1. For the Teachers & Lecturers

The researcher gives suggestion to teachers and lectures to explore and combine many kinds of AI in speaking class, especially the three AI

that the researcher use in this research (Cake Application, Google Assistant, and Replika Application). Beside that the researcher also suggest the teachers to find the new AI that can help the students learn by them selves then suggest the students to use it in their learning activities.

## **2. For the Students**

For the students who are already using AI in learning speaking, the researcher suggests continuing to utilize AI that has been used before to improve speaking skills. In addition, the researcher advises all students to always receive the latest AI-based applications that can support and help improve speaking skills..

## **3. For the Other Researcher**

For the further researchers, the researcher would like to suggest to conduct a study about Artificial Intelligence in its influence on various skills in English, especially speaking skills. In addition, because in this study the researcher only used pre-experimental design and focusing on 3 applications (Cake Application, Google Assistant and Replica Application), the researcher suggests further researchers to use the other method and the other application which is even better.

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# APPENDICES

Appendix 1 : Virtue of Consultant Degree

  
**KEPUTUSAN  
DEKAN FAKULTAS TARBIYAH  
NOMOR : 1683 TAHUN 2022  
TENTANG  
PENETAPAN PEMBIMBING SKRIPSI MAHASISWA FAKULTAS TARBIYAH  
INSTITUT AGAMA ISLAM NEGERI PAREPARE**

---

**DEKAN FAKULTAS TARBIYAH**

Menimbang : a. Bahwa untuk menjamin kualitas skripsi mahasiswa Fakultas Tarbiyah IAIN Parepare, maka dipandang perlu penetapan pembimbing skripsi mahasiswa tahun 2022;  
b. Bahwa yang tersebut namanya dalam surat keputusan ini dipandang cakap dan mampu untuk diserahi tugas sebagai pembimbing skripsi mahasiswa.

Mengingat : 1. Undang-undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional;  
2. Undang-undang Nomor 12 Tahun 2005 tentang Guru dan Dosen;  
3. Undang-undang Nomor 12 Tahun 2012 tentang Pendidikan Tinggi;  
4. Peraturan Pemerintah RI Nomor 17 Tahun 2010 tentang Pengelolaan dan Penyelenggaraan Pendidikan;  
5. Peraturan Pemerintah RI Nomor 13 Tahun 2015 tentang Perubahan Kedua atas Peraturan Pemerintah RI Nomor 19 Tahun 2005 tentang Standar Nasional Pendidikan;  
6. Peraturan Presiden RI Nomor 29 Tahun 2018 tentang Institut Agama Islam Negeri Parepare;  
7. Keputusan Menteri Agama Nomor 394 Tahun 2003 tentang Pembukaan Program Studi;  
8. Keputusan Menteri Agama Nomor 387 Tahun 2004 tentang Pelaksanaan Pembukaan Program Studi pada Perguruan Tinggi Agama Islam;  
9. Peraturan Menteri Agama Nomor 35 Tahun 2018 tentang Organisasi dan Tata Kerja IAIN Parepare;  
10. Peraturan Menteri Agama Nomor 16 Tahun 2019 tentang Statuta Institut Agama Islam Negeri Parepare.

Memperhatikan : a. Surat Pengesahan Daftar Isian Pelaksanaan Anggaran Petikan Nomor: SP DIPA-025.04.2.307381/2022, tanggal 17 November 2021 tentang DIPA IAIN Parepare Tahun Anggaran 2022;  
b. Surat Keputusan Rektor Institut Agama Islam Negeri Parepare Nomor: 494 Tahun 2022, tanggal 31 Maret 2022 tentang Pembimbing Skripsi Mahasiswa Fakultas Tarbiyah IAIN Parepare Tahun 2022.

Menetapkan : **MEMUTUSKAN**  
**KEPUTUSAN DEKAN FAKULTAS TARBIYAH TENTANG PEMBIMBING SKRIPSI MAHASISWA FAKULTAS TARBIYAH INSTITUT AGAMA ISLAM NEGERI PAREPARE TAHUN 2022;**

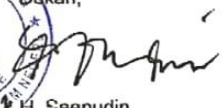
Kesatu : Menunjuk saudara; 1. Mujahidah, M.Pd.  
2. Muh. Yusuf, M.Pd.  
Masing-masing sebagai pembimbing utama dan pendamping bagi mahasiswa :  
Nama : Kadaruddin  
NIM : 19.1300.082  
Program Studi : Pendidikan Bahasa Inggris  
Judul Skripsi : Improving Students' Speaking Skill By Using The Activis Intelligent The On The Second Semester Of English Program At IAIN Parepare


Kedua : Tugas pembimbing utama dan pendamping adalah membimbing dan mengarahkan mahasiswa mulai pada penyusunan proposal penelitian sampai menjadi sebuah karya ilmiah yang berkualitas dalam bentuk skripsi;

Ketiga : Segala biaya akibat diterbitkannya surat keputusan ini dibebankan kepada anggaran belanja IAIN Parepare;

Keempat : Surat keputusan ini diberikan kepada masing-masing yang bersangkutan untuk diketahui dan dilaksanakan sebagaimana mestinya.

Ditetapkan di : Parepare  
Pada Tanggal : 26 April 2022

Dekan,  
  
H. Saepudin



Appendix 1 : Research Permit Recommendation

**KEMENTERIAN AGAMA REPUBLIK INDONESIA**  
**INSTITUT AGAMA ISLAM NEGERI PAREPARE**  
**FAKULTAS TARBİYAH**  
Alamat : Jl. Anas Bakti No. 08 Sorong Parepare 91132 telp (0421) 21307 Fax:24404  
PO Box 909 Parepare 91100, website : [www.iainparepare.ac.id](http://www.iainparepare.ac.id), email: [mail@iainpare.ac.id](mailto:mail@iainpare.ac.id)

---

Nomor : B.1675/In.39/FTAR.01/PP.00.9/04/2023 18 April 2023  
Lampiran : 1 Bundel Proposal Penelitian  
Hal : Permohonan Rekomendasi Izin Penelitian

Yth. Walikota Parepare  
C.q. Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu  
di,  
Kota Parepare

*Assalamu Alaikum Wr. Wb.*

Dengan ini disampaikan bahwa mahasiswa Institut Agama Islam Negeri Parepare :

Nama : Kadaruddin  
Tempat/Tgl. Lahir : Rantepao, 3 Desember 2001  
NIM : 19.1300.082  
Fakultas / Program Studi : Tarbiyah/ Pendidikan Bahasa Inggris  
Semester : VIII (Delapan)  
Alamat : Kanan, Kec. Tanduk Kalua. Kab. Mamasa,  
Prov. Sulawesi Barat

Bermaksud akan mengadakan penelitian di wilayah Kota Parepare dalam rangka penyusunan skripsi yang berjudul **"Improving Students' Speaking Skill By Using Artificial Intelligence On The Second Semester Of English Program At IAIN Parepare"**. Pelaksanaan penelitian ini direncanakan pada bulan April sampai bulan Mei Tahun 2023. Demikian permohonan ini disampaikan atas perkenaan dan kerjasamanya diucapkan terima kasih.

*Wassalamu Alaikum Wr. Wb.*

  
Dr. Zulfah, M.Pd.  
NIP. 19830420 200801 2 010

Tembusan:  
1 Rektor IAIN Parepare  
2 Dekan Fakultas Tarbiyah

## Appendix 2 : Permission Research

**SRN IP000350**



**PEMERINTAH KOTA PAREPARE**  
**DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU**  
*Jalan Veteran Nomor 28 Telp (0421) 23594 Faximile (0421) 27719 Kode Pos 91111, Email : dpmpstp@pareparekota.go.id*

---

**REKOMENDASI PENELITIAN**  
**Nomor : 350/IP/DPM-PTSP/5/2023**

Dasar : 1. Undang-Undang Nomor 18 Tahun 2002 tentang Sistem Nasional Penelitian, Pengembangan, dan Penerapan Ilmu Pengetahuan dan Teknologi.  
2. Peraturan Menteri Dalam Negeri Republik Indonesia Nomor 64 Tahun 2011 tentang Pedoman Penerbitan Rekomendasi Penelitian.  
3. Peraturan Walikota Parepare No. 23 Tahun 2022 Tentang Pendelegasian Wewenang Pelayanan Perizinan dan Non Perizinan Kepada Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu.

Setelah memperhatikan hal tersebut, maka Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu :

**MENGIZINKAN**

KEPADA NAMA : **KADARUDDIN**

UNIVERSITAS/ LEMBAGA : **INSTITUT AGAMA ISLAM NEGERI (IAIN) PAREPARE**  
Jurusan : **PENDIDIKAN BAHASA INGGRIS**  
ALAMAT : **KANAN, KEC. TANDUK, KAB. MAMASA**  
UNTUK : melaksanakan Penelitian/wawancara dalam Kota Parepare dengan keterangan sebagai berikut :

JUDUL PENELITIAN : **IMPROVING STUDENTS SPEAKING SKILL BY USING ARTIFICIAL INTELLIGENCE ON THE SECOND SEMESTER OF ENGLISH PROGRAM AT IAIN PAREPARE**

LOKASI PENELITIAN : **INSTITUT AGAMA ISLAM NEGERI (IAIN) PAREPARE**

LAMA PENELITIAN : **10 Mei 2023 s.d 10 Juli 2023**

a. Rekomendasi Penelitian berlaku selama penelitian berlangsung  
b. Rekomendasi ini dapat dicabut apabila terbukti melakukan pelanggaran sesuai ketentuan perundang - undangan

Dikeluarkan di: **Parepare**  
Pada Tanggal : **11 Mei 2023**

**KEPALA DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU KOTA PAREPARE**

  
**Hj. ST. RAHMAH AMIR, ST, MM**  
Pangkat : **Pembina Tk. 1 (IV/b)**  
NIP : **19741013 200604 2 019**

**Biaya : Rp. 0.00**

■ UU ITE No. 11 Tahun 2008 Pasal 5 Ayat 1

- Informasi Elektronik dan/atau Dokumen Elektronik dan/atau hasil cetaknya merupakan alat bukti hukum yang sah
- Dokumen ini telah ditandatangani secara elektronik menggunakan **Sertifikat Elektronik** yang diterbitkan **BSrE**
- Dokumen ini dapat dibuktikan keasliannya dengan terdaftar di database DPMPSTP Kota Parepare (scan QRCode)



Balai Sertifikasi Elektronik





Appendix 3 : Letter of Research Completion



**KEMENTERIAN AGAMA REPUBLIK INDONESIA  
INSTITUT AGAMA ISLAM NEGERI PAREPARE  
FAKULTAS TARBİYAH**

Alamat : Jl. Amal Bakti No. 08 Soreang Parepare 91132 ☎ (0421) 21307 Fax.24404  
PO Box 909 Parepare 91100, website: [www.iainpare.ac.id](http://www.iainpare.ac.id), email: [mail@iainpare.ac.id](mailto:mail@iainpare.ac.id)

**SURAT KETERANGAN TELAH MENELITI  
NOMOR : B.3111/ln.39/FTAR.01/PP.00.9/07/2023**

Yang bertanda tangan di bawah ini,

Nama : Dr. Zulfah, M.Pd.  
NIP : 19830420 200801 2 010  
Pangkat / Golongan : Pembina / IV a  
Jabatan : Dekan Fakultas Tarbiyah  
Instansi : Institut Agama Islam Negeri Parepare

dengan ini menerangkan bahwa

Nama : Kadaruddin  
NIM : 19.1300.082  
Fakultas/Prodi : Tarbiyah/ Pendidikan Bahasa Inggris  
Alamat : Kanan, Kec. Tanduk, Kab. Mamasa

Benar telah melakukan penelitian di Fakultas Tarbiyah Institut Agama Islam Negeri (IAIN) Parepare mulai bulan Mei 2023 sampai dengan bulan Juli 2023, dengan judul penelitian **"Improving Students Speaking Skill By Using Artificial Intelligence On The Second Semester Of English Program At IAIN Parepare"**.

Demikian surat keterangan ini diberikan kepada yang bersangkutan untuk digunakan sebagaimana mestinya.

Parepare, 11 Juli 2023

Dekan  
  
Dr. Zulfah, M.Pd.  
NIP. 19830420 200801 2 010

Appendix 4 : Instrument of the Research

	<b>KEMENTERIAN AGAMA</b> <b>INSTITUT AGAMA ISLAM NEGERI PAREPARE</b> <b>FAKULTAS TARBIYAH</b> <b>Jl. Amal Bakti No. 8 Soreang, Kota Parepare 91132</b> <b>Telepon (0421) 21307</b>
	<b>VALIDASI INSTRUMENT PENELITIAN PENULISAN</b> <b>THESIS</b>

Nama Mahasiswa : Kadaruddin  
NIM : 19.1300.082  
Fakultas : Tarbiyah  
Judul : Improving Students' Speaking Skill by Using Artificial Intelligence on the Second Semester of English Program at IAIN Parepare

**INSTRUMENT OF PRE-TEST**

Please choose one of the topic below and have conversation with your couple based on the topic that you have chosen. You only have 5 minutes to do it.

1. Campus Activities
2. Home Town
3. Daily activities

**INSTRUMENT OF POST-TEST**

Please choose one of the topic below and have conversation with your couple based on the topic that you have chosen. You only have 5 minutes to do it.

1. Meeting a new person
2. New best friend


Parepare, .... April 2023

Approved by  
Consultant Commissions

Consultant

  
Dr. Mujahidah, M.Pd.  
NIP.197904122008012020

Co-Consultant

  
Muh. Yusuf, M.Pd.  
NIDN.2018089301



**KEMENTERIAN AGAMA**  
**INSTITUT AGAMA ISLAM NEGERI PAREPARE**  
**FAKULTAS TARBIYAH**  
**Jl. Amal Bakti No. 8 Soreang, Kota Parepare 91132**  
**Telepon (0421) 21307**

**VALIDASI INSTRUMENT PENELITIAN PENULISAN**  
**THESIS**

Nama Mahasiswa : Kadaruddin  
NIM : 19.1300.082  
Fakultas : Tarbiyah  
Judul : Improving Students' Speaking Skill by Using Artificial Intelligence on the Second Semester of English Program at IAIN Parepare

**KUESIONER**

**I. Petunjuk Pengisian Kuesioner**

1. Bacalah dengan baik dan teliti.
2. Isi Biodata berdasarkan apa yang di tanyakan
3. Pilih salah satu jawaban yang paling sesuai dengan cara memberikan tanda (√) pada kolom yang sesuai dengan persepsi anda dari masing-masing point.

a. Keterangan

**SA** : Strongly Agree (Sangat Setuju)

**A** : Agree (Setuju)

**N** : Neutral (Netral)

**D** : Disagree (Tidak Setuju)

**SD** : Strongly Disagree (Sangat Tidak Setuju)

4. Dalam pengisian Kuesioner mohon dijawab sesuai dengan persepsi anda yang sebenarnya tanpa ada pengaruh dari orang lain. Peneliti menjamin bahwa jawaban yang diterima hanya digunakan untuk kepentingan penelitian.

**II. Identitas Responden**

Nama : .....

NIM : .....

Gender :  Male  Female

**III. Pernyataan**

Variable	No	Measurement	SA	A	N	D	SD
Perceived Ease of Use (Kemudahan)	1	Using AI in learning Speaking is easy to make Interaction					
	2	With AI in learning Speaking is be clear and understandable the materials					
	3	I found AI in learning Speaking and it's easy to get what I want it to do					
	4	By using AI in learning Speaking and it makes clear and understandable					
	5	It is easy for me to become skilful by using AI in learning Speaking					
	6	I found AI in learning Speaking and it's complicated to use					
	7	Learning Speaking by using AI it is easy for me					
	8	It is so fun when AI is used in learning Speaking					
	9	Using AI in learning Speaking provide me with a lot of enjoyment					
	10	By using AI in learning Speaking would bore me					
	11	It would not be easy to use the AI in learning Speaking technically					
	12	It would not be easy to operate the AI in learning Speaking					
	13	It would take quite some time to get					

		familiar with the AI in learning Speaking					
	14	It looks a little difficult to use the AI in learning Speaking					
Attitude Toward Using (Sikap Dalam Menggunakan)	1	Use of the AI in every learning Speaking is good Speaking.					
	2	Use of the AI in every learning Speaking is bad English					
	3	Use of the AI in every learning Speaking is useless					
	4	Use of the AI in every learning Speaking is useful					
	5	Use of the AI in every learning Speaking is desirable					
	6	Use of the AI in every learning Speaking is Undesirable					
	7	Use of the AI in every learning Speaking is Effective					
	8	Use of the AI in every learning Speaking is ineffective					
	9	Use of the AI in every learning Speaking is unpleasant					
	10	Use of the AI in every learning Speaking is pleasant					
	11	Use of the AI in every learning Speaking is likeable					
	12	Use of the AI in every learning Speaking is not irritating					
	13	Use of the AI in every learning Speaking is helpful					
	14	Use of the AI in every learning Speaking is worthless					
Perceived Usefulness (Kemanfaatan)	1	Using the AI in every learning Speaking is not improve my English performance.					
	2	Using the AI in every learning Speaking is help my English Skill.					

	3	Using the AI in every learning Speaking do not enhance effectiveness in English.					
	4	I have the resources, knowledge, and ability to use the AI in every learning Speaking					
	5	People who influence my behaviour would think that I should not use the AI in every learning Speaking					
	6	People who are important to me would think that I should use the AI in every learning Speaking					
	7	People around me will take a negative view of me in using the AI in every learning Speaking					
	8	I would have fun interacting with the AI in every learning Speaking					
	9	Using the AI in every learning Speaking would not provide me with a lot of enjoyment					
	10	I would enjoy using the AI in every learning Speaking in Learning English					
	11	Using the AI in every learning Speaking would bore me					
	12	Compared to the effort I would need to put in, the AI in every learning Speaking is beneficial to me					
	13	Compared to the time I would need to spend, the AI in every learning Speaking is not worthwhile to me					
	14	Overall, the AI in every learning Speaking delivers good value in learning English					
Behavioral	1	I intend to use the AI in every learning					

Intention		Speaking for future					
	2	I do not intend to use the AI in every learning Speaking frequently					
	3	I intend to recommend that other people to use AI in every learning Speaking					
	4	I do not intend to buy AI in every learning Speaking in the future					
	5	I intend to purchase the AI in every learning Speaking in the future					
	6	When I purchase a product/service, the AI in every learning Speaking will not be considered first					
	7	I intend to recommend the AI in every learning Speaking to people around me					
	8	I do not plan to purchase AI in every learning Speaking soon					

Parepare, .... April 2023

Approved by  
Consultant Commissions

Consultant

Co-Consultant

Dr. Mujahidah, M.Pd.  
NIP.197904122008012020

Muh. Yusuf, M.Pd.  
NIDN.2018089301

Appendix 5 : The Result of the Questionnaire

NO	NAME	Gender	PERCEIVED EASE OF USE													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	AM	M	A	A	D	A	A	A	A	A	A	D	D	D	N	D
2	AS	M	N	N	N	N	N	N	N	N	N	N	N	N	N	N
3	AP	F	A	SA	D	A	A	A	D	A	A	D	D	D	A	D
4	DR	F	SA	SA	SA	SA	SA	SA	SA	SA	SA	D	D	D	D	D
5	FA	F	SA	A	N	A	SA	A	N	A	A	D	D	D	N	N
6	JN	F	N	A	N	A	N	N	N	N	A	N	N	D	A	A
7	MS	F	N	A	D	A	N	N	D	N	N	D	D	D	N	D
8	MF	M	SA	A	N	A	A	A	A	N	A	D	N	N	A	N
9	N	F	SA	A	A	A	A	A	A	A	A	A	A	A	A	A
10	NF	F	A	N	N	N	N	A	D	A	A	D	N	A	D	D
11	NH	F	SA	A	D	N	A	N	A	A	A	A	N	N	A	N
12	RI	F	SA	A	N	A	SA	N	N	A	A	D	N	D	D	N
13	RH	F	A	A	D	A	A	A	D	A	A	D	D	D	D	D
14	RS	M	A	A	D	A	A	A	A	A	N	D	D	A	A	D
15	RA	F	A	A	D	A	A	N	D	A	A	D	N	N	N	D
16	SA	F	SA	SA	SD	SA	SA	SA	D	SA	SA	SD	SD	SD	SD	SD
17	VP	M	A	A	N	A	A	A	N	A	A	N	N	N	A	A



NO	NAME	Gender	ATTITUDE TOWARD USING													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	AM	M	A	D	D	A	D	D	A	A	D	D	A	N	A	D
2	AS	M	N	N	SA	N	SD	N	SA	SA	SA	SA	SA	SA	A	A
3	AP	F	A	D	D	D	A	D	A	D	D	A	A	N	A	D
4	DR	F	SA	D	D	SA	SA	D	SA	D	D	SA	SA	D	SA	D
5	FA	F	SA	D	D	A	N	N	A	D	N	N	N	N	A	D
6	JN	F	A	N	N	N	N	N	N	N	N	A	N	N	N	N
7	MS	F	N	D	D	A	N	D	N	N	N	N	N	N	A	N
8	MF	M	SA	D	D	SA	A	D	A	D	D	A	A	D	A	D
9	N	F	A	D	D	D	D	D	A	A	D	A	A	N	A	D
10	NF	F	N	N	A	A	N	N	N	N	D	A	A	N	A	A
11	NH	F	A	SD	SD	A	N	N	A	D	D	A	N	N	A	N
12	RI	F	A	D	D	SA	A	D	A	D	D	A	A	D	A	D
13	RH	F	A	D	D	A	A	D	A	D	D	A	A	D	A	D
14	RS	M	A	D	D	A	N	N	A	D	N	N	A	D	A	D
15	RA	F	A	D	D	A	A	D	A	D	N	N	A	D	SA	D
16	SA	F	SA	SD	SD	SA	D	N	SA	N	N	N	N	D	SA	D
17	VP	M	A	D	D	A	A	N	A	N	N	A	A	N	A	N

NO	NAME	Gender	PERCEIVED USEFULNESS													
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	AM	M	D	A	D	A	D	A	D	A	D	A	D	A	D	A
2	AS	M	D	N	D	N	SD	D	N	D	D	A	D	D	D	D
3	AP	F	D	A	D	A	N	N	D	A	D	A	D	A	N	A
4	DR	F	SD	SA	SD	SA	SD	SA	SD	SA	SD	SA	SA	SA	SD	SA
5	FA	F	D	A	D	A	N	N	N	A	D	A	A	A	N	N
6	JN	F	N	A	D	N	N	N	D	N	N	N	N	N	N	N
7	MS	F	N	N	N	N	N	N	D	A	N	N	D	N	N	N
8	MF	M	D	A	D	A	N	A	SD	A	D	A	A	SA	D	A
9	N	F	D	A	D	A	D	A	D	A	D	A	A	A	D	A
10	NF	F	D	A	N	A	D	N	D	A	D	A	N	N	N	A
11	NH	F	D	A	D	A	N	N	D	SA	SD	A	A	N	N	SA
12	RI	F	D	A	N	A	N	N	D	A	D	A	D	N	N	A
13	RH	F	D	A	D	N	N	N	D	A	D	A	D	A	D	A
14	RS	M	D	A	D	A	D	A	D	A	D	A	D	A	D	A
15	RA	F	D	A	D	N	D	A	D	A	D	A	D	A	A	A
16	SA	F	SD	SA	SD	SA	SD	SA	SD	SA	SD	SA	SD	SA	A	SA
17	VP	M	D	A	N	A	D	A	D	A	D	A	D	A	D	A

NO	NAME	Gender	BEHAVIORAL INTETNTION							
			1	2	3	4	5	6	7	8
1	AM	M	A	D	A	D	A	D	A	D
2	AS	M	A	N	N	N	N	D	A	SD
3	AP	F	A	D	A	D	A	D	A	N
4	DR	F	SA	SD	SA	SD	SA	SD	SA	SD
5	FA	F	A	N	N	N	N	N	N	D
6	JN	F	A	N	N	N	N	N	N	N
7	MS	F	N	N	A	N	N	N	N	N
8	MF	M	A	D	A	N	A	D	A	D
9	N	F	A	D	A	D	A	D	A	D
10	NF	F	N	A	N	N	N	N	N	D
11	NH	F	A	D	A	N	N	N	N	N
12	RI	F	A	D	A	N	N	N	N	N
13	RH	F	A	D	A	D	A	N	A	N
14	RS	M	N	D	SA	A	D	A	N	A
15	RA	F	A	D	A	D	A	D	A	D
16	SA	F	SA	SD	SA	SD	SA	SD	SA	SD
17	VP	M	A	D	A	D	N	D	A	D

Appendix 6 : Students' Perception Point

NO	NAME	Gender	PERCEIVED EASE OF USE														POINT	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		
1	AM	M	4	4	4	4	4	4	4	2	4	4	4	4	4	3	4	53
2	AS	M	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	42
3	AP	F	4	5	4	4	4	4	4	4	4	4	4	4	2	4	4	55
4	DR	F	5	5	1	5	5	5	1	5	5	4	4	4	4	4	4	57
5	FA	F	5	4	3	4	5	4	3	4	4	4	4	4	3	3	3	54
6	JN	F	3	4	3	4	3	3	3	3	4	3	3	4	2	2	2	44
7	MS	F	3	4	4	4	3	3	4	3	3	4	4	4	3	4	4	50
8	MF	M	5	4	3	4	4	4	2	3	4	4	3	3	2	3	3	48
9	N	F	5	4	2	4	4	4	2	4	4	2	2	2	2	2	2	43
10	NF	F	4	3	3	3	3	4	4	4	4	4	3	2	4	4	4	49
11	NH	F	5	4	4	3	4	3	2	4	4	2	3	3	2	3	3	46
12	RI	F	5	4	3	4	5	3	3	4	4	4	3	4	4	4	3	53
13	RH	F	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	56
14	RS	M	4	4	4	4	4	4	2	4	3	4	4	2	2	4	4	49
15	RA	F	4	4	4	4	4	3	4	4	4	4	3	3	3	3	4	52
16	SA	F	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	69
17	VP	M	4	4	3	4	4	4	3	4	4	3	3	3	2	2	2	47

NO	NAME	Gender	ATTITUDE TOWARD USING														POINT
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	AM	M	4	4	4	4	2	4	4	2	4	2	4	3	4	4	49
2	AS	M	3	3	1	3	1	3	5	1	1	5	5	1	4	2	38
3	AP	F	4	4	4	2	4	4	4	4	4	4	4	3	4	4	53
4	DR	F	5	4	4	5	5	4	5	4	4	5	5	4	5	4	63
5	FA	F	5	4	4	4	3	3	4	4	3	3	3	3	4	4	51
6	JN	F	4	3	3	3	3	3	3	3	3	4	3	3	3	3	44
7	MS	F	3	4	4	4	3	4	3	3	3	3	3	3	4	3	47
8	MF	M	5	4	4	5	4	4	4	4	4	4	4	4	4	4	58
9	N	F	4	4	4	2	2	4	4	2	4	4	4	3	4	4	49
10	NF	F	3	3	2	4	3	3	3	3	4	4	4	3	4	2	45
11	NH	F	4	5	5	4	3	3	4	4	4	4	3	3	4	3	53
12	RI	F	4	4	4	5	4	4	4	4	4	4	4	4	4	4	57
13	RH	F	4	4	4	4	4	4	4	4	4	4	4	4	4	4	56
14	RS	M	4	4	4	4	3	3	4	4	3	3	4	4	4	4	52
15	RA	F	4	4	4	4	4	4	4	4	3	3	4	4	5	4	55
16	SA	F	5	5	5	5	2	3	5	3	3	3	3	4	5	4	55
17	VP	M	4	4	4	4	4	3	4	3	3	4	4	3	4	3	51

NO	NAME	Gender	PERCEIVED USEFULNESS														POINT
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	AM	M	4	4	4	4	4	4	4	4	4	4	4	4	4	4	56
2	AS	M	4	3	4	3	5	2	3	2	4	4	4	2	4	2	46
3	AP	F	4	4	4	4	3	3	4	4	4	4	4	4	3	4	53
4	DR	F	5	5	5	5	5	5	5	5	5	5	1	5	5	5	66
5	FA	F	4	4	4	4	3	3	3	4	4	4	2	4	3	3	49
6	JN	F	3	4	4	3	3	3	4	3	3	3	3	3	3	3	45
7	MS	F	3	3	3	3	3	3	4	4	3	3	4	3	3	3	45
8	MF	M	4	4	4	4	3	4	5	4	4	4	2	5	4	4	55
9	N	F	4	4	4	4	4	4	4	4	4	4	2	4	4	4	54
10	NF	F	4	4	3	4	4	3	4	4	4	4	3	3	3	4	51
11	NH	F	4	4	4	4	3	3	4	5	5	4	2	3	3	5	53
12	RI	F	4	4	3	4	3	3	4	4	4	4	4	3	3	4	51
13	RH	F	4	4	4	3	3	3	4	4	4	4	4	4	4	4	53
14	RS	M	4	4	4	4	4	4	4	4	4	4	4	4	4	4	56
15	RA	F	4	4	4	3	4	4	4	4	4	4	4	4	2	4	53
16	SA	F	5	5	5	5	5	5	5	5	5	5	5	5	2	5	67
17	VP	M	4	4	3	4	4	4	4	4	4	4	4	4	4	4	55

NO	NAME	Gender	BEHAVIORAL INTENTNION								POINT
			1	2	3	4	5	6	7	8	
1	AM	M	4	4	4	4	4	4	4	4	32
2	AS	M	4	3	3	3	3	4	4	5	29
3	AP	F	4	4	4	4	4	4	4	3	31
4	DR	F	5	5	5	5	5	5	5	5	40
5	FA	F	4	3	3	3	3	3	3	4	26
6	JN	F	4	3	3	3	3	3	3	3	25
7	MS	F	3	3	4	3	3	3	3	3	25
8	MF	M	4	4	4	3	4	4	4	4	31
9	N	F	4	4	4	4	4	4	4	4	32
10	NF	F	3	2	3	3	3	3	3	4	24
11	NH	F	4	4	4	3	3	3	3	3	27
12	RI	F	4	4	4	3	3	3	3	3	27
13	RH	F	4	4	4	4	4	3	4	3	30
14	RS	M	3	4	5	2	2	2	3	2	23
15	RA	F	4	4	4	4	4	4	4	4	32
16	SA	F	5	5	5	5	5	5	5	5	40
17	VP	M	4	4	4	4	3	4	4	4	31

Appendix 7 : Students' Score in Pre-test Activity

No	Name	Students' Point					Total Point
		Grammatical	Vocabulary	Fluency	Pronunciation	Comprehension	
1	AM	2	3	3	2	3	13
2	AS	3	3	2	2	3	13
3	AP	3	3	4	3	4	17
4	VP	2	2	3	2	3	12
5	AL	2	2	2	3	3	12
6	DR	3	3	2	2	3	13
7	FA	2	3	3	2	3	13
8	JN	2	3	2	3	3	13
9	MS	2	3	2	2	2	11
10	MF	2	3	3	2	2	12
11	N	2	2	3	3	3	13
12	NF	2	3	3	3	4	15
13	NH	2	2	3	3	3	13
14	RI	2	2	3	3	4	14
15	RH	2	3	3	2	4	14
16	RS	3	3	4	3	3	16
17	RA	2	2	3	3	3	13
18	SA	2	3	3	3	4	15
19	SK	2	2	2	2	3	11



Appendix 8 : Students' Score in Post-test Activity

NO	NAME	STUDENTS' POINT					TOTAL POINT
		GRAMMATICAL	VOCABULARY	FLUENCY	PRONUNCIATION	COMPREHENSION	
1	AM	3	4	3	4	3	17
2	AS	3	4	3	4	4	18
3	AP	3	4	4	4	4	19
4	VP	2	3	2	3	3	13
5	AL	2	3	3	3	3	14
6	DR	3	3	3	3	4	16
7	FA	3	3	3	3	4	16
8	JN	2	4	3	3	4	16
9	MS	2	4	3	3	4	16
10	MF	3	4	3	3	4	17
11	N	2	3	3	3	4	15
12	NF	3	3	4	4	4	18
13	NH	4	3	3	4	3	17
14	RI	3	2	3	3	4	15
15	RH	3	3	3	2	4	15
16	RS	3	3	4	3	4	17
17	RA	2	3	3	3	4	15
18	SA	3	4	4	3	4	18
19	SK	2	3	3	2	3	13

PAREPARE

Appendix 9: Questionnaire that has been Answered



Appendix 10: Documentation

Pre-test Activities



Treatment



Post-test Activities



## CURRICULUM VITAE



Kadaruddin was born on December 3<sup>rd</sup> 2001 in Rantepao, North Toraja regency, South Sulawesi. He is the first Child from the marriage of his parents, Hasan Budu and Nurbaya. His education background began at SDN 007 Tamalantik on 2007 and graduated on 2013. His junior high school was at MTs DDI Kanang and graduated on 2016, then he continued his study at MA DDI Kanang and graduated on 2019. He was enrolled and accepted in English Education program, Tarbiyah Faculty, State Islamic Institute of Parepare in 2019. He complete his study with his undergraduate thesis on the title “Improving Students’ Speaking Skill by Using Artificial Intelligence on the Second Semester of English Program at IAIN Parepare”.

