CHAPTER I

INTRODUCTION

A. Background

Vocabulary is the basic component aspect in learning language besides pronunciation and grammar. In learning a language especially foreign language like English, as the beginner that must be known and mastered in the vocabulary. As a learner that learn a new language, that have a difficulty in learning process to make the material to be mastered. In learning process that conduct by itself or teacher that needs method that make the learning process easier, fun, relax and interesting.

One of the most significant components in helping students in mastering language abilities, such as listening, speaking, reading, and writing, is vocabulary. Students may not be able to understand decent discourse when listening. Students may not be able to communicate effectively in speaking if they lack vocabulary, may not understand the content they are reading in reading, and may have difficulties articulating ideas in writing if they lack vocabulary. Because vocabulary is one of the components of language in English, we can conclude that vocabulary acts a significant part in a language. Vocabulary is the foundation of language, and it is what gives a language its meaning. This means that the more language a person learns, the easier it will be for them to communicate their thoughts. This is critical for building effective strategies for understanding and improving language patterns, as well as using the most effective methods for

learning vocabulary (Chen et al 2008). The goal of acquiring vocabulary is to develop, memorize, and apply newly acquired words in a variety of situations (McCarthy in Teng 2016)

In the modern era, that the technology was growth so fast, not to be a difficulty thing to makes learning process more interesting. Technology also makes the learning process more various and learners suggested the use of the technology can work to help to organize and provide the material for learners, help learners, and teachers interact, anytime and anywhere. There many applications can use to learning vocabulary that give interesting and fun features so that didn't make boring in replying the same topic. Therefore, it is needing a technology can apply as the media to support learning process without the limitation time and has various feature to make the learning process more interesting and nor make easier to get bored. (Satbana et al 2021)

Duolingo has been the subject of several studies, one of which discussed how to learn a new language plays an important role in learners' mastery to improve their language skills Vesselinov & Grego (2012). Munday (2016) recommends using Duolingo in the classroom, stating that students prefer it to homework. In addition, some students continued to use Duolingo after the lesson ended. These findings suggest that students may find Duolingo more entertaining and effective than advanced students. Ahmed (2016) conducted this research. He looked at the use of technology to help people learn languages. Duolingo is a modern program that makes learning a second language easier.

Before conducting the preobservation, the researcher expected that students in SMPN 10 Parepare had a good vocabulary, but in fact after conducting the preobservation, the results found in the field did not match the researcher's expectations because the teacher said that students' vocabulary from the explanation above, the researcher concludes that the use of technology is currently very influential in the world of education. Therefore, the researcher chose Duolingo for schools because it can be used as a medium for teaching vocabulary.

The researcher also made observations at SMP 10 Parepare to find out how well the students at the school were speaking English. The researcher asked the English teacher directly if the students' vocabulary mastery was very weak, especially in eighth grade. Therefore, the researcher was convinced to choose Duolingo for school as a learning media to improve students' vocabulary mastery. Because Duolingo for school has many interesting features and does not make students bored, by using Duolingo for school as a medium, students can add vocabulary that helps improve vocabulary mastery, especially nouns, adjectives and verbs.

B. Problem Statement

Based on the background above, the researcher formulates the problem is:

Can the use of Duolingo For School to improve the students' vocabulary mastery?

C. Objective of the Research

Base on the formulation of the problem above, the purpose of this research is:

To find out whether the use of Duolingo for school can improve students' vocabulary mastery.

D. Significance of the Research

1. Teachers: by using Duolingo for school as a medium for teaching speaking, teachers will have many choices of media for teaching speaking in the modern era and are expected to improve students' vocabulary mastery.
2. Students: as research subjects, can be a new experience in speaking class and improve their vocabulary mastery.
3. Other researchers: for other researchers this research can be used as reference material if they want to research the same subject and the results of this research can develop their experience and knowledge in learning English.
4. Readers: The researcher hopes that the results of this study can be useful for readers, especially in the process of teaching and learning English, especially in mastering vocabulary.

E. Scope of the Research

The scope of the research is divided into three parts, namely:

1. Disciplinarily, this research relates to a sub-skill in English language learning, namely vocabulary.
2. In terms of content, this relates to the content in the curriculum that applies at SMPN 10 Parepare, namely the 2013 curriculum. Where the Competency

Standards are listening, speaking, reading, writing, while the Basic Competency of the curriculum is to compile very short and simple oral and written transactional interaction texts involving the act of giving and requesting information related to circumstances or actions that are carried out routinely or are common truths, with attention to social functions, text structures, and linguistic elements that are correct and appropriate to the context.

3. By activity, the researcher asked the students to download the Duolingo for school application using their cell phones and observed the students' vocabulary by asking the students to work on the units in the Duolingo for school application. And finally, the researcher gave a "multiple choice and matching test" as data material.

CHAPTER II

REVIEW OF RELATED LITERATURE

A. Some Related Research Findings

Several previous studies show that Duolingo Application has a major influence on the teaching and learning process. According to Yuwono (2022) stated that the results of his research showed that students' scores improved significantly, especially in vocabulary mastery. The researcher stated that the students were very enthusiastic in completing the tasks given in the Duolingo application. When the teaching and learning process using the Duolingo application was carried out, the students were very happy and got a new enthusiasm for learning English. The students feel happy and interested because the Duolingo application can be easily accessed even by young students. Therefore, this application can be one of the alternative English learning media for students.

Ahmed (2016) conducted this research. It looked into how technology may be used to help people learn languages. The goalof the study is to prove that Duolingo can assist novices learn two languages at the same time. The findings revealed that Duolingo can help novices learn two languages, although it has limitations. As a result, it is suggested that Duolingo be developed for advanced users as well as English language learners. Based on prior research findings, it is clear that Duolingo may assist students, particularly those who are currently learningEnglish, in improving their English.

Manan (2017), stated that the research he conducted aimed to confirm the effectiveness of Duolingo in helping students learn English. Survey research including questionnaires. He found that the results displayed in Duolingo had a significant influence in learning English by using the application for students on his campus. Using the application for students on his campus, but has limitations. His research suggested using Duolingo continuously for higher grades and also for English language learners.

Kusumadewi and Widyastuti (2018) This study aims to determine the effect of using Duolingo on students' vocabulary mastery. This research is also expected to help teachers to use electronic media such as Duolingo to support more modern and interesting teaching and learning activities, such as mobile or web-based applications. Students' learning outcomes with Duolingo Android Application media have a positive influence compared to conventional learning.

Habibie (2020), This study aims to determine student motivation in learning English through Duolingo as a means of language education. He found that the use of Duolingo application is quite effective in increasing students' motivation to learn English. This research shows that Duolingo is an application that can motivate beginners to learn a second language and continue to make progress.

Research from Jaelani and Sutari (2020), this study aims to determine students' perceptions of the use of the Duolingo Application as a medium for learning vocabulary. They found that most of the students preferred to use the Duolingo aplication as a medium. Duolingo has several advantages in learning

media for students, including students who are easier to understand the material and enthusiastic about learning vocabulary. This research has similarities, namely using the Duolingo Application as a medium. This study also has a significant difference that using qualitative methods namely case study methods and interviews as instruments to know the students' response.

Putri and Islamiati (2018) state that Duolingo can motivate the students to practice using the foreign language daily because it is found that the Duolingo application contributed to increasing the vocabulary, improving pronunciation, and simple grammatical. The result is that students who learn English using the Duolingo Application have a positive effect compared to the conventional student approach.

Based on the previous related research above, the researcher concluded that the use of Duolingo for school is one of the effective media in vocabulary learning. This media is very attractive to students because they show a positive perception of Duolingo. Duolingo is easy to use in English learning and can be used anywhere and anytime, so they easily understand and learn English vocabulary. They feel interested in learning by using Duolingo because it is easy to use and gives them the opportunity to be more active in learning English vocabulary. Duolingo makes them excited and motivated in the learning process. They can learn English vocabulary by using this aplication at home easily, making it easier for them to understand the material.

B. Some Pertinent Ideas

1. Vocabulary

a. Definition of Vocabulary

One of the foreign languages that are studied by many students around the world is English because English is a foreign language that must be learned in school. Four skills must be mastered in language learning, namely listening, speaking, reading, and writing. Among the four skills, the most important is vocabulary, because without mastering it, it will be difficult to learn and develop the four language skills. Vocabulary is a collection of words used to compose sentences so that the other person can understand what we are saying. Words are learned by memorizing and understanding each meaning the word. The more vocabulary we know the easier it is for us to communicate with strangers. Vocabulary is one of the language's competencies, and it plays a significant part in the teaching of foreign languages because it is linked to four language skills: speaking, reading, listening and writing (Rafida et al. 2017).

Vocabulary is an important aspect of learning a language. Humans must first learn vocabulary in learning a language. Kadwa and Alshenqeeti (2020), noted that in English, vocabulary is one of the centers of skill development because vocabulary cannot be separated from the four language skills. According to Berliani and Katemba (2021), vocabulary must be taught at the start of the English language and must be integrated into the four English abilities listening, speaking, reading, and writing.

Vocabulary is one of the most important aspects of learning a language. Bai (2018), claimed that vocabulary is similar to the building blocks of language. Learners with a Small vocabulary may find it difficult for students to learn other aspects of the language. According to Ghonivita (2021), vocabulary development is an essential component of language learning, we will be able to understand more of what we hear and read if we know more words. Because without mastering vocabulary it will be difficult to speak, write, read, and listen. Vocabulary is a collection of words that have meaning, which form a sentence. Respati and Nur (2019), stated that vocabulary is extremely important, especially for people who are learning the language as a second or even foreign language. With us mastering the vocabulary we will easily communicate with strangers.

As mentioned in the paragraph above it can be reviewed that vocabulary is an aspect of language that has an important role in learning English. The first thing to learn in learning English is vocabulary because vocabulary is a collection of words used to compose sentences so that the interlocutor can understand what we say. Words are learned by memorizing and understanding each meaning of the word. The more vocabulary we know, the easier it is for us to communicate with foreigners.

b. Problem in Vocabulary

Vocabulary is one of the difficult subjects and students have problems in mastery vocabulary because vocabulary skill includes some aspects. According to Adriani and Srywahyuningsi (2019) vocabulary skill included:

pronunciation, spelling, grammar and meaning.

1) Pronunciation

Pronunciation is one of the aspects that have a great influence of vocabulary. Pronunciation is the way in which a particular person pronounces the word of a language. Students need to listen a new word in foreign language in order they can notice the sound at the beginning and at the end, the stress patterns of the word. There is different pronunciation between English and Indonesian vocabularies. Every language has special phoneme, English has different sound with Indonesia/ Malaysia sound. Therefore, students have problems in pronunciation. The students have difficulties for some reasons. The first reason is that some sounds of English do not exist in Indonesia. The phoneme /o/ (thin) and /Ɵ/ (this) are found, it is not found in Indonesia. Therefore, in learning pronunciation, one must learn or not only to form sound correctly but also to use them in the correctly place (Andriani and Srywahyuningsi 2019).

2) Spelling

Students need to know the letters and syllables that make up the word that is called spelling. Spelling is the act of forming words correctly from individual letter or the way that a word is spelt. Sound-spelling mismatches are likely to be the cause of errors; either of pronunciation or of spelling and can contributes to a word's difficulty. While most of English spelling is fairly law-abiding, there are also some

glaring irregularities (Andriani and Srywahyuningsi 2019).

3) Grammar

Also, problematic is the grammar associated with the word, especially if this differs from mother language equivalent. Remembering whether a verb enjoy, love, or hope is followed by an infinite (to swim) or an –ing form (swimming) can add to is difficulty (Andriani and Srywahyuningsi 2019)

4) Meaning

When two words overlap in meaning, learners are likely to confuse them. Make and do are a case in point (Adriani and Srywahyuningsi 2019).

c. The importance of Vocabulary

Vocabulary is very important to learn because vocabulary is the basic for mastering English. Vocabulary is the basic of the four skills that must be mastered and developed in mastering English (Ruzimuratova 2021). Learning vocabulary is the first thing we have to do. Having a good vocabulary, we can convey thoughts, feelings, and the meaning of these words and make it easier for us to communicate. Learning vocabulary is very important because it is the main capital in learning sentence structure and other language skills. Mastering vocabulary makes it easier for someone to read, write, listen and speak. By increasing vocabulary every day to start the process of speaking we can gradually master a language. More vocabulary mastered can also increase confidence in mastering a foreign language. We will feel more than most

people. Our courage in practicing the language directly makes us more enthusiastic about improving and mastering the language (Gaybulloyevna 2022).

Mastering vocabulary is also very important because it is related to activities that need to know the vocabulary, such as listening to English songs, and watching films in English and English stories so that we know the meaning (Alqahtani 2015) stated that if a person cannot get the vocabulary used to convey the intended meaning, then there is no value even though the person can make sentences according to the grammar. Mastering vocabulary first makes it easier for us to master grammar. The more vocabulary mastered the more words that can be spoken. Many underestimates vocabulary because they think it is not important. Whereas vocabulary is our basis for mastering the English language.

2. Duolingo for School

a. The Definition of Duolingo for School

Duolingo is an application made to make it easier for people to learn many languages for free and easy. According to Botero, et.al. (2019) states that languages like English, Korean, Spanish, Japanese, Arabic, and others can be learned by students who easily use the Duolingo Application. Students often feel bored or lazy in learning languages but in Duolingo for school, they will learn languages using diverse and fun techniques for beginners to learn new languages. Duolingo uses a very simple procedure so it's easy to use for all ages like children, adults, and parents. Munday (2016) states that based on the study

learning language using Duolingo is preferred because it has diverse and interesting features than regular media.

Duolingo is a platform that was launched for public use in June 2012 as a language learning platform that can be accessed on the website, Android, or iOS application. According to Bogdan (2016) Duolingo is part of ICT because it is included in the category of Mobile-Assisted Language Learning (MALL). Students who want to improve their vocabulary can use the Duolingo Application as an easy and fun language learning application. Students can get vocabulary practice and get the opportunity to know and evaluate and improve their vocabulary (Guaquat and Angela 2018).

b. The Types of Duolingo for School

Wagner and Kunnan (2015) say that Duolingo has four separate tasks such as vocabulary task, listening and transcription task, sentence completion task, and speaking task. Each user may have a different order and task because of this there is a computer adaptive test in which the order and occurrence of tasks are different based on the responses of each user. The duties of Duolingo can be explained as follows:

1) Vocabulary: In vocabulary assignments, the user can pick up several words on the grid on the screen. Then the user must choose the right words in English (Wagner and Kunnan 2015).
2) Listening and Transcription: The user's mastery to listen can be assessed from listening and transcription. Users must type the words they hear aurally correctly. This task is usually like a dictation model. Users can

choose to use speed or slow mode in listening to the given test (Wagner and Kunnan 2015)

3) Sentence completion: The next task given is to complete sentences. The user will be given several short texts that must be arranged to become correct sentences (Wagner and Kunnan 2015).
4) Speaking: Speaking is the last task in Duolingo. In this task, the user will be given on-screen instructions such as "say this sentence". Then, the user must click on the microphone icon and read the given written sentence (Wagner and Kunnan 2015).

c. The Purpose of Using Duolingo for School

Mastering vocabulary is important to who is still beginner in learning a language, especially for foreign language learners. If they are lack of vocabulary, they be will hard to understand what they read or listen because for beginner to understand the sentence is not easy. That is why vocabulary is strongly important to understand a language. Teacher must know the exciting technique to present the vocabulary to students.

The purpose of Duolingo is the user can understand a language and they can use it. In the part of what it provides in learning, the users will know if Duolingo focus on mastering vocabulary. Based on it, Duolingo can be a medium for students to improve their vocabulary and teachers used it in classroom in teaching to help their students in mastering vocabulary. One idea of using Duolingo is, it may help students in master new vocabulary through games so

they will not be bored in learning, and one game particular that can be played for this purpose is Duolingo (Redman in Muddin 2018).

C. Conceptual Framework

The conceptual framework of this research is shown below:

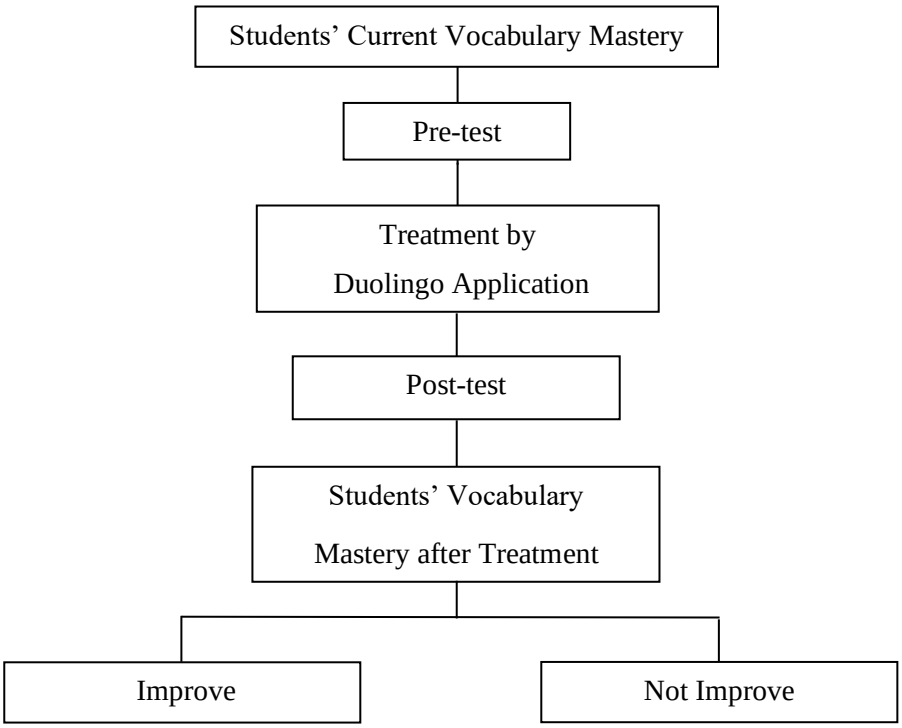


Chart 2.1 Conceptual Framework

Based on the conceptual framework above, this research is to find out how to improve students' English vocabulary at SMPN 10 Parepare. This research uses the Duolingo Application to improve students' English vocabulary. This research focuses on improve students' vocabulary mastery. This study used pre-experimental research and students were given a pre-test and post-test to determine before and after treatment.

D. Hypothesis

Based on the literature review and conceptual framework above, the researcher stated the research hypothesis as follows:

1. Null Hypothesis (Ho): There is no significant effect of using Duolingo Application on students' vocabulary mastery.
2. Alternative Hypothesis (Hα): There is a significant effect of using Duolingo Application on students' vocabulary mastery.

CHAPTER III

RESEARCH METHOD

A. Research Design

This study used pre-experimental research with a one group pre-test and post-test design. There is only one group in this pre-experimental research design. This design conducted by giving a pre-test followed by a treatment and then a post-test. To find out whether there is significant effect of Duolingo application on student's vocabulary mastery. The research design can be seen as follows:

$$E = O_1 \; X \; O_2$$

E = Experimental Class
O_1 = Pre-test
X = Treatment
O_2 = Post-test

(Gay, 2012)

B. Research Variables and their Operational Definitions

1. Research Variable

There were two variables that researchers use in conducting research, namely the independent variable and the dependent variable. The independent variable in this research was the use of Duolingo for school because it affects students' vocabulary mastery. While the dependent variable is the students' vocabulary mastery because it is influenced by Duolingo Application.

2. Operational Definition of Research Variables

In this research, there are two variables; they are (1) using Duolingo application X variable and (2) students' vocabulary mastery as Y variable.

a. Definition of Duolingo for school

The use of the Duolingo for school application as media becomes variable X because it can affect students' vocabulary mastery at SMPN 10 Parepare, so that students can master new vocabulary in the Duolingo for school application.

Duolingo in this study is an application that researchers use as an online English learning media in the classroom. duolingo is a type of application that has many types of exercises in it, including: unit 1 understanding basic phrases, using basic sentences, unit 2 expressing common phrases, unit 3 discussing the names of food and animals and unit 4 using plural words. Then students work on these exercises to improve vocabulary mastery. the purpose of this duolingo application is to improve vocabulary mastery in class VIII students of SMPN 10 Parepare.

b. Students’ Vocabulary Mastery

Variable Y in this study is students' vocabulary mastery which is influenced by the Duolingo for school application. Vocabulary mastery is the ability of students to use words contained in English. The vocabulary mastery referred to in this study is that students of SMPN 10 Parepare are expected to improve their vocabulary mastery.

C. Population and Sample

1. Population

The population of this study were the eighth-grade students of SMPN 10 Parepare in the 2023-2024 school year. The total population was one hundred and thirty-five students consisting of five classes.

2. Sample

The researcher used purposive sampling to select one class as a sample in this research. The researcher chose class VIII.5 as the research sample, with a sample size of twenty-seven students. The researcher used purposive sampling because the teacher suggested the researcher conduct research in class VIII.4 because the students' vocabulary mastery in the class was still lacking.

D. Instrument of the Research

The instrument in this study was a written test which was divided into two parts, namely pre-test and post-test. The pre-test was given to students before being given treatment by using the Duolingo for school application as a learning media. The post-test was given after the teaching and learning process using the Duolingo for school application. This process is expected to prove a significant effect on students' ability to improve vocabulary mastery. In the pre-test and post-test, students were given questions in the form of multiple choice and word matching consisting of twenty questions.

E. Procedure of Collecting Data

1. Pre-test

The pre-test was given to students before they received the treatment. The purpose of this pre-test is to determine students' initial ability regarding students' vocabulary mastery. The steps in giving the pre-test are:

a. The researcher entered the class and asked for students' attention and conveyed the learning objectives to be achieved.
b. The researcher distributed papers containing ten matching test questions and ten multiple choice questions to each student.
c. The researcher explained the procedure for working on the questions to the students.
d. After that, the researcher asked each student to show and read their answers.

2. Post-test

The test is given after being given treatment in experimental research. The post-test was given to students after they were taught using the Duolingo application in learning vocabulary. The form of the post test is a written test. The steps in giving a post-test are:

a. The researcher entered the class and asked for students' attention and conveyed the learning objectives to be achieved.

b. The researcher distributed papers containing ten matching test questions and ten multiple choice questions to each student.
c. The researcher explained the procedure for working on the questions to the students.
d. After that, the researcher asked each student to show and read their answers.

F. Treatment

After conducting the pre-test, the researcher gave treatment to students using the Duolingo application which was conducted for four meetings. Some of the steps of giving the treatment are:

1. At the first meeting of the treatment, the researcher provided motivation and explained the importance of learning English before starting the material.
2. The researcher asked the students to download the "Duolingo for School" application in the play store or app store on their respective cellphones.
3. Then the researcher asked the students to create their accounts using the email or phone number on their respective cell phones.
4. The researcher asked the students to follow several steps in creating an account, such as language selection, gender selection, avatar selection, reasons for wanting to learn English, writing a name for the account, offers for accounts that want to join the pro program, and selecting the level of English proficiency.

5. After having an account, the researcher explained to the students how to use the "Duolingo for School" application.
6. The researcher explained to students the levels that exist in the Duolingo feature.
7. The researcher asks students to work on unit 1 “understanding basic phrases, using basic sentences”. After students open unit 1 there are 4 exercises that are done by students the questions contain composing sentences, guessing pictures, and matching words. After students have done all the exercises in unit 1, students review unit 1.
8. At the second meeting. the researcher asked students to work on unit 2 “expressing common phrases”. After students opened unit 2, there were 7 exercises that students did which contained composing sentences, guessing pictures, and matching words. After students finished doing all the exercises in unit 2, students did a review on unit 2.
9. In the third meeting, the researcher asked students to continue unit 3 “discussing the names of food and animals”. After students open unit 3, there are 8 exercises that must be done by students which contain questions to complete sentences, translate pictures, and translate words. after students have done all the exercises in unit 3, students do a review of unit 3.
10. In the fourth meeting, the researcher asked students to work on unit 4 “using plural words”. After students open unit 4, there are 8 exercises that are done by students which contain questions about translating

sentences, completing sentences, and translating words. After students do all the exercises in unit 4, students do a review on unit 4.

G. Technique of Data Analysis

The data get from pre-test and post-test was analyzed through the following steps:

1. Scoring the students' answer

In scoring vocabulary test, it was determined that the ranging from 0-100 by accounting the correct answer and by applying this formula:

$$students'score = \frac{total\ score}{maximum\ score} x\ 100$$

(Nugiyono 2020)

2. N-gain score calculation formula

$$N\ Gain\ = \frac{Score\ posttest - Score\ pretest}{Score\ ideal - score\ pretest}$$

3. *S*tudents' vocabulary improvement criteria by using the Duolingo for school application.

Index Gain	Criteria
g > 0,70	High
0,30 ≤ g ≤ 0,70	Medium
g ≤ 0,30	Low

(Meltzer 2002)

4. Tabulated and classify the students score into the following clarification The score of the test were classified into seven levels as follows:

Table 3. 1 The classification Score of Vocabulary

No.	**Range of Score**	**Classification**
1.	96-100	Excellent
2.	86-95	Very good
3.	76-85	Good
4.	66-75	Fairly good
5.	56-65	Fair
6.	46-55	Poor
7.	0-45	Very poor

(Depdikbud, 2012)

5. The criteria for the hypothesis testing as follows:

Comparison	Hypothesis	
	H_0	H_1
t-test< t-table	Rejected	Accepted
t-test > t-table	Accepted	Rejected

(Gay 2012)

From the table above, it can be concluded that if the t-test value is smaller than the t-table value, the null hypothesis is accepted and the alternative hypothesis is rejected. And if the t-test value is greater than the t-table value, the null hypothesis is rejected and the alternative hypothesis is accepted.

CHAPTER IV

FINDINGS AND DISCUSSIONS

This chapter explains the results and discussion of the research data that has been conducted to find answers to the problem formulation. Based on the existing criteria, the data on students' pre-test and post-test results are displayed below. In addition, at the discussion stage, where the research findings are discussed.

A. Findings

The results and data analysis of the study were based on the data obtained from the learning activities of students who were taught using the Duolingo for school application. In this study, the researcher conducted a pre-test at the first meeting to find out the extent of students' vocabulary mastery before being given treatment and then gave a post-test after being given treatment. This research was conducted for four meetings attended by twenty-seven students. The pre-test and post-test materials used were multiple choice and word matching.

The researcher found an improve in vocabulary in the eighth grade after being taught using the Duolingo for school application. Based on the number of students who attended as many as twenty-seven students. The total pre-test average was 41.11 and the post-test average was 79.26.

1. Scoring classification on Pre-test and Post-test

   a. The rate percentage scores of pre-tests

Tabel 4.1 Percentage score of students of pre-test

No	Classification	Score	Frequency	Percentage
1.	Excellent	96-1000	0	0%
2.	Very Good	86-95	2	8%
3.	Good	76-85	0	0%
4.	Fairly Good	66-75	1	3%
5.	Fair	56-65	2	8%
6.	Poor	46-55	3	11%
7.	Very Poor	0-45	19	70%
	Total		27	100%

Table 4.1 shows the classification of student scores on the pre-test. The table 4.1 shows that many students' score were below the minimum criteria achievement classification. Some students scored very poorly on the pre-test score classification. This proves that students have low vocabulary mastery. Table 4.1 shows the diverse student scores, which indicate that no students scored Excellent (0%), two students scored very good (8%), no students scored good (0%), one student scored fairly Good (3%), two students scored fair (8%), three students scored poor (11%), and eighteen students scored very poor (70%). It can be concluded that the students' pre-test scores are still far below the average.

b. The rate percentage scores of post-tests

Tabel 4.2 Percentage score of students of post-test

	Classification	**Score**	**Frequency**	**Percentage**
1.	Excellent	96-1000	0	0%
2.	Very Good	86-95	7	25%
3.	Good	76-85	10	38%
4.	Fairly Good	66-75	7	25%
5.	Fair	56-65	1	4%
6.	Poor	46-55	1	4%
7.	Very Poor	0-45	1	4%
	Total		27	100%

Table 4.2 shows the classification of students' scores on the post-test after being given treatment using the Duolingo for school application. The table 4.2 shows that there is an i in students' vocabulary mastery. Where no student scored excellent (0%), seven students scored very good (25%), ten students scored good (38%), seven students scored fairly good (25%), one student scored fair (4%), one student scored poor (4%), and one student scored very poor (4%). It can be concluded that the students' pre-test scores are still far below the average. Based on these results, it shows that the percentage and classification of students' scores in the post-test are higher than the pre-test. So, it can be concluded that students' vocabulary mastery improved after being given treatment using the Duolingo for school application.

2. Improvement of the students' vocabulary mastery by using Duolingo for school application.

Tabel 4.3 Students' vocabulary improvement criteria by using the Duolingo for school application

NO	Variables	Mean Score		N-Gain
		Pre-Test	Post-Test	
1.	Vocabulary Mastery	41,11	79, 26	0,64

To clearly see the improvement in students' vocabulary mastery, it can be seen in the following chart:

Chart 4.1 The Improvemen of Students Vocanulary Mastery by Duolingo for School Application

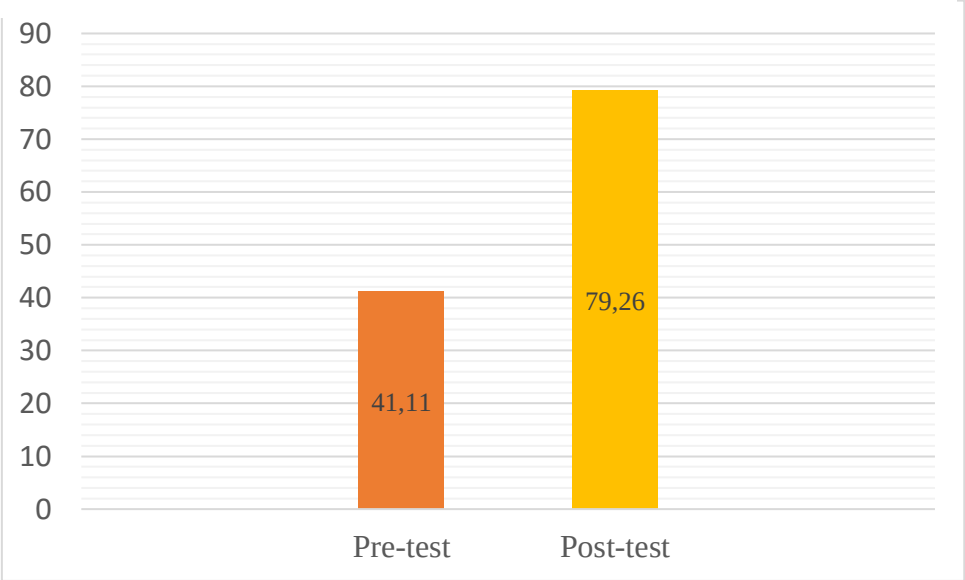


Chart 4.1 After conducting a pre-test using the Duolingo for school application, the average score of students is 41.11, this shows that students' vocabulary mastery is still below average. after students are given treatment, the average score of students' post-test is 79.26. Based on the N-gain calculation, the value is 0.64.

Where $0{,}30 \leq g \leq 0{,}70$ which states that the improve in students' vocabulary mastery is in the medium criteria.

3. The Mean Score and Standard Deviation of Students in Pre-test and Post-test

Tabel 4.4 The Mean Score and Standard Deviation of Students in Pre-test and Post-test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	41.111	27	20.8628	4.0150
	POST TEST	79.259	27	11.9859	2.3067

Table 4.4 shows the average scores of students in the pre-test and post-test. The average score on the pre-test was 41.11, and the average score on the post-test was 79.26. The average score on the post-test was higher than the students' score on the pre-test. This shows that students' scores improved after using the Duolingo for school application as a medium in teaching students' vocabulary. The results of the standard deviation of students' vocabulary mastery shown in table 4.4 are 20.8628 before treatment and 11.9859 after treatment. The lower the standard deviation value, the better the effect of the media used. This means that students' vocabulary mastery has improve after using the Duolingo for school application as a medium in learning.

4. Hypothesis Testing

Tabel 4.5 Hypothesis Testing

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRE TEST - POST TEST	-38.1481	22.6660	4.3621	-47.1145	-29.1818	-8.745	26	.000

Based on table 4.5 above, it is known that the t value is negative, namely -8.745. The t value is negative because the average value of the Pre-Test is lower than the average value of the Post Test. In the context of a case like this, a negative t-test can be accessed with a positive t-test. So that the t-test becomes -8.745. Next is the stage of finding the t table value, where the t table is searched based on df (degrees of freedom) and the significance value (α).

From the output above, it is known that the df value is 26 and the value is 0.05. Researchers use this value as a reference basis in calculating the t table value in the t statistical distribution. Then the t table value is 1.705. Thus, because the calculated t value is -8.745 > 1.705, the selection of the basis for decision making is H0 rejected and Ha accepted. Which means that the Duolingo for school application can improve students' vocabulary mastery in class VIII.5 SMPN 10 Parepare

B. Discussion

This section discusses how the Duolingo for school application can improve vocabulary. In this section the researcher discusses the research findings related to the problem statement. This is also related to the purpose of this study, which is to find out whether students' vocabulary can be improved by using the Duolingo for

school application. Researchers collected data using pret-test and post-test as instruments to answer the problem statement in this study. Based on the results that have been found after analyzing the data, the following is a discussion of the findings and answers to the problem formulation.

Based on the results of the statistical analysis of the use of the Duolingo for school application at SMPN 10 Parepare, it can be concluded that before using the Duolingo for school application, students were still lacking in vocabulary mastery. This is supported by the results of students' pre-test scores which showed that there were 19 students (70%) who scored very poorly. Then the researcher gave treatment by using the Duolingo for school application as a medium in teaching vocabulary for 4 meetings. After the treatment, the researcher conducted a post-test to find out the difference in students' vocabulary mastery before and after the treatment. The average score of students in the pre-test was 41.11 while in the post-test was 79.26, meaning that the post-test score was higher than the pre-test score.

Duolingo application can improve students' vocabulary because this application can be used anytime and anywhere so that this application can be more easily accessed by students and also easily applied in the English teaching and learning process. This can be seen from the increase in student scores. This research is supported by Yuwono (2022) which states that student scores have increased significantly, especially in mastering vocabulary and the use of the Duolingo application can make it easier for students to learn because this application is easier for students to access so that the Duolingo application becomes one of the alternative English language learning media.

The use of the Duolingo application can help beginners in learning English, researchers found that students' ability to learn English at first was still very below average so that after using the Duolingo application, students' English improvement became more improved. In line with Ahmed's research (2016) states that the Duolingo application can help beginners who are learning languages, especially in improving their English language skills.

The findings of Manan (2017), stated that the use of the Duolingo application has a significant effect in learning English by using the application for students at his campus. This study has a difference with previous researchers, this study lies in the scope of its limitations, where the researcher uses the Duolingo application to implement four English language skills in students, while this study is only limited to students' ability in vocabulary.

Compared to learning using books, researchers found that students feel more interested when learning using smartphones, especially in learning English vocabulary using the Duolingo application, this research is supported by Kususmadewi (2018) that student learning outcomes with electronic media such as the Duolingo application have a positive influence compared to conventional learning so that learning English using the Duolingo application has a positive influence.

Most students prefer to use the Duolingo application as a medium in learning English because the Duolingo application has several advantages including students understanding the material more easily and being enthusiastic in learning

vocabulary. This research is supported by Jaelani and Sutari (2020) that many students prefer to learn English vocabulary using the Duolingo application because they find it easier to understand the material and are more excited and enthusiastic about learning so that they can come up with new ideas in learning English.

After students learned English by using the Duolingo application, the researcher found that the Duolingo application was quite effective in increasing students' motivation to learn English. This shows that the Duolingo application can motivate students to learn English and is effective in increasing students' vocabulary. This research is supported by Habibie (2020) and De Castro (2016) that Duolingo application can motivate students to learn English because it was found that this application is effective in increasing vocabulary.

Duolingo for school is an application created to make it easier for people to learn multiple languages for free and easily. Students often feel bored or lazy in learning a language but in Duolingo for school, they will learn a language using diverse techniques and it is fun for beginners to learn a new language. In the application, there are several types of exercises that they can do in the application, such as in unit 1 understanding basic phrases, Unit 2 expressing common phrases, Unit 3 discussing the names of food and animals, Unit 4 using plural words. Learning using duolingo for school is preferred because it has diverse and interesting features from the usual media so students who want to improve their vocabulary can use the Duolingo for school application as an easy and fun language learning application.

Based on the explanation above, the researcher can conclude that the Duolingo application can have a significant effect on students' vocabulary knowledge. Duolingo application can make students' learning more fun because Duolingo can help students easily acquire new words with interesting image features to understand the meaning of the words. This makes students more active and enthusiastic in improving vocabulary. Students can also learn vocabulary anytime and anywhere so that they are not bored in learning, this can be seen from the vocabulary test scores after the researchers conducted the treatment which were higher than before being taught with the Duolingo for school Application. This means that the use of Duolingo Application shows a positive influence to be applied to students, especially eighth grade students of SMPN 10 Parepare.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

This study aims to prove that the Duiolingo app for schools can improve students' English vocabulary acquisition at SMPN 10 Pare pare. After giving the English proficiency test to the students, the researchers analyzed the test results and consulted the findings.

The researchers have analyzed and argued that teaching vocabulary using the Duolingo for school application is one of the appropriate ways. The use of Du2olingo for school application as a media has a significant effect on the vocabulary mastery of students of grade VIII SMPN 10 Pare-pare. This is evidenced by the average pre-test and post-test scores of students in class VIII SMPN 10 Pare-pare of 41.11 and the average post-test score of 79.266 which shows a significant difference between the average pre-test score and the average post-test score.

B. Suggestion

Based on the conclusion presented above. The researcher tries to give some suggestions for English teacher, the next research, and everyone who read this thesis as follow:

1. For the teachers

The Duolingo application can be applied in the teaching and learning

process. Teaching and learning process, especially vocabulary teaching. Duolingo application also makes different situation in the teaching and learning process. So, students are interested in learning vocabulary with the level units in the Duolingo application. However, the use of smartphones at school should be under the supervision of the school so that the positive effect of this application is positive and this application will be more optimal.

2. For the Students

Duolingo will improve students' ability not only to acquire new vocabulary, but also help them to understand how to use the vocabulary and be able to use the vocabulary in daily life.

3. For other Researchers

This research can be used by future researchers as a reference for their research. Duolingo can not only be used as self-taught learning, but can also be implemented in the classroom or other language learning activities.

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