THE EFFECT OF USING DUOLINGO APPLICATION TO INCREASE STUDENT'S VOCABULARY AT THE SEVENTH GRADE OF SMPN 4 SIAK HULU

A THESIS

Intended to Fulfill of the Requirements for the Award of Sarjana Degree in English Language Teaching and Education

BY:

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ENGLISH LANGUAGE EDUCATION

FACULTY OF TEACHER TRAINING AND EDUCATION

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1	December 8th 2021	Consulting the Research Title	
2	February 22th 2022	Revised Background	
3	February 24th 2022	Revised Chapter I	
4	March 1st 2022	Revised Chapter II	
5	March, 17th 2022	Revised Chapter III	
6	March 18th	Approved to Join Seminar Proposal	
7	July, 22th 2022	Consulting to Collect the Research Data	
8	August, 2th 2022	Analyzing Data Findings	
9	August, 5th 2022	Checking Chapter IV & V	
8	August, 8th 2022	Checking All Chapter	
9	August, 8th 2022	Approved to Join Thesis Approval	

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DECLARATION

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I hereby declare this thesis is definetly from my own ideas, except the quotations (directly or indirectly). Which were taken from various sources and scientifically referenced. The researcher responsible for the data and facts provided in this thesis.

Pekanbaru, 18 August 2022

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Pekanbaru, 18 August 2022

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ABSTRACT

Tia Delvanny, (2022) : The Effect of Using Duolingo Application to Increase Student's Vocabulary at the Seventh Grade of SMPN Negeri 4 Siak Hulu.

Keywords : Duolingo Application, Vocabulary .

This study aimed to get empirical evidence of the impact of utilizing the Duolingo application on students' vocabulary learning. This research used a quasi-experimental design. The participants in this research were seventh graders from SMP 4 Siak Hulu.

The sample consists of 20 students from the experimental class, VII.12, and 20 students from the control class, VII.14. The experimental class was taught using the Duolingo application. In contrast, the control class was conducted without the program.

The research instrument consisted of multiple-choice pre-and post-tests. The t-test was used to examine this study's data. The statistical calculation with a 5% significance level indicated that to = 2.728 is higher than tt = 1.672. The research suggested that the utilization of the Duolingo application may have a beneficial impact on the vocabulary of seventh-grade students at SMP 4 Siak Hulu during the 2022–2023 academic year.

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CHAPTER I

INTRODUCTION

1.1 Background

Primary and high school students in Indonesia are required to take English as a class. Students must be able to communicate effectively in English (Taka, 2020). On the other hand, many student's struggled to articulate their thoughts in English. The main issue is a lack of vocabulary among the students. There is a language barrier between them. (Rifdinal, 2021)

Indonesian students find English a complex subject because it is so different from their language in terms of structure, pronunciation, and vocabulary (Pangabean, 2015). Listening, speaking, reading, and writing are the four language skills included in the English language education curriculum (Monaj, 2015). Besides vocabulary and grammar, there are other aspects to consider. An essential part of language is vocabulary.

Vocabulary is essential in second and foreign language acquisition because students cannot understand others or express their own feelings without appropriate and sufficient knowledge. However, mastering vocabulary is not easy and new words run swiftly out of mind if stored without any use.

Vocabulary can be defined as language words, including single items and phrases or collections of several words with specific meanings.

Vocabulary learning is essential for English as a foreign language and second language. Vocabulary mastery plays a critical role within the four language skills, and it is to be thought that vocabulary mastery is one of the necessary parts of the language (Susanto, 2017). As we continue to grow and learn, our language grows with us to help us understand the things we see in the communities around us.

We can not live without today's technology in so many ways because it is advanced quickly. We can use technology to improve students' language abilities to make our lives more convenient. For example, technology can make vocabulary building for English Language Learners (ELLs) more enjoyable and engaging. (Clark, 2013). Regardless, technology has both positive and negative effects. Since many students are unfamiliar with the benefits of technology, they are less likely to use it. Mobile Legends is a famous examples of how people utilize smartphones solely for fun (Sunarto, Wulandari, and Hartanto, 2019). Teachers must find a solution to this problem and turn it into a challenge to best utilize smartphone technology to get outstanding results.

However, during the researcher's teaching and learning practice experience in the classroom, it is not simple to increase one's language fluency. Many students were found to have a poor command of the English language's vocabulary. Because there are teachers who do not apply English learning methods that are suitable for their students. So, that makes students afraid of English lessons. A teacher must choose an approach that encourages students to learn new words and phrases. Teachers should already have a proper

approach, which aligns with Larsen and Freeman (2002). They recommend that teachers supply the media, teaching techniques, and strategies because they want their students to communicate effectively in the target language. When it comes to learning, the rapid growth of technology has been a significant factor in how it has been implemented in education.

There are several ways English teachers use technology and media to help students learn vocabulary, including using the Duolingo app because it is one media that can be used in the process. A guidebook for schools published by Duolingo in 2016 describes the platform as the "world's largest online language learning platform." Duolingo is a good option for English learners looking for a convenient way to practice their language skills.

This app, called Duolingo, is perfect for students who want to improve their vocabulary, especially when it comes to words they use every day. Because this app shows vocabularies with excellent and clear picture interfaces, students will be amazed and honoured by the picture and interface in this app (Habibie, 2020). They will also enjoy their class material with a smile on their faces. Even with the new version, the students who pass the challenge will get the visual gems as a reward. So, students will have to answer any questions at every level of this app, and learning English will be a lot of fun for the students.

Teachers can use the Duolingo application as a supplement or assistance to language learning activities because it focuses not just on vocabulary but also on other English abilities such as speaking, reading,

writing, and listening (Fadda & Alaudan, 2020).Thus, when students acquire this application at school, they can use it again at home or in their leisure time to improve their English skills. Indirectly, their English skills improve due to not having a solid talent.

The researcher's aims is to use Duolingo to help students improve their vocabulary and study its impact on student learning outcomes in First grade at SMPN 04 Siak Hulu. The writer then proposes the title of this research, "THE EFFECT OF USING DUOLINGO APPLICATION TO DEVELOP STUDENTS' VOCABULARY" (A Quasi-Experimental Research at First Grade of SMPN 4 Siak Hulu Kab. Kampar in Academic Year 2021/2022).

1.2 Identification of the Problem

Based on the background of the study, the following issues arise:

1) Students believe it is challenging to learn English due to a lack of vocabulary and the ease they might forget it.

2) Students may become disinterested in presented materials if lecturers adopt the traditional way of imparting knowledge to students.

3) Students lack information about how to use smartphone technology effectively and beneficially, and some use their smartphones solely for recreational purposes, particularly gaming.

1.3 Focus of the Problem

Based on the identification of problems, the study focuses on the effect of using Duolingo application on students' vocabulary in SMP 4 Siak Hulu.

1.4 Research Question

Based on the background of the study, the research question is indicated as "Is there any significance towards the use of the dulingo application to the Seventh th grade of SMPN 4 Siak Hulu?"

1.5 Objective of the Research

The main purpose of this study is to find out the effect of using Duolingo application on students' vocabulary at the seventh grade of SMP 4 Siak Hulu.

1.6 The Significance of the Study

The result of this study is expected to be useful for:

1) The teacher will be more creative when teaching English and will solve problems in the classroom by using technology, devices, and textbooks to make the learning process more fun.

2) The students will have more fun learning English because the material is not just from a textbook. It's also on their gadget, which has an app for language learning that they can use in their free time. So, English isn't just an essential subject for students to learn in their textbooks and it is also necessary for people to learn.

3) For the researchers, the results of this study are expected to give them new ideas for research about how Duolingo can be used to teach and learn vocabulary.

1.7 Definition of the Key Term

To make the readers get easier in understand this study, here, the researcher will define some key terms that important to be understood as the following:

1.7.1   Effect

According Meriam-Webster Dictionary, effects are things that happen because of something else, like a cause, an agent, or things meant to make a specific or desired impression. Effects are usually used in the plural.

This research show how effective Duolingo application to improving vocabulary at the first grade of SMPN 4 Siak Hulu.

1.7.2   Vocabulary

The term "vocabulary" refers to the general understanding of words and their meanings. More precisely, we use the term "vocabulary" to refer to the kind of terms that pupils must be familiar with to read more complex text with comprehension." (Kamil & Hiebert, 2005).

In this research, vocabulary is learning material that has to be learned by the students of SMPN 4 Siak Hulu. The learning material is also based on the textbook.

1.7.3 Duolingo

Duolingo is a free language-learning program. Duolingo may be an excellent place to practice English for young people if it helps them learn English more quickly and cutting-edge. (Fadda & Aludan, 2020)

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 Vocabulary

2.1.1 Definition of Vocabulary

Vocabulary is an essential part of a language, and the vocabulary of a language is crucial in learning a new language. To put it another way, if a learner does not know the vocabulary of a language, they cannot use it. As Lehr (2008) defines it, vocabulary is the ability to understand and use both written and spoken language and the meanings of words, in both forms of communication.

According to the Oxford advanced learners dictionary, vocabulary refers to all the words that an individual knows or uses and all the words in a particular language, which people use when discussing a specific subject. Vocabulary, as a component of speech, can assist someone in communicating clearly. Students quickly acquire information based on their own words due to the process of recognizing English words. Students who develop vocabulary mastery can share their ideas, knowledge, and voice more effectively because they acquire vocabulary through practice relevant to their individual needs and English developmental skills.

Gutlohn (2006) defines vocabulary as "knowledge of words and their meanings." Vocabulary cannot be fully mastered in a single lifetime; it grows and deepens over time.

According to some definitions above, vocabulary does not simply contain a list of words; it also includes information on how to use the words and their meaning in a language. Thus, communication becomes necessary for people, as an idea cannot be conveyed without vocabulary.

2.1.2 The Important of Vocabulary

Vocabulary is a critical part of language learning. Students can communicate effectively in the language if they have a strong vocabulary. According to Richards (2002), vocabulary is a critical component of language proficiency since it accounts for a large portion of how successfully students speak, listen, read, and write. On the other hand, students will struggle to communicate, write correctly, and respond to questions in both spoken and written form without vocabulary.

In addition, Arista (2010) stated that vocabulary is critical for children because it is a necessary communication component when someone wishes to communicate something. Students must be familiar with various types of language and then combine them into a sentence or sentences. Alternatively, utilize vocabulary to pronounce the words.

Based on the explanations, vocabulary is critical for students since it is an essential language component. Without sufficient vocabulary, a student cannot communicate effectively or express his ideas in both spoken and written form. Additionally, vocabulary is one of the linguistic components that might aid students in comprehending English.

2.1.3 Type of Vocabulary

Vocabulary is divided into two categories: spoken and written. Students increase their vocabulary by listening and speaking before they begin writing and reading. Using the wrong sort of vocabulary might harm the decisions. In contrast, the development of one kind of language helps to encourage the development of another kind of vocabulary. The following are a few examples of vocabulary.

2.1.3.1 Listening Vocabulary

What we comprehend through hearing are called listening terms. When a fetus is in the womb, it may be able to recognize certain words. Learning new words is an ongoing process, and by the time you are an adult, you have mastered over half a million of them. Visual listening vocabulary may be used to teach deaf individuals.

2.1.3.2 Speaking Vocabulary

Words that we use in conversation are included in our spoken vocabulary. It is word count ranges from 5000 to 10000. They serve informative and conversational purposes. There are fewer terms in this category than in the listening vocabulary category.

2.1.3.3 Reading Vocabulary

Reading is a critical component in expanding one's vocabulary. Reading expands your vocabulary and enhances your comprehension. Reading vocabulary refers to the terms we acquire when reading a piece of literature.

Even if we do not utilize vocabulary in our conversation, we may still be able to grasp it by reading about it.

2.1.3.4 Writing Vocabulary

Writing vocabulary is the group of words we use to express ourselves in writing. Most of the time, the words we can spell affect the words we use when writing. When we speak, show emotion with our faces, or change the tone of our voice, it is easy to get our point across. However, when we write, our vocabulary depends on how well we know it.

2.2 Media

2.2.1 Definition of Media

The term "media" refers to the components of materials and technologies used in the educational process. A comprehensive definition of media includes using these systems and resources to accomplish specific learning objectives.

According to (Miftah, 2017), media is a device that functions as a bridge in communication activities (delivery and reception of messages) between the communicator (message delivery) and the communicant (message recipient).

Meanwhile, learning is an attempt to teach students. Teaching means trying to make a person learn. In learning efforts, communication occurs between students and teachers, either directly or with the role of learning media.

So, the definition of learning media can be briefly put forward as something (it can be a tool, material, or circumstance) that use as a communication intermediary in learning activities.

2.2.2 Types of Media

Teachers must comprehend the aim of the media in order to help students acquire vocabulary and other language skills effectively and successfully, particularly in the early stages of their education. Various media may be employed depending on the situation and the student's learning goals. Teachers should be aware of specific features of each form of media so they may choose the most suitable media for their students' requirements and the classroom environment. The following is a description of the many categories of media:

1) Print Media i.e. News Paper, Magazines, Digest, Journals, Bulletins, Handouts, Poster etc.

2) Graphics Media i.e. Overhead transparency Charts, Graphs Models, Dioramas, Maps, Globes

3) Photographic Media i.e. Still Pictures, Slides, Filmstrips, Motion Pictures, Multi-images etc.

4) Audio Media i.e. Audiotape, Audiocassettes, Records, Radio, Telecommunication etc.

5) Television/Video i.e. Broadcast Television, Cable Television, (Videotape, Video Cassettes, Videodiscs, Teletext, Videotext) etc.

6) Computers i.e. Minicomputer, Microcomputer etc.

7) Simulations and Games i.e. Boards, Written, Human, Interaction, Machine etc.

Media use in the classroom may assist teachers in engagingly transferring knowledge and improve the learning environment. As a result, the students are more engaged in the learning process, motivating them. Teachers must develop specific learning material to help students learn more effectively. In other words, teachers help their students learn more effectively.

2.2.3 The Advantages of Media

The media is a teaching tool to help people learn the English language. Using media to help students learn can get them more interested and give them new goals. In general, the benefits of media are that they make it easier for teachers and students to talk to each other, making it more effective and efficient. According to (Falahudin, 2014), there are some benefits to using media. Here are some of them:

1) Subject material delivery may be standardized.

2) The learning process becomes more transparent and engaging.

3) The instructional process becomes more interactive.

4) Effective use of time and resources

5) Enhance the quality of the learning process's output.

6) Media may be used in the learning process anywhere and at any time.

7) Media use may enhance students' attitudes about the subject matter and the learning process.

8) To shift the role of students in a constructive and more positive direction.

9) The use of media may concretize abstract information.

10) Media may also transcend geographical and temporal limits.

11) Media may assist humans in overcoming their limited senses.l

From the explanation above, media use to help people learn. Media are a part of the learning process, and the use of media should help students pay more attention to everything they are learning. Students will be able to work together to reach their educational goals by using a variety of media.

2.3 Duolingo

2.3.1 Definition of Duolingo

Duolingo is an app that helps people learn languages. Luis Von and Severin Hacker made it in 2011 to give free education to everyone. More than 30 million people are using this app to learn right now. This website helps people who speak many different languages learn English, and people who speak English learn other languages. (Fadda, Alauda: 2020)

Duolingo is a language-learning website that is entirely free. It is structured so that as users advance through the lessons, they contribute to the translation of various websites and other documents. It was created to translate the web, but as a result, millions of people are learning a new language." Duolingo envisions a world where education is free, and language barriers are

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eliminated. Users can practise their language skills for free while also translating the web.

Moreover, Duolingo provided a vocabulary drill and allowed students to assess their knowledge and find areas for improvement. It means that Duolingo is positioned as an educational tool that can be integrated into classrooms to provide students with a novel learning experience based on material quality, feedback, and motivation. Thus, the Duolingo application is critical for students learning a language to boost their motivation and make the application more entertaining. Students and teachers can benefit from using Duolingo to improve their English skills. Additionally, students who need to improve their vocabulary can utilize the Duolingo application, which is practical and enjoyable.

2.3.2 The Characteristics of Duolingo Application

Duolingo, as a free language-learning tool, can provide a broader range of functions, but it does require an internet connection to use. The following are some of the aspects of the Duolingo application:

1) **Achievements** are a Duolingo application feature given out when the learners or users have completed the lessons through best effort.

Figure. 2.3.2.1

2) **Lingots** is a small jewel icon that the learners have completed the activities and level successfully to get "lingots". It can be changed for extra bonus practices.

Figure 2.3.2.2

3) **Crown Levels** are a new feature in the Duolingo application., and each skill has a "Crown Levels". When you have completed a skill, you will get a crown, and continued to new skills.

Figure 2.3.2.3
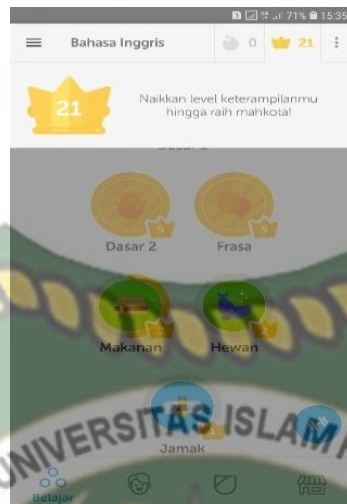
4) **Daily Goal** is about appreciation for the learners who have
completed a daily goal. Duolingo application rewards them
with surprising sounds and unique pictures and make the
learners feel more enjoyable.

Figure 2.3.2.4

5) **Clubs User Networking** is a feature for learners to
communicate and share with other users about language
learning. It also can compete to gain (10) XPs and see their
friends score.

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Figure 2.3.2.5

Duolingo application also provides the learners with various types of exercises within a lesson or unit, such as:

1. **Vocabulary**, The users see a picture, and be asked to choose it with the correct answers.

Figure 2.3.2.6

2. **Pronunciation**, The users will be asked to repeat or say a sentences what they hear.

Figure 2.3.2.7

3. **Listening**, The users will hear an audio clip of word or sentence and have to type it correctly.

Figure 2.3.2.8

4. **Translation** in which the users will be asked to translate a word or a sentence into the language they want to know or learn.

Figure 2.3.2.9

2.3.3 Teaching Vocabulary by Using Duolingo Application

Duolingo can assist students in expanding their vocabulary understanding of English terms; nevertheless, they must have a solid ability to create vocabulary. At the very least, students can benefit from three distinct advantages. To begin, Duolingo assists students in increasing their motivation and enhancing their enjoyment of this application. Second, Duolingo can help students quickly acquire new words by exposing them to engaging images and a broader range of features as they learn new vocabulary. Additionally, students can utilize the Duolingo application to determine the definition of a word.

Duolingo can be played individually in class following the teacher's material delivery. Students can take several practical and systematic action to acquire new vocabulary, and teachers can select and edit resources based on the class government curriculum. There are various processes involved in teaching vocabulary through the use of the Duolingo application:

a) Provide students with materials based on an English book without requiring them to use the Duolingo app. Students can recognize

the vocabulary words used in the text.

b) After the students have mastered the vocabulary, give them some exercises. Students may be asked to fill in the blanks using words and details from the book.

c) Once the students have received the resources, they should learn new vocabulary through the Duolingo application.

To simply help the readers to understand the function of each part of the Duolingo application, several steps that can be conducted in the classroom learning activities as follows:

1) Students go to Playstore in their gadget and type Duolingo in the search bar. For the PC version, they could open it in Microsoft Store or www.duolingo.com.
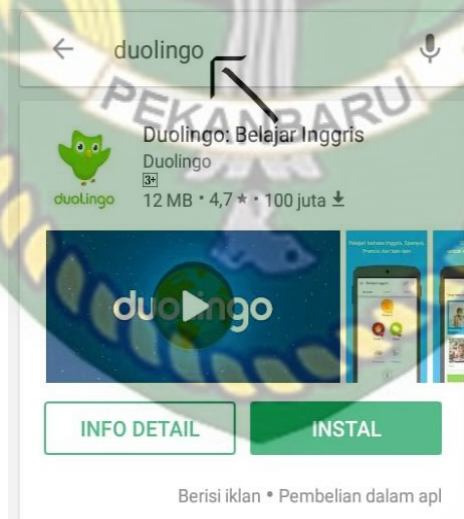
2) Click Install in the green bar

3) Installing it to your gadget and choose AYO MULAI in the

white bar.

4) The screen will show "Saya ingin belajar, or I want to learn

in English and choose Bahasa Inggris.

5) Choose "Pertama kali belajar Bahasa Inggris" for new English learners and choose "Sudah mengerti sedikit Bahasa Inggris" if student have known little bit of English.

6) If you have chosen one of them, "Pilih Target Harian" will appear. It means you can choose your daily target based on your option.
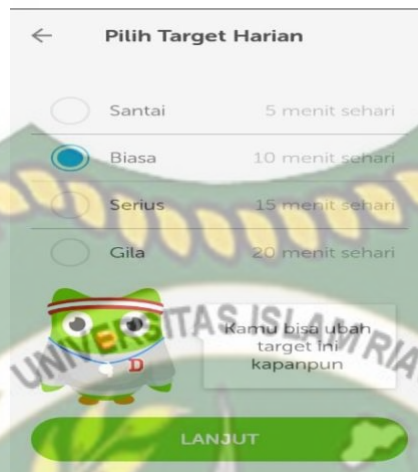
7) After that, the question will appear one by one. The questions that users have to answer is almost 16 questions in one rally with different questions and include four skills in it (Speaking, Reading, Writing and Listening).
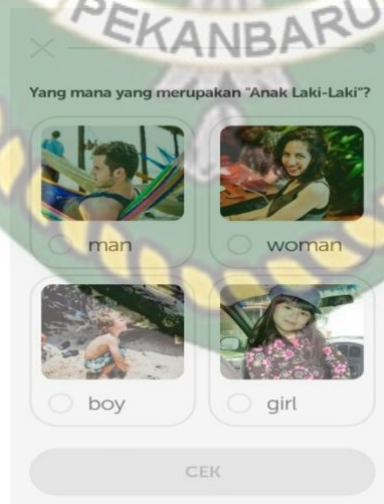
8) The screen will show green colour with the text "Kamu benar" if you correctly answer the question.

9) And will show red colour with the text "Ups, salah" if you wrong answer the question.

10) "Tes Selesai" will appear and show your XP (experience).

XP term, commonly used in every game, means experience.

11) Usually, you would get a gem if you did a great job. Particularly if you are perfectly correct, answer the questions in one rally.

In the classroom, the teacher can begin by distributing materials based on an English textbook and instructions on utilizing the Duolingo application. The students might then be asked to decipher the meaning of the words. Thus, students gain a general comprehension of the language and acquire new vocabulary. Students can begin utilizing the Duolingo application to select a topic from a list or create their own.

2.4 Relevance Study

Maulida Laeily (2018), the student from Universitas Islam Negeri Banten, in her research about "The Effectiveness of Computer Assisted Language Learning (CALL); Duolingo Application to Improve Students' Vocabulary". She stated that the students who use Computer Assisted Language Learning (CALL) in Duolingo Application could improve students vocabulary. Her research shows that the students' vocabulary who use Computer Assisted Language Learning (CALL); Duolingo application improve much more vocabulary than those who do not use Computer Assisted Language Learning (CALL); Duolingo application.

Cecep Abdul Fatah (2018), a student from Syarif Hidayatullah State Islamic University, in his research about "The Effect of Using Duolingo Application to Develop Students Vocabulary Knowledge", stated that the students who used the Duolingo application could increase their vocabulary knowledge. His research result stated that using the Duolingo application is more effective than not using Duolingo application.

Hafifah (2020), a student from the University of Islam Malang, in her research about "The Effectiveness of Duolingo in Improving Student's Speaking Skill at Madrasah Aliyah Bilingual Batu School Year 2019/2020" , stated that the students who use Duolingo Application could increase their speaking skill. Her research result stated that using Duolingo application is more effective than not using Duolingo Application.

Based on the explanation above, the researcher would like to apply the Duolingo application that may help students to develop their vocabulary and also would like to investigate the effect of using the Duolingo application in teaching vocabulary at the seventh grade of SMPN 4 Siak Hulu in Academic Year 2021/2022.

2.5 Conceptual Framework

Vocabulary may be summarized as a collection of all the words they have learned. Students must acquire as many words as possible to have a strong vocabulary. It is possible to communicate concepts in written or spoken form with kids who are fluent in a language.

Because vocabulary is critical to effective communication, students must acquire millions of words as one of the language components. It is impossible to overstate the significance of pupils having a solid foundation in the language. Students' ability to learn a foreign language might be boosted if they have a better understanding of vocabulary.

For effective language teaching, classrooms must use engaging and relevant media. However, using media in teaching and learning increases

student motivation. In this way, media use may help students learn languages more effectively, but it must also be fun and engaging. It means that children can grasp the meaning of words if they are given engaging media.

In order to achieve effective teaching, media must be used to offer educational information to students. The Duolingo app may be used to help students overcome some of the challenges of learning English as a second language. It is thus critical to the effectiveness of the teaching and learning process to gain the greatest possible outcome.

Students may utilize Duolingo, an application technology, to help them learn a language. It is a tool for creating new learning environments and boosting student motivation. Everyone may use Duolingo at any time and from any place. As a result, the students can easily recall the new term. Because of this, students should be familiar with technology to support effective and entertaining learning.

Based on the explanation above, the researcher thinks using the Duolingo app might increase students' vocabulary understanding. Therefore, the researcher would want to conduct a study by utilizing the Duolingo application to improve students vocabulary.

The conceptual framework of this study is shown below:
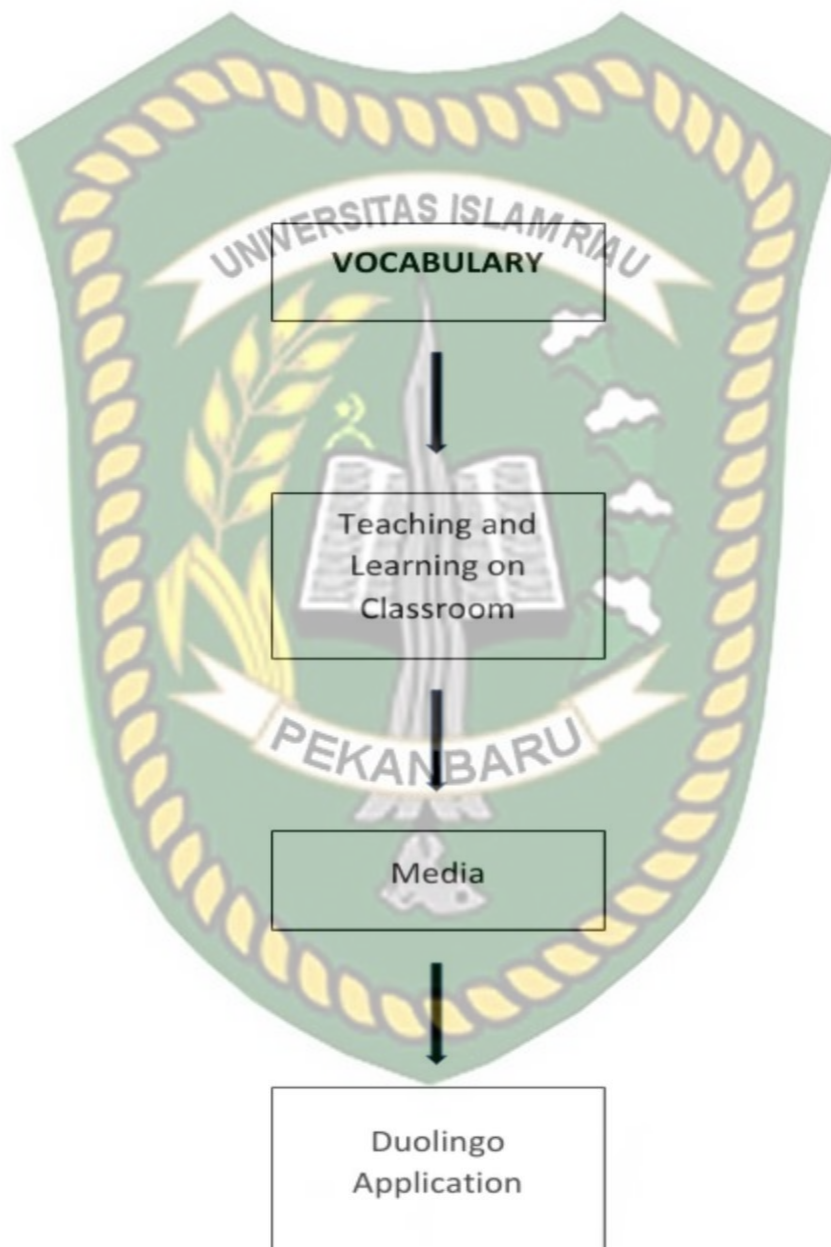
2.6 Hypothesis

According to Binoy, 2019) A hypothesis is a clear statement of what you think will happen. It is a researcher's preliminary or tentative explanation or guess about what the results of an investigation will be. It is an educated guess about a possible connection between two or more phenomena and variables.

According to this study, researchers provide this hypothesis for this inquiry:

1) Alternate Hypothesis (Ha): The application of Duolingo influences students' vocabulary. The alternative hypothesis is accepted, while the null hypothesis is rejected.

2) Null Hypothesis (H0): The application of Duolingo does not influence students' vocabulary. It indicates that the alternative hypothesis (Ha) is rejected and the null hypothesis (Ho) accepted.

CHAPTER III

METHODOLOGY

3.1 Research Design

The researcher will be conducting quantitative research in this study. According to (Donatus, 2016), the quantitative and qualitative approach is a prominent scientific method utilized in social science-related social research. The quantitative technique refers to collecting empirical facts inspired by positivism, whereas the qualitative approach is associated with the subject's comprehension and interpretation of the factual data in light of existential-phenomenological thought. The researcher chose a quasi-experimental design. Pre- and post-testing are included in the quasi-experimental plan. The researcher made a comparison of two types of research. One group of students gives special treatment with the Duolingo application as an experiment class, while another group is designed as a control group. VII 1 is the control class, while VII 2 is the experiment class. The design of quasi-experimental studies can be summarized as follows:

Table 3.1 Nonequivalent Control Group Design

O1	X	O2
O3		O4

Explanation:

O1 is a pre-test for the experimental group

O2 is a post-test for the experimental group

O3 is a pre-test for the controlled group

O4 is a post-test for the controlled group

X is treatment for the experimental group (using Duolingo application)

This design has two tests: one before and one after the experiment. These tests are referred to as pre-test and post-test, where pre-test is an observation conducted before the experiment and post-test are performed following the experiment. Two sets of students serve as the samples in this design. Both groups are given a pre-test to determine their vocabulary mastery level before receiving treatment. They would be treated experimentally utilizing Duolingo, and the control group would be treated using conventional techniques.

3.2 Location and Time of Research

The researcher will conduct the study in SMP 4 Siak Hulu, located at Pandau Jaya, Siak Hulu, Kampar Regency, Riau. This research will be conducted from July to August 2022, focusing on seventh-grade SMP 4 Siak Hulu students. This research will be held in four meetings each class; Pre-test, treatment twice, and post-test.

3.3 Population and Sample

3.3.1 Population of the Research

The Population of this research is the students of VII 12 grade consisting of 20 students, and VII 14 grade consists of 20 students. The total number of students is 40 students.

3.3.2 Sample of the Research

The sample used in this study consisted of 2 classes, namely:

1) The experimental class is a group of students who learn using the Duolingo application. The experimental class in this study is class IV.12

2) The control class, namely the class of students who get conventional learning. The control class in this study is class IV.14

3.4 Research Instrument

The use of a selection of techniques in data collection activities obtains research data following the problems of researchers. Researchers used documentation and tests to collect research data in this study. Here is an explanation of documentation and tests.

3.4.1 Test

The test used in collecting data this research is a learning outcomes test in the form of objective multiple choice type (Multiple Choice Test). In this, the researcher gives 20 questions of vocabularies about greeting, and things to measure their background knowledge of vocabulary.

Learning outcome tests are used to measure student learning outcomes during pre-test and post-tests. This is done so that it can find out whether there is influence and differences in learning outcomes with the Duolingo applications and conventional learning. The results of the tests carried out by students are then given a score to obtain quantitative data. Answer the objective test if it is true then given the score = 5, for the answer to the wrong value then given a score = 0.

3.4.2 Documentation

Documentation is to find data on things in records, books, magazines, and gaps. Documentation media in this study are the names of class IV students of SMP 4 Siak Hulu and the learning outcomes of class IV students, geographical location of school, educators, lesson plan. The documentation instrument in this study uses the datasheet, a list of data needed by researchers obtained from SMP 4 Siak Hulu.

3.5 Data Collection Technique

Data collection techniques are the most important step in research because the main purpose of research is to obtain data (Sugiyono, 2013). Data collection techniques include identifying variables to be collected, data sources, measurement techniques, instruments, and data retrieval techniques.

This study collected data using pre-and post-tests. Before treatments, experimental and control classes conducted a vocabulary pre-test. The researcher offered the experimental group Duolingo app treatments after a pre-test. The control group was not treated. Four treatments occurred. The

researcher worked in two classes. 7A is the experimental group, and 7B is the controlled group. The researcher taught six classes with pre-and post-tests.

In the first meeting, the researcher gave students in the experimental and controlled classes a pre-test to see how well they would do in those classes at the first meeting. Afterward, the researcher informs both classes of what they may expect to learn from the second meeting. Afterward, the researcher informs them of the upcoming class activity: playing Duolingo.

In the second meeting, the researcher showed the students how to say hello and introduce themselves. In the experimental class, the app Duolingo is used as a tool by the researcher. Each student in the classroom used this app on their own. Students used an app on their cell phones with 10 to 15 exercises to choose which lessons to do. The group from exercises is called Frasa. In the controlled class, the researcher starts by saying hello and then explains the material.

The researcher discusses descriptive text at the third meeting. The researcher facilitated this discussion in the experimental class by use of the Duolingo app. The researcher then assigns a Duolingo task to test the students' knowledge of the material. Meanwhile, in a control class students are given materials to write about and then asked to write them after they have been explained by the researcher.

In the fourth meeting, the researcher reviews the material the students have learned and conducts a post-test of the experimental and controlled classes. This exam is used to evaluate students' progress after they have

received treatment. This objective is to determine whether the Duolingo application influences student vocabulary.

3.6 Technique of Analysis Data

Data analysis techniques in quantitative research using statistics. There are two types of statistics used for data analysis in research: descriptive statistics and inferential statistics (Sugiyono, 2013). The descriptive study presents data through frequency distribution tables, histograms, averages, and raw devices. While inferential statistics use normality tests, homogeneity tests, and hypothesis tests using statistical test t.

Data analysis techniques in quantitative research use statistics. Two forms of statistics are used for research data analysis: descriptive and inferential (Sugiyono, 2013). The descriptive study provides information in frequency distribution tables, histograms, averages, and raw devices. In contrast, inferential statistics utilize normality, homogeneity, and hypothesis tests using t-test.

3.6.1 Normality Test

A normality test determines whether or not experimental and controlled class data are typically distributed. If the result of the normality test is more than or equal to 0.05, the test can classify the data distribution as normal; however, if the result scores are less than or equal to 0.05, the data distribution is not normal. A normality test determines whether or not experimental and controlled class data are typically distributed. If the result of the normality test is more than or

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equal to 0.05, the test can classify the data distribution as normal; however, if the result scores are less than or equal to 0.05, the data distribution is not normal.

3.6.2 Homogeneity Test

After obtaining the normality test results, the data's homogeneity was determined. The homogeneity test will establish whether or not the data in both classes were identical. This test will employ IBM SPSS Statistic Version 23 to ensure data homogeneity at a significance level greater than = 0.05.

3.6.3 t-Test

The t-test is the data analysis procedure used to determine the significance of the difference between experimental class students' vocabulary knowledge using the Duolingo application and controlled class students' vocabulary knowledge without the Duolingo application. Independent Samples T-test with two-tailed significance test utilizing IBM SPSS Statistic Version 23. The null hypothesis is supported if the result demonstrates Sig. (2-tailed) > sig = 0.05 (5%). Nevertheless, an alternative hypothesis is acceptable if Sig. (2-tailed) sig = 0.05 (5%).

CHAPTER IV

RESEARCH FINDING AND DISCUSSION

4.1   Research Finding

4.1.1   The Description of Data

This chapter presents the researcher analysis of data collected from the seventh-graders at the SMP 4 Siak Hulu. The findings provided empirical proof for the efficacy of the Duolingo application in enhancing students' vocabularies. Students' pre-and post-test scores in the experimental and control groups were used to collect the necessary data.

4.1.2   Research Procedures and Research Steps

The application of duolingo application can be carried out with the following steps:

a. Preparation Stage

At this stage the researcher performs several steps as follows:

1) Choosing material to be applied in the class

2) Creating learning tools in the form of Learning Objectives Flow (ATP), Teaching Modules, and Student Activity Sheets (LAS).

3) Make pretest and posttest questions

4) Determine the individual basic scores obtained from the pretest and post results

b. Implementation Stage

The implementation of the teaching process will be carried out in the experimental and control class.

Meeting 1: Pre-Test (18-19 July 2022)

Before being given treatment, to find out the initial ability of the experimental class, first given a pretest. Class VII.12 as an experimental class and class VII.14 as a control class.

Meeting 2: Greeting Card (Monday, 25 July 2022)

Experiment Class (VII.12)

Preliminary activities (15 minutes)

1) The teacher opens the lesson by saying greetings and preparing students

2) The teacher asks lighter questions related to greetings through video

3) The teacher explains the learning objectives to be achieved; and delivering material coverage and explanations of activity descriptions

4) Students search for the meaning of new words or phrases found in videos about the class in a critical, polite and responsible manner.

5) The teacher provides information about the material studied.

Core activity (60 minutes)

1) The teacher asks students to pay attention to the material to be delivered.

2) The teacher delivers material about Greeting in the form of a powerpoint.

3) Students listen to and analyze detailed information (kind of greeting) and the main idea of the material.

4) The teacher asks the students to take a piece of paper to play vocabulary on the Duolingo app through the projector.

5) The teacher plays the phrase category present in the Duolingo application that corresponds to the Greeting material.

6) The teacher gives 1 minute for the students to complete 1 question.

7) The teacher gives appreciation to the students who have completed the task.

8) The teacher asks the students to mention the vocabulary present in the application.

9) The teacher asks the student to rewrite the vocabulary in the notebook.

10) The teacher recites vocabulary in English.

11) The teacher asks the student to reciprocate what the teacher said.

12) The teacher checks the students' understanding along with the responses.

Final activity (15 minutes)

1) The teacher and the students reflect on what has been learned in this and previous meetings.

2) The teacher plans the learning activities for the next meeting.

3) The teacher asks students to always play the Duolingo application anywhere and anytime.

4) The teacher asks one of the students to lead a prayer.

5) The teacher closes with a greeting.

Meeting 2: Greeting Card (Tuesday, 26 July 2022)

Control Class (VII.14)

Preliminary activity (15 minutes)

1) The teacher opens the learning by saying greetings and preparing students

2) The teacher asks lighter questions related to greetings through video

3) The teacher explains the learning objectives to be achieved; and delivering material coverage and explanations of activity descriptions

4) Students search for the meaning of new words or phrases found in videos about the class in a critical, polite and responsible manner.

5) The teacher provides information about the material studied.

Core activity (60 minutes)

1) The teacher asks students to pay attention to the material to be delivered.

2) The teacher delivers material about Greeting in the form of a powerpoint.

3) Students listen to and analyze detailed information (kind of greeting) and the main idea of the material.

4) The teacher asks the student to rewrite the vocabulary in the notebook.

5) The teacher recites vocabulary in English.

6) The teacher asks the student to reciprocate what the teacher said.

7) The teacher checks the students' understanding along with the responses.

Final activity (15 minutes)

1) The teacher and the students reflect on what has been learned in this and previous meetings.

2) The teacher plans the learning activities for the next meeting.

3) The teacher asks one of the students to lead a prayer.

4) The teacher closes with a greeting.

Meeting 3: Descriptive text (things) (Monday, 1 August 2022)

Experiment Class (VII.12)

Preliminary activity (15 minutes)

1) The teacher opens the learning by saying greetings and preparing students

2) The teacher asks lighter questions related to things through video

3) The teacher explains the learning objectives to be achieved; and delivering material coverage and explanations of activity descriptions

4) Students search for the meaning of new words or phrases found in videos about the class in a critical, polite and responsible manner.

5) The teacher provides information about the material studied.

Core activity (60 minutes)

1) The teacher asks students to pay attention to the material to be delivered.

2) The teacher delivers material about things in the form of powerpoints.

3) Learners listen to and analyze detailed information (object names, functions) and the main idea of the material.

4) The teacher asks the students to take a piece of paper to play vocabulary on the Duolingo app through the projector.

5) The teacher plays the category of Objects in the Duolingo application that corresponds to the material of Things.

6) The teacher gives 1 minute for the students to complete 1 question.

7) The teacher gives appreciation to the students who have completed the task.

8) The teacher asks the students to mention the vocabulary present in the application.

9) The teacher asks the student to rewrite the vocabulary in the notebook.

10) The teacher recites vocabulary in English.

11) The teacher asks the student to reciprocate what the teacher said.

12) The teacher checks the students' understanding along with the responses.

Final activity (15 minutes)

1) The teacher and the students reflect on what has been learned in this and previous meetings.

2) The teacher plans the learning activities for the next meeting.

3) The teacher asks students to always play the Duolingo application anywhere and anytime.

4) The teacher asks one of the students to lead a prayer.

5) The teacher closes with a greeting.

Meeting 3: Descriptive text (things) (Tuesday, August 2, 2022)

Control Class (VII.14)

Preliminary activity (15 minutes)

1) The teacher opens the learning by saying greetings and preparing students

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2) The teacher asks lighter questions related to things through video

3) The teacher explains the learning objectives to be achieved; and delivering material coverage and explanations of activity descriptions

4) Students search for the meaning of new words or phrases found in videos about the class in a critical, polite and responsible manner.

5) The teacher provides information about the material studied.

Core activity (60 minutes)

1) The teacher asks students to pay attention to the material to be delivered.

2) The teacher delivers material about things in the form of powerpoints.

3) Learners listen to and analyze detailed information (object names, functions) and the main idea of the material.

4) The teacher asks the student to rewrite the vocabulary in the notebook.

5) The teacher recites vocabulary in English.

6) The teacher asks the student to reciprocate what the teacher said.

7) The teacher checks the students' understanding along with the responses.

Final activity (15 minutes)

1) The teacher and the students reflect on what has been learned in this and previous meetings.

2) The teacher plans the learning activities for the next meeting.

3) The teacher asks one of the students to lead a prayer.

4) The teacher closes with a greeting.

Meeting 4: Post-Test (7 August 2022)

After being given learning, to find out the final ability, the experimental and control classes are given a post-test. Class VII.12 as an experimental class and class VII.14 as a control class.

a.   Data Results of Experimental Class

The experiment students were from the 7.12 SMP 4 Siak Hulu class, consisting of 20 students taught using the Duolingo application. Before getting the treatments, the student's pre-test scores were collected. After implementing the Duolingo application, the post-test scores of the students were then collected. The outcome is displayed in Table 4.1.

Table 4.1

No	Students	Pre-Test	Post-Test	Gained Score
1	S1	55	70	15
2	S2	70	90	20
3	S3	65	85	20
4	S4	60	75	15
5	S5	65	85	20
6	S6	60	80	20
7	S7	60	75	15
8	S8	70	85	15

9	S9	60	80	20
10	S10	65	80	15
11	S11	65	70	5
12	S12	70	80	10
13	S13	75	90	15
14	S14	65	75	10
15	S15	55	85	30
16	S16	75	80	5
17	S17	60	75	15
18	S18	70	80	10
19	S19	75	90	15
20	S20	60	70	10
	Mean	65	80	15
	Minimum	55	70	
	Maximum	75	90	

Based on Table 4.1, it can be shown that the scores of 20 students in the experimental class were different. The average score on the pre-test was 65, while the average score on the post-test was 80. The minimum score on the pre-test was 55, while the maximum score was

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75. The highest score on the post-test was 90, while the lowest was 70.

b. Data Results of Controlled Class

The controlled students were from the 7.14 SMP 4 class, consisting of 20 students who were not taught utilizing the Duolingo Application. Students' pre-and post-test scores were used to construct the obtained data. The data is shown in the table below.

Table 4.2

No	Students	Pre-Test	Post-Test	Gained Score
1	S1	55	65	10
2	S2	55	70	15
3	S3	75	90	15
4	S4	60	75	15
5	S5	70	75	5
6	S6	75	80	5
7	S7	65	65	0
8	S8	60	70	10
9	S9	60	75	15
10	S10	55	70	15
11	S11	75	85	10

12	S12	80	80	0
13	S13	60	75	15
14	S14	70	75	5
15	S15	65	70	5
16	S16	70	75	5
17	S17	70	70	0
18	S18	55	70	15
19	S19	70	80	10
20	S20	60	75	15
	Mean	65.25	74.5	9.25
	Minimum	55	65	
	Maximum	75	90	

Based on the data in table 4.2, it can be concluded that there are

20 students in the controlled class. The average score on the pre-test was

65.25, while the average score on the post-test was 74.5. The maximum

score on the pre-test was then 80, while the minimum score was 55. The

lowest score on the post-test was 65, while the highest was 90.

4.2   The Analysis of Data

In this part, the researcher uses the t-test method to compare students' performance in experimental and controlled classes. Before obtaining the t-test result, it was important to determine the data's normality and homogeneity to examine the significance level of the difference. The normality test was required to assess whether the data were normally distributed or not. The homogeneity test was then necessary to determine whether or not the data were homogenous.

4.2.1 Normality Test

This test is conducted before the t-test is done. It aimed to determine whether or not the data are normally distributed. The researcher used Kolmogorov-Smirnov, as shown in Table 4.3. The data are normally distributed since = 0.05 is more than the significance level (5%). The outcome may be characterized as follows:

Table 4.3 Normality Test

	GROUP	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Student's	Pre-Test Experiment	.187	20	.065	.916	20	.084
Learning	Post-Test Experiment	.150	20	.200*	.920	20	.101
Outcome	Pre-Test Control	.198	20	.039	.912	20	.070
	Post-Test Control	.218	20	.014	.916	20	.084

*. This is a lower bound of the true significance.

The significance of the data in the table of Kolmogorov-Smirnov for the Pre-Test experimental class is 0.065, and for the controlled class,

it is 0.039, as shown in the table above. The pre-test data are normally distributed since the significance score is higher than = 0.05. And the post-test data result for the experimental class is 0.200, and for the control class, it is 0.014. Both class and group are more than = 0.05, indicating that the post-test results are normally distributed.

4.2.2 Homogeneity Test

To determine whether or not the data are homogenous, the writer conducted a homogeneity test using the Levene statistic after obtaining the normality test results. If the outcome of the data calculation is above = 0.05, it indicates that the data are homogeneous. The outcome is shown in the table below:

Table 4.4

Homogeneity Result of Pre-Test

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Pre-Test	Based on Mean	2.367	1	38	.132
	Based on Median	2.265	1	38	.141
	Based on Median and with adjusted df	2.265	1	37.973	.141
	Based on trimmed mean	2.265	1	38	.141

According to the previous table 4.4, the significance of the pre-test data between the experimental and control groups was 0.132. Therefore,

the pre-test data were homogenous since they were more than = 0.05 (0.132 > 0.05).

Table 4.5

Homogeneity Result of Post-Test

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Post-Test	Based on Mean	.098	1	38	.756
	Based on Median	.147	1	38	.703
	Based on Median and with adjusted df	.147	1	37.816	.703
	Based on trimmed mean	.069	1	38	.794

According to the results in table 4.5, the significance of the post-test between the two groups was 0.756, which is more than = 0.05 (0.356 > 0.05). It indicates that the post-test results were homogeneous.

4.2.3 t-Test

As the data's normality and homogeneity were established, the researcher utilized the t-test to determine if there were significant differences between students' vocabulary in the experimental and control classes. The outcome of the t-test provides an answer to the

research problem of whether or not the Duolingo application is a successful method in this study. The recapitulation of the data appears as follows:

Table 4.6 t-Test Result of Post-Test

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Students Learning Outcomes	PostTest Experiment	20	80.00	6.489	1.451
	PostTest Control	20	74.50	6.262	1.400

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Post Test	Equal variances assumed	.098	.756	2.728	38	.010	5.500	2.016	1.418	9.582
	Equal variances not assumed			2.728	37.952	.010	5.500	2.016	1.418	9.582

The results of the post-test t-test may be seen in the table above for the experimental and controlled classes. It suggested a significant difference between the experimental class's mean score of 80 and the control class's mean score of 74.5. The experimental class standard deviation is 6,489, while the controlled class standard deviation is 6,262. The standard error of the mean for the experimental group is 1,451, and for the control group, it is 1,400.

The results of the independent sample test are t (df = 38) = 2.72 and p-value or sig (2-tailed) is 0.010. Since the p-value or sig (2-tailed) 0.010 is greater than = 0.05, the null hypothesis (Ho) is rejected, and the alternative hypothesis (Ha) is accepted (5%). It indicates that Duolingo is excellent at enhancing students' vocabulary knowledge.

4.3   Hypothesis Test

The researcher was done to answer the question: "Does using the Duolingo application significantly increase students' vocabulary?" It is how the statistical hypothesis is explained:

a. (Ha): The application of Duolingo has a significant impact on increasing students' vocabulary knowledge.

b. (Ho): The application of Duolingo has no significant effect on students' vocabulary ability.

In addition, the statistical hypothesis's assumption:

a.   If $t_0 > t_{table}$ with the significance level 0.05 or if the Sig (2-tailed) > α = 0.05 (5%). Then, (alternative hypothesis) Ha is accepted, and (null

hypothesis) Ho is rejected. The experimental class's mean scores are higher than the controlled class's. So, using Duolingo to improve seventh-grade SMP 4 Siak Hulu students' vocabulary is successful.

b. If $t_0 < t_{table}$ with the significance level 0.05 or if the Sig (2-tailed) $< \alpha =$ 0.05 (5%). Then, Ha is rejected, and Ho is accepted. The experimental class's mean scores are the same or less than the control class's. So, using Duolingo to improve seventh-grade students' vocabulary seems ineffective.

Based on the post-test results from the experimental and control groups, it may be concluded that t0 (2.728) is higher than t_{table} (1.672) at the $= \alpha=0.05$ (5%). Therefore, the alternative hypothesis (Ha) is accepted, and the null hypothesis (Ho) is rejected, given that t0 $>$ t_{table}. Thus, it was determined that the application Duolingo efficiently increases the vocabulary of seventh-grade SMP 4 Siak Hulu students.

4.4   Discussion

Based on the data description of the calculation above, the data is normally distributed and homogenous. In the seventh grade students of SMP 4 Siak Hulu, the student vocabulary is improved, especially using the Duolingo application. The result of the data was taken from 20 students in a class of pre-test and post-test. It can be seen in table 4.1 from the experimental class that the mean of the pre-test is 65 before doing treatments by using the Duolingo application. Then, the mean post-test score was increased to 80 after doing treatments. Therefore, the students' mean

scores for the experimental class post-test were higher than the experimental class pre-test.

After calculating the normality test using IBM SPSS Statistic Version 23, it can be proved that the significance of the data from experimental and controlled classes in pre-test and post-test were distributed normally. The pre-test score showed that the data of Kolmogorov-Smirnov in the experimental class is 0.65, and the controlled class is 0.039. Meanwhile, the post-test score also showed that the data of Kolmogorov-Smirnov in the experimental class is 0.200, and the controlled class is 0.014. It can be concluded that both classes are higher than $\alpha = 0.05$, which means the result is normally distributed.

Based on the result of the homogeneity test, the data from the experimental and controlled classes were proved homogeneous. It can be seen that the significance of the pre-test between experimental and controlled classes was 0.132, which is higher than $\alpha = 0.05$ $(0.132 > 0.05)$. Then, the significance of the post-test of both experimental and controlled classes was 0.354, which is higher than $\alpha = 0.05$ $(0.756 > 0.05)$. The data from experimental and controlled classes in pre-test and post-test were proved as homogeneous data.

In addition, the data analysis that used an independent sample t-test proved the effect of using Duolingo application during the treatment period statistically. It can be seen the statistical significance is shown by the analyzed post-test data that the result of t (df = 38) = 2.728 and p-value or

sig (2-tailed) is 0.010, which is higher than α = 0.05 (5%). It means that the alternative hypothesis (Ha) is accepted, and the null hypothesis (H0) is rejected. Therefore, it was proved that using the Duolingo application increases students' vocabulary knowledge.

The following data analysis helps the researchers conclude that the Duolingo application may significantly impact students' vocabulary since the writer's vocabulary test scores are higher after students use the Duolingo application to learn the language than before. Additionally, this application is a specific topic and may be used in any course. It is suggested that the seventh-grade students at SMP 4 Siak Hulu may benefit from using the Duolingo application in their learning routine.

In line with this research, other relevance research was done by Hafifah (2020) At the tenth grade students of MA Bilingual Batu. This research using normality test, homogeneity test, and t-test. On the normality test using IBM SPSS Statistic Version 20, It can be conclude that both classes are higher than α = 0.05, which means the result is normally distributed. On homogeneity test, the significance from the pre-test between the experimental and control classes was 0.588 which is higher than α = 0.05 (0.588 > 0.05). Then, the significance from post-test of both experimental and control class was 0.354 which is higher than α = 0.05 (0.354 > 0.05). It means that the data from experimental and control classes in pre-test and post-test were proved as homogeneous data.

In addition, the data analysis that used an independent sample t-test is shown by the analyzed post-test data that the result of t (df = 38) = 2.881 and p-value or sig (2-tailed) is 0.006, which is lower than α = 0.05 (5%). It concluded the alternative hypothesis (Ha) is accepted and the null hypothesis (H0) is rejected. Therefore, it was proved that using the Duolingo application has an effect in improving students' speaking skill. Moreover, the result of the effect size is 0.91 that indicates the using Duolingo application is a moderate effect in this research.

In line with this research, other relevance research was done by Cecep Abdul Fatah (2018) At the seventh grade students of SMP Islam Taman Quraniyah Jakarta Selatan. This research using normality test, homogeneity test, and t-test. On the normality test using IBM SPSS Statistic Version 20. It can be concluded that both of classes is higher than α = 0.05 which means the result is normally distributed. On homogeneity test,It can be seen that the significance from pre-test between experimental and controlled class was 0.588 which is higher than α = 0.05 (0.588 > 0.05). Then, the significance from post-test of both experimental and controlled class was 0.354 which is higher than α =0.05 (0.354 > 0.05). It means that the data from experimental and controlled class in pre-test and post-test were proved as homogeneous data.

In addition, the data analysis that used independent sample t-test proved statistically the effect of using Duolingo application used during treatments period. It can be seen the statistical significance is shown by the analyzed post- test data that the result of t (df = 38) = 2.881 and p-value or sig (2-tailed) is 0.006 that is lower than α = 0.05 (5%). It means that the alternative hypothesis (Ha) is accepted and the null hypothesis (H0) is rejected. Therefore, it was proved that the using Duolingo application has an effect to develop students" vocabulary knowledge. Besides, the result of the effect size value is 0.91, which indicates that the using Duolingo application is a moderate effect in this research.
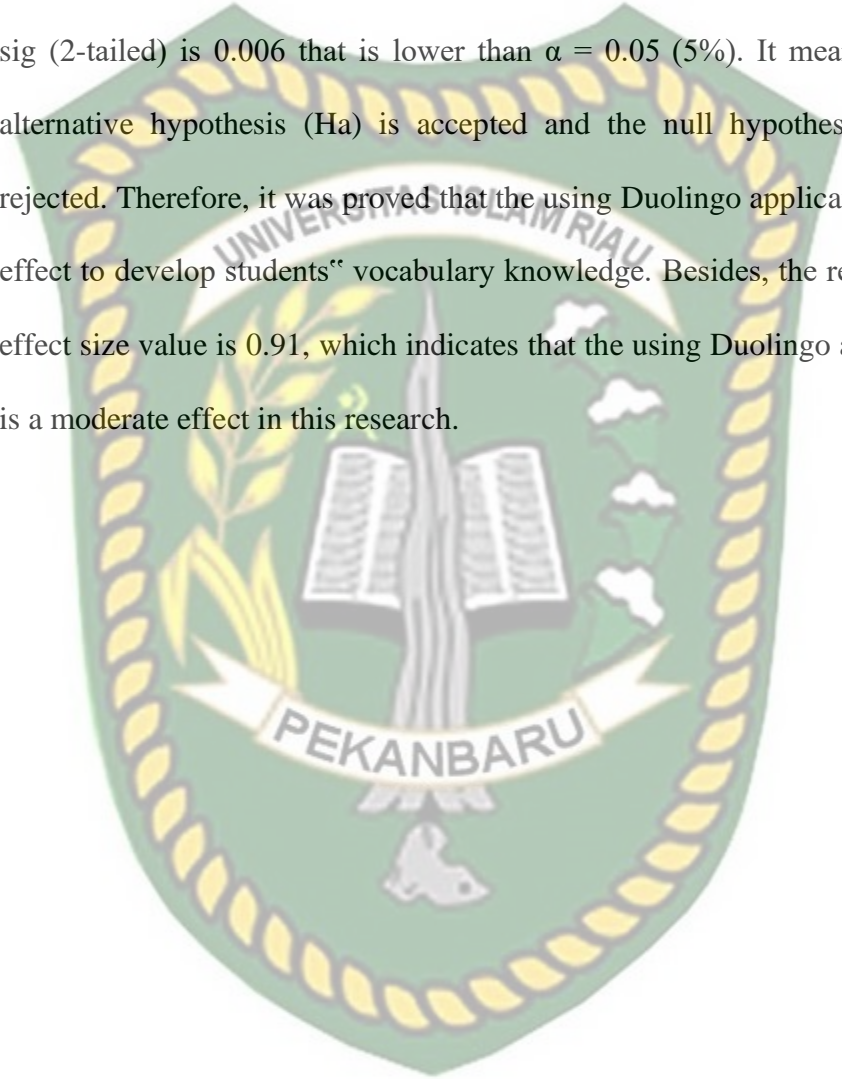
CHAPTER V

CONCLUSION AND SUGGESTION

5.1 Conclusion

Junior High School of 4 Siak Hulu students have found great success with the vocabulary-building Duolingo application. Students have more fun and succeed using the Duolingo app in the classroom. Free and fun language learning games where students earn experience points for the right answers compete against the clock, and level up is available. The students are also more engaged and certain in their ability to communicate and acquire new vocabulary. SMP 4 Siak Hulu students had an average vocabulary of 65 before being introduced to the Duolingo app. Meanwhile, students improve after being taught using the Duolingo application, with an average post-test score of 75. Students using the Duolingo app showed significant gains in vocabulary size and variety.

There are significant differences in students' learning before and after using Duolingo. The data presented in Tables 4.1 and 4.2 for the pre-and post-tests confirm this result. Table 4.1 shows that the mean scores of the post-test are higher than those of the pre-test, indicating that the Duolingo application may increase students' achievement compared to before using the application. The application Duolingo gets students more curious about what they will learn in the next chapter. Duolingo application also makes students more interested in studying English vocabulary since the way of teaching

vocabulary via Duolingo application differs from what a teacher normally teaches.

Therefore, it can be concluded from the above data analysis that there are significant differences between students' accomplishments before and after using the Duolingo application. In addition, it is more successful and engaging than traditional English vocabulary instruction, particularly for junior high school students.

5.2 Suggestion

The study shows a significant difference in vocabulary ability between students before and after being taught using the Duolingo app. Therefore, the researcher attempts to provide the following points.

The first suggestion begins with SMP 4 Siak Hulu. The school must offer suitable learning facilities for students, including internet access and computer through the Duolingo application. Because the students are not allowed to bring smartphone to school, so, the researcher uses infocus in the application of the Duolingo. The application of Duolingo is to teach vocabulary and help students improve their language skills. Particularly in junior high school. As a result of the variance in teaching methods being seen as more entertaining and fascinating by the students, the application Duolingo features more vibrant images and displays.

Secondly, it is also directed to the students. Since the effectiveness of the Duolingo app is shown in this study, it is recommended that students engage in more active and creative exercise completion.

Finally, it is directed at researchers. The study's only aim is to collect data on teaching vocabulary at SMP 4 Siak Hulu. There are still several aspects of English instruction that students might investigate further. Therefore, the researcher proposes that more studies be conducted on the English classes taught at this school or elsewhere.

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