

**THE EFFECTS OF USING DUOLINGO MOBILE  
APPLICATION ON STUDENTS' ENGLISH  
PRONUNCIATION SKILL**

**THESIS**



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UNIVERSITAS PESANTREN TINGGI DARUL ULMU**

**JOMBANG**

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**THESIS**



**Presented to**

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For the Degree of Sarjana in English Language Education**

**By :**

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JOMBANG**

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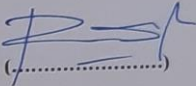
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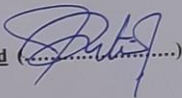
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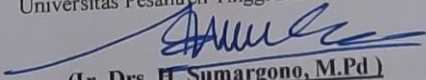
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### DECLARATION

In the name of Allah, The Most Gracious and Most Merciful

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I declare the thesis "*The Effects of Using Duolingo Mobile Application on Students' English Pronunciation Skill*" is originally written by researcher. It is neither plagiarism nor need by others. The things related to other peoples' work are written in quotation, citation and included within references. If this statement is rather proven false, the researcher willingly takes any responsibility for Department of English language Education, Faculty of Teacher Training and Education, Universitas Pesantren Tinggi Darul Ulum Jombang.

Jombang, 10<sup>th</sup> August 2022



  
Kunti Syarifah Illiyyin

**MOTTO**

لَا يُكَلِّفُ اللَّهُ نَفْسًا إِلَّا وُسْعَهَا ۗ

“Allah does not impose upon any soul a duty but to the extent of its capacity.....”

**(QS. Al Baqarah: 286)**

## DEDICATE PAGE

In the name of Allah, most gracious and the most merciful. Finally, I can finish my research. This thesis dedicated to:

- ✓ My both beloved parents, Abah Sumardi and Umi Dewi Halimatul Lailiyah who always give me true love, supports, prayers, and motivation and guidance for me. You are my everything.
- ✓ My beloved twin Zakiyah Syarifah Khasanah, and my sibling Akhmad Syarif Hubeib Al-Firdaus and my little sister Syarifah Ainin Nadhifah Azzahro who always raise my spirit.
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However, I also realize that this study is not perfect. Therefore, I will receive all positive suggestions and critic concerning with my study for the better results. Hopefully, this study can be valuable contribution for the English Department student particularly for those who are interested in linguistics.

Jombang.....

Kunti Syarifah Illiyyin

Kunti Syarifah Illiyyin



### Abstract

English pronunciation is frequently become big problems for Indonesia learners. One of the problems is the pronunciation of vowels, both short and long vowel. The research aimed to investigate the effects of using the Duolingo App on students' English pronunciation skill. The research uses quantitative data. This research use students' recording data to collect the data. Based on the statistical calculation, there was a significant difference between teaching pronunciation by using Duolingo App and without using Duolingo App, but there are insignificant effects between pre-test and post-test in the Experimental group. The results by Mann-Whitney test value 0,73 higher than 0,05. It means that the Null Hypothesis (H0) was accepted and the Alternative Hypothesis (H1) was rejected. According to the results of the hypothesis, it is known that the use of Duolingo App did not give any significantly effects on students' English pronunciation skill.

**Keywords:** *Duolingo App, English pronunciation, short and long vowel.*

## CHAPTER I

### INTRODUCTION

#### 1.1 Research Background

One of the problems frequently faced by many English learners in Indonesia is pronunciation. There are several factors that affect this phenomenon. They are native language, age, exposure, innate phonetic ability, and identity and language ego, motivation. Simatupang (2021) stated that in general Indonesian students have problem in learning English pronunciation. Indonesia students were confused in English pronunciation. According to (Sara, 2009) “Pronunciation is an essential aspect of learning to speak a foreign language”.

Based on anecdotal evidence that researcher found when conducting small research on pronunciation at a vocational high school. The researcher did not directly ask about pronunciation, but invite several students to talk about their problem in English learn. The difficulty in learning pronunciation faced by students at vocational high school was related to the pronunciation of short and long vowel. For examples from small research, the word “could” that students should pronounce //kəd/ /, but students pronounce /kold/. In other case, word “suit” that students should pronounce /su:t/, but students pronounce /suit/. In word



“learn”, that subject should pronounce /lɜ:n/ but subject pronounce /lern/. And the students didn't give the practice of using good language pronunciation, so they were not accustomed to good pronunciation. Researcher noticed that the teacher also frequently spoke in in Bahasa Indonesia rather than speaking in English with good pronunciation. These are some factors that may affect the students' low English pronunciation ability, exactly in short and long vowel.

To help in students' pronunciation improvement in vocational high school, an alternative teaching method or perhaps needs to be employed. There are many strategies that can be used to improve students' English pronunciation ability. In this research, researcher attempts to use Duolingo App as medium to improve students' English pronunciation. There is a kind of rapid training in English. When users of Duolingo make errors, so they should repeat pronunciation with correctly and go way the next training. The researcher introduces the technology of the Duolingo App to students to increase their pronunciation. This Duolingo App has also been used by author. Actually, the Duolingo App not gave effect for students' English pronunciation skill. That reason why Duolingo was chosen as media in training students' pronunciation in vocational high school.



Duolingo App as media to improve students' pronunciation. Several previous studies use Duolingo App to increase writing and speaking skill. That is very different with this research. The previous study was conducted by Mutaqin (2016) his research told the author was used Duolingo App to increase confidence in speaking English. And the results of research are a positive and significant relations in using the Duolingo App. And the previous research was about suggest that the Duolingo App could be to enhance speaking skills in VII MTS Cinsayag. The purpose of using Duolingo App as learning media to get a glimpse of the effect it can has on the students. This research by Fauziyah (2019). The both of previous study was explained about Duolingo App can increase the speaking students. The increased speaking in the use Duolingo App effects on the English pronunciation because pronunciation is one of the important components in speaking.

## 12 Hypotheses

H1:

The use of Duolingo app is significantly effective to improve students' English pronunciation.

H0:

The use of Duolingo app is insignificantly effective to improve students' English pronunciation.



### **13 Objectives of the research**

The objective of the research is to know the effect of the Duolingo app on SMK students' English pronunciation in Vowel (short & long).

### **14 Significances of the research**

The significance of this research can be viewed from the theoretical and practical aspects, as described below:

### **15 Theoretical significance**

The results gave contribution in phonological studies and also the implementation of Duolingo Mobile App for media of ELT, especially in short and long vowel.

#### **1.5.1 Practical Significance**

##### **a. The English Teacher**

The results of this study give a contribution to the teacher about the effectiveness Duolingo App to improving students' English pronunciation skill.

##### **b. The student**

The study helps students to find problem-solving in their pronunciation. Furthermore, the results from the study can support to improve students in English pronunciation skill.

##### **c. The Other Researcher**

For other researchers is expected to give more information about the effectiveness of the Duolingo App



to improve students' English pronunciation in vocational high school.

## **1.6 Research Scope and Limitation**

The scope of study focuses on how to assess students' competence in English pronunciation skill by Duolingo App. Whether it will be effective for them in improving pronunciation or not. This study uses Phonetic Oxford to measure students' pronunciation and uses Duolingo App as experiment media in English pronunciation. Moreover, the limitation pronunciation of vowel is short and long vowel. The respondents of this study are 28 students of the 11<sup>th</sup> grade in vocational high school.

## **1.7 Operational Definition of Key Terms**

### **1. English pronunciation**

Pronunciation is more than — listen and repeat. Pronunciation includes features of language (vocabulary and grammar) and skills (speaking and listening). Like vocabulary and grammar, we pronounce by notice and understanding rules and patterns the surface of speech (Hancock, n.d.)

### **2. Vowel of Pronunciation**

Ambalegin and Arianto (2018) defined, “vowel is a sound produced without significant constriction of their flowing through the oral activity”. Vowels are voiced that articulate





that makes by tongue and the lips modify the overall shape of mouth (Kelly, 2001).

### 3. Duolingo App

According to Settles and Hagiwara (2020) is The Duolingo English Test is an innovative English language, digital-first, and computer adaptive in the English Language. Duolingo has <sup>5</sup> four key constructs for assessing English Language proficiency: speaking, writing, reading, and listening (SWRL), and it is aligned with the Common European Framework of Reference for languages (CEFR) proficiency levels (The Council of Europe, 2001, 2020).





## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### 2.1 Pronunciation

Understanding pronunciation is one of the basics of learning English. And good pronunciation can lead the learning why bad pronunciation makes it difficult in English learning Gilakjani (2012). English pronunciation is one of the difficult skills to get and learn for increasing their pronunciation spends a lot of time Pourhossein (2016) The small unit of language sounds.

Pronunciation sounds was produced. Not only refers to speech sounds in the mouth but also about stress the way sounds by hearing. Zielinski, Beth. Yates (2014) stated the pronunciation is sounds that we use to make meaning in speak. It includes the particular consonants and vowels (segments), aspects of speech beyond the level of individual segments such as stress, timing, rhythm, intonation, and phrasing. And many aspects in pronunciation, but this research just focus on single vowels (short and long).

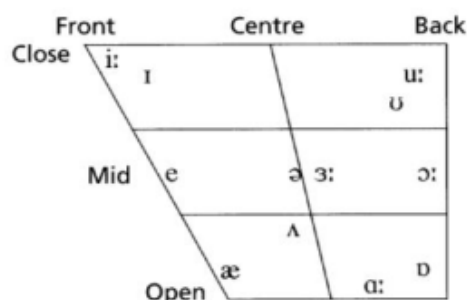
Many aspects become a problem in pronunciation. According to Subandowo (2017) stated mother tongue not only the one language that learns from ones' mother but using as speaker dominant and home language.

Based on the development of language study, teaching pronunciation is most important. This is one method that was famous in the United States, there is audio lingualis. In this method, a teacher gives modeling of the sounds and asks them to repeat with better pronunciation. IPA was popular to demonstrate the sounds. The phonemic transcript that is used here is IPA (International Phonetic Alphabet). Setiyono (2019, p. 25–26) said, –The International Phonetic Alphabet is usually used as standard in transcribing different units of sounds and phonemes.

## **2.2 The Vowel of Pronunciation**

According to Yule (2014, p. 3.3) in (Ambalegin & Arianto, 2018, p. 113) stated: “Vowel sounds are produced with a relatively free flow of air, and they are all typically voiced”. Vowel sounds are a voice from certain letters, and the letters can be voiced. Kelly (2001) stated there are three categories of vowels sounds; close vowel, mid vowel, open vowel. Each vowel has position to represent the pronounce.





Pict 2.1 short and long vowel position

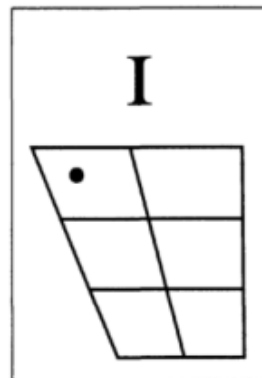
Simarmata and Pardede (2018) was stated, In English has twelve vowels. There are: /I:/, /I/, /e/, /æ/, /ɔ/, /ɜ:/, /ʌ/, /ɑ:/, /ɒ/, /ɔ:/, /u:/, /ʊ/. And in vowels has two kinds in English. They are long vowels and short vowels. The long vowels /I:/, /ɜ:/, /ɑ:/, /ɔ:/, /u:/, /I:/, /ɜ:/, /ɑ:/, /ɔ:/, /u:/. and the short vowel like: /I/, /e/, /ə/, /ʌ/, /ʊ/. English has more vowels than Bahasa Indonesia, because Bahasa Indonesia have different sound system with English. And researcher used short and long vowels conduct the research.

### 2.2.1 Short Vowel

Short vowels are the vowel that have sound similarity with Indonesian vowel. Compare with Indonesian vowels: /A/, /I/, /U/, /E/, /O/.

As we know, the short vowels have seven sounds: there are /I/, /e/, /ə/, /ʌ/, /ʊ/, /æ/, /ɒ/. The following is some rules when the vowels must be pronounced with short vowel. The following Simarmata and Pardede (2018) presents them;

a. Short Vowel /ɪ/



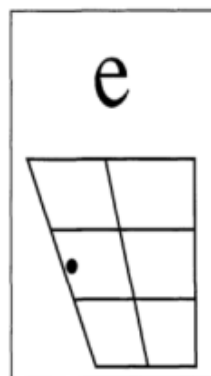
Pict 2.2 short vowel position

Is the half-sticking <sup>1</sup> front vowel. Articulatory definition:

- a. in producing [ɪ] the front of the tongue was raised.
- b. The tongue was raised to the point slightly above the position half and the tongue's <sup>1</sup> position is clear from clearly lower than for I:/.

The jaws are bit wider than I:/. List of words: Meet /mit/; Senior / sinjər/; Kit / kɪt/; Fill /fɪl/; Fit /fɪt/; Eat / it/.

b. Short Vowel /e/



Pict 2.3 short vowel position

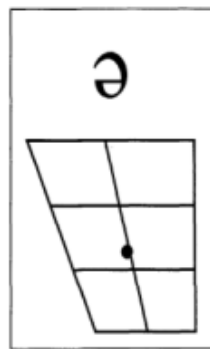
Are the front vowels being <sup>1</sup> open to half open. Articulatory definition:

a. In producing æ the front of tongue was raised.

b. The position of lips <sup>1</sup> spread or neutral.

The jaws were rather open. List of words: Name /nem/, Candy /kændi/, Hair /hɛr/; Man /mæn/; Act /ækt/.

c. Short Vowel /ə/



Pict 2.4 short vowel position

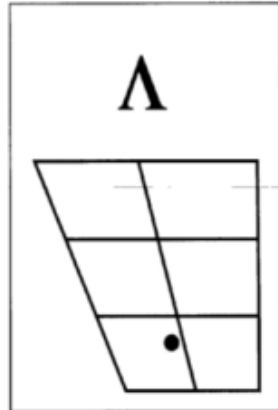
The central vowels are half open till they are close. Articulator <sup>1</sup> description:

a. in producing /ə/ in middle of the tongue lifted.

b. The position of lips <sup>1</sup> spread or neutral.

c. The opening between medium jaws. List of Words: Statement /stetmənt/; Sofa /sofə/; mirror /mɪrər/; hurt /hɜrt/; Pen /pen/.

d. Short Vowel /ʌ/



Pict 2.5 short vowel position

The central back vowels are half open that are not round or open vowels are half open that are not round the rear vowels middle.

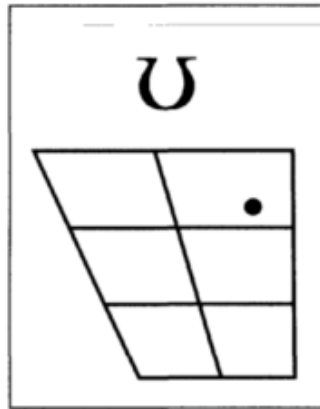
1  
Articulatory description:

a, in /ʌ/ some part between the front and the back of the tongue are almost the middle of the tongue raised

b. The position of the lips is neither round or neutral.

The jaws are wide apart. List of words: Cut /kʌt/, But /bʌt/, Run /rʌn/, Cup /kʌp/, Sun /sʌn/.

e. Short Vowel / ʊ /



Pict 2.6 short vowel position

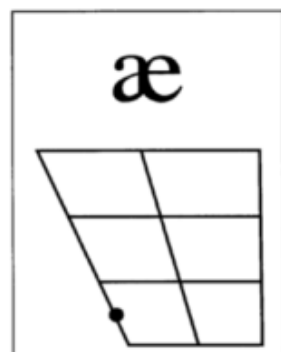
Is a half-round vocal near the back cover. <sup>1</sup>Articulatory description:

a. In producing the back of an elevated tongue this advance from the actual back position.

b. The lips position is quite tight and slightly bulging without any <sup>1</sup>muscle tension.

The jaws are slightly separated from each other. List of words: Cook /kʊk/, Could /kʊd/, Put /pʊt/; Fully /fʊli/; Room /rum/; Book /bʊk/.

f. Short Vowel /æ/:



Pict 2.7 short vowel position



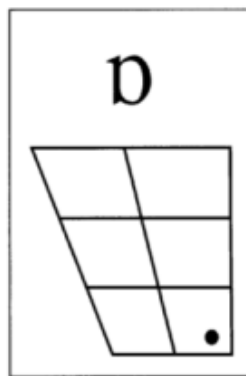
Is the sound unrounded open <sup>1</sup> to half open front vowel.

Articulatory description;

- a. The producing /æ/ in the front of the tongue.
- b. The front of the tongue was raised a little bit between the open and the half positions.
- c. The lips positions is neutral.

The jaws are widely opened. List of words; Band /bænd/, Bad /bæd/, land /lænd/, Sand /sænd/.

**g. Short Vowel /ɒ/:**



Pic<sup>1</sup> 2.8 short vowel position

Is the sound rounded open back vowel. Articulatory description:

- a. The back tongue is slightly raised.
- b. The tongue very low in the mouth.
- c. The lips are slightly rounded, not protruded.

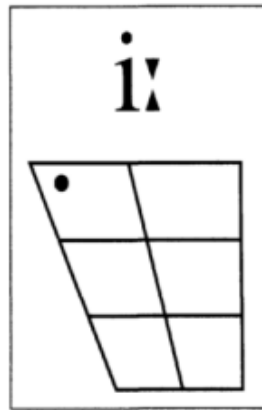
The jaws are rather wide apart. List of words; Fog /fɒg/, Lock /lɒk/, Long //lɒŋ/.



### 1.2.2. Long Vowel

First to introduce is the five long vowel; that the vowel which tend to be longer than a short vowel. The differences between five long vowel and the six short vowels not only length but also in quality Roach (2009). You can see the long and short vowel symbols would be different in the length mark. So very important to remember the symbols long vowel for avoid the mistake in pronunciation.

#### a. Long Vowel /i:/:



Pict 2.9 long vowel position

Is the sound surrounded **close front vowel**. Articulatory description;

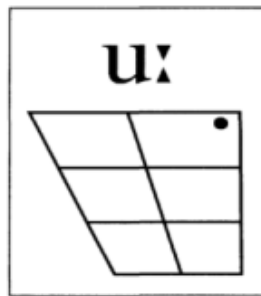
- a. In producing // the front of the tongue was raised.
- b. The lips position is unrounded or spread, may be a neutral.

The jaws are slightly apart from each other. List of words:

Bee /bi:/, Cheap /tʃi:p/, Sea /si:/.



**b. Long Vowel /u:/:**



Pict 2.10 long vowel position

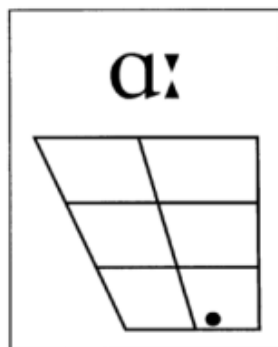
The sound articulated <sup>1</sup> close back vowel. Articulatory description;

- a. In producing // the back tongue was raised.
- b. The point was raised very near a close position.
- c. The lips are closely rounded with little protrusions.

The jaws only slightly separated. List of words; Food

/fu:d/, Pool/pu:l/, Shoe /ju:/, Soon /su:n/.

**c. Long Vowel /a:/:**



Pict 2.11 long vowel position

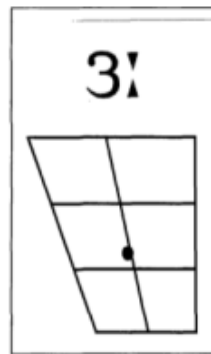
The sound <sup>1</sup> is an unrounded open back vowel.

Articulatory descriptions:

- a. The back tongue was raised
- b. The raising <sup>2</sup> of the tongue is only slight and the tongue can be very low in the mouth.
- c. The lips of production not rounded but they are neutral.

The jaws fairly wide apart: Harm /hɑ:m/, Heart /hɑ:t/,  
Hard /hɑ:d/, Smart/smɑ:t/.

**d. Long Vowel /ɜ:/:**



Pic<sup>1</sup>.12 long vowel position

Is the sound half close to half open central vowel.

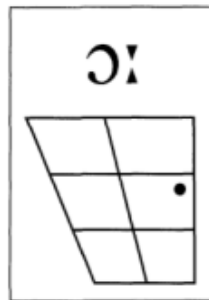
Articulatory descriptions:

- a. In // the central tongue was raised.
- b. It raised to a point between the half close and half open positions.
- c. The lips very neutral from /I/.

The Jaws are slightly separated in each other. List of Words;

Journey/'dʒɜ:ni/, Word /wɜ:d/, Bird /wɜ:d/.

e. Long Vowel /ɔ:/:



Pict 2.13 long vowel position

1 Is a round open back vowel. Articulatory descriptions:

- a. In // the back of tongue was raised.
- b. The raising almost reaches the half positions.
- c. The lips more closely rather than for //.

The jaws very fairly apart from each apart. List of words;  
Salt /sɔ:lt/, Saw /sɔ:/, War /wɔ:(r)/.

## 2.3 Duolingo App

### 2.3.1 An overview of Duolingo

Duolingo is an application to learn English with the purpose give people get free education. According to Duolingo is a language learning app created by Luis Von and Severin Hacker in 2011 to give free education to the world Munday (2016).

Luis Von and Saverin Hacker are the founder of the website Duolingo App. Many languages can access the users, among of them is the English language. As a digital application, Duolingo has the first assessment for users and can show the user's point. The scoring will get to the way for



the next level or stick the level. According to Settles and Hagiwara (2020) claims –the <sup>5</sup> Duolingo English Test is a groundbreaking, digital-first, computer-adaptive English language proficiency test. Duolingo App has advantages and disadvantages.

The advantages are:

- a. Duolingo has access to IOS, Android, or Windows Phone applications.
- b. Many languages can use in Duolingo.
- c. Duolingo has many activities: students listen, transcribe, speak and translate into a simple interface as they work through words and phrases.
- d. Students can balance the translation, listening, matching words, and speaking exercise.
- e. Students can repeat their pronouncing until pronounce the correct spelling.

The disadvantages are:

- a. Duolingo uses a computerized voice system in a listening session, so students do not listen to the language.
- b. The voice is dry and non-rhythmical.
- c. The grammatical structures do not offer any explanation of part of its dashboard.



### **2.3.2 Teaching English Pronunciation by using Duolingo Application**

Based on learning activities that will do, I will use Duolingo as teaching-learning media. There are some ways to use Duolingo Application:

1. Opening the lesson with regards.
2. Asking one student to guide and common prayer.
3. Checking the attendance list and calling the names' students one by one.
4. Giving interest motivating to students.
5. Giving the students to chance to imagine what will we do in Duolingo App.
6. Explaining about Duolingo Application and giving examples how to use Duolingo Application.
7. Inviting students to join the Duolingo class.
8. Giving one assignment as an example and ask students to do the task (pronunciation session) in Duolingo Application.

Using Computer-Assisted Language Learning (CALL) gives many benefits for teachers, students, and EFL in learning English. Based on S. (2006) state the CALL method always used middleman or media and thus was consistent with the use of computer and other media technologies. According to Levy and Stockwell (2013), learning English using CALL is the way by



technology. It may also have an impact on the use of technology to operate the technology.

#### **2.4 Previous Research**

Alamudi (2018) in his research said about the effect of using the Duolingo App for English learning media on students. Her research just focusses on using Duolingo by Android. Learning program makes easy media can invite students to use it. The result of the study is Duolingo can give a big effect on students, exactly in learning English.

Another article, the research that uses Duolingo App also as the research media was written by Nuralie (2019) her research use Duolingo App to focus on the relation between the application as a learning medium and learning self-reliance focused on the English communication ability.







### CHAPTER III RESEARCH METHOD

#### 3.1 Research Design

The research uses experimental design. According to Dornyei (2007) the concept of quantitative research is the reliability very simple, but when the researcher found a validity and took the two parallel systems in quantitative research. In this research, I had examined the effect of the Duolingo App on English pronunciation. I chose the method to know the difference between of using a Duolingo App and a traditional method.

**2**  
**Table 3.1 The scheme of Experimental Design**

<b>Group</b>	<b>Pre test</b>	<b>Treatment</b>	<b>Post Test</b>
<b>E (Experimental), A-class of 11 grade, and consist of 14 students.</b>	<b>Y1</b>	<b>X1 (Twice giving a treatment by using Duolingo App)</b>	<b>Y2</b>
<b>C (Control), B-class of 11 grade and consist of 14 students.</b>	<b>Y1</b>	<b>X2 (Twice meeting by using LKS as usual)</b>	<b>Y2</b>

(Adopted from: Shal dish et al; 2002)

Items:

E: Experimental group

C: Control group

X1: Treatment by using Duolingo App

X2: Treatment by using traditional method

Y1: Pre-test

Y2: Post – test

### **3.2 Subject of the research**

#### **3.2.1 Participants**

The participants of this study were all the students XI A of vocational high school in academic year 2021-2022 amount 28 students of 11<sup>th</sup> grade, there were divided into two groups, 13 students in experiment group and 13 students in the control group. Two students were absent.

#### **3.2.2 Sample**

The sample of this study was the students of the 11<sup>th</sup> grade students of vocational high school within two groups. The research used a purposive sampling method to take a sample. According to Sugiyono (2017) in Imran et al (2020) the reason to use this purposive sampling method is appropriate to be used in quantitative research, or research that does not generalize. In this activity the author was helped by the English teacher. The sample of this study was students of XI-1 as the experiment group and XI-2 as the control group. The



scheme of the sample was:

**Table 3.2**  
**The Number of Sample**

The Number of Sample		
No	Group	The Number of Students
1	XI-1	13
2	XI-2	13
All of the Students		26

### 3.3 Research Instruments

#### 3.3.1 Pre test

The researcher took the score data before the experiment the Duolingo App in treatment group and control group. Students were given the test within 36 Words as instrument and their pronunciation was measured by Phonetic Oxford. Using Phonetic Oxford to measure Single Vowel (short & long) of student pronunciation.

#### 3.3.2 Post test

The researcher took the score data after the experiment the Duolingo App in treatment group and control group. Students were given the test within 36 Words as instrument and their pronunciation was measured by Phonetic Oxford. Using Phonetic Oxford to measure Single Vowel (short & long) of student pronunciation.



### 3.4 Data and Source Data

The data of this research was students' scores and was taken by pre-test and post-test. The source of the data is two groups at the sample. There were XI-1 consisted of with 13 students (experiment group) and XI- 2 consisted of with 13 students (control group).

### 3.5 Data Collection Method

This research collects the data by conducting the procedure:

- a. Asking permission teacher for take students as sample.
- b. Dividing students into control group and experimental group based on purposive sampling method.
- c. Giving pretest to control group and experimental group to measure student' pronunciation achievement of the subject before getting the treatment.
- d. Giving treatment to experimental group by using Duolingo App, and control group was traditional methods LKS (Lembar Kerja Siswa).
- e. Giving treatment to experimental group that using Duolingo App conduct for two meeting, and the control group in two meeting also.
- f. Giving posttest to experimental group and control group to measure pronunciation achievement after get the treatment.
- g. Analyzing and making conclusion from the results score of



data analysis by student's test (pretest and posttest) after students got treatment (for experimental group) and learning process as usual (for control group)

### 3.6 Data Analysis

After took the pre-test dan post-test, the data were analyzed by Statistical Package for Social Science (SPSS). SPSS used to calculate the score of pre-test and post-test. The researcher used SPSS (NPAR Test) to know there is a significant effect or not between the experimental group which was used Duolingo App and the control group which uses the traditional method.

The pretest and post test data in both experimental and control group were analyzed by using obligatory occasion in scoring. In the scoring method, test instrument must had focused the material. Like vowels (short and long) in pronunciation. According to Farid and Zulfikar, A (2016), that the scoring data was calculated with the formula:

$$\text{Individual score} = \frac{\text{Original Score}}{\text{Instrument}} \times 100 = \text{Total Score}$$

