

A THESIS

**IMPROVING STUDENTS' WRITING ABILITY: COMPOSING
ENGLISH WORDS CORRECTLY BY USING DUOLINGO
APPLICATION AT SMP NEGERI 5 PAREPARE**



BY

SRI RAHAYU PUTRI RULI
REG NUM: 19.1300.011

**ENGLISH EDUCATION PROGRAM
TARBIYAH FACULTY
STATE ISLAMIC RELIGION INSTITUTE
PAREPARE**

2026

**IMPROVING STUDENTS' WRITING ABILITY: COMPOSING
ENGLISH WORDS CORRECTLY BY USING DUOLINGO
APPLICATION AT SMP NEGERI 5 PAREPARE**



BY

**SRI RAHAYU PUTRI RULI
REG NUM: 19.1300.011**

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

**ENGLISH EDUCATION PROGRAM
TARBIYAH FACULTY
STATE ISLAMIC INSTITUTE (IAIN)
PAREPARE
2026**

SUPERVISORY COMMISSION APPROVAL

Thesis Title : Improving Students' Writing Ability:
Composing English Words Correctly by Using
Duolingo Application at SMP Negeri 5
Parepare

Student Name : Sri Rahayu Putri Ruli

Student Reg. Number : 19.1300.011

Study Program : English Education

Faculty : Tarbiyah

Basis for Supervisor Determination : Dean of the Faculty of Tarbiyah Decree
Number: 4041 Year 2026

Approved By:

Principal Supervisor : Dr. Arqam, M.Pd

EIN : 1974032920021221001

Co-Advisor : Munawir, M. Pd

EIN : 198809302023211016

Knowing:

Dean of the Faculty of Tarbiyah



Dr. Aldar M. Pd. Iy

EIN 19761230 200501 2 002

APPROVAL OF THE EXAMINING COMMISSION

Thesis Title : Improving Students' Writing Ability: Composing English Words Correctly by Using Duolingo Application at SMP Negeri 5 Parepare

Student Name : Sri Rahayu Putri Ruli

Student Reg. Number : 19.1300.011

Study Program : English Education

Faculty : Tarbiyah

Basis for Assigning Examiners : B4041./In.39/FTAR.01/PP.00.9/01/2026

Date of Graduation : (Monday, 6 July 2026)

Approved By:

Dr. Arqam, M. Pd (Chair)

Munawir, M. Pd (Secretary)

Dr. Abdul Haris Sunubi, S. S, M. Pd (Member)

Kalsum, M. Pd (Member)

(Signature: Munawir)

(Signature: Dr. Abdul Haris Sunubi)

(Signature: Kalsum)



Knowing:
 Dean of the Faculty of Tarbiyah

(Signature: Dr. Abdur M. Pd. Iqbal)
 Dr. Abdur M. Pd. Iqbal
 IDN.19761230 200501 2 002

ACKNOWLEDGEMENT

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Alhamdulillah Rabbil' Alamin, Praise is merely to the Almighty Allah Swt. Give thanks for God's love and grace for us, the most gracious, the most merciful, the lord of the universe and the master of the judgement, the king of the kings, who has given his bless and salvation to the writer for finishing this thesis entitled: Improving Students' Writing Ability: Composing English Words Correctly by Using Duolingo Application at SMP Negeri 5 Parepare. Shalawat and Salam always be given to our prophet Muhammad SAW. (Peace is upon him) a person that becomes a leader, the greatest example, the one who has led us out of an age of darkness and ignorance into an age of enlightenment and beneficial knowledge for all.

This thesis would not have been complete without the support of the family. For this reason, the writer would like to express deepest gratitude to their family, especially their parents, Amiruddin Lamiri and Halwati Haddaru, for their unwavering moral, materials and motivational support throughout this writing process, enabling the writer to complete this thesis successfully.

The writer would also like to express his deepest gratitude to Dr. Arqam, M. Pd As the main consultant & Munawir, M. Pd. As the assistant who has patiently guided and provided their time, motivations, advice and construction corrections to the writer for the completion of her thesis. Therefore the writer would like to express her sincere thanks and appreciation to:

1. Prof. Dr. Hj. Darmawati, S. Ag., M. Pd. As the rector of IAIN Parepare who has worked hard to manage the education of IAIN Parepare.

2. Dr. Ahdar, M. Pd. I. As the Dean of the faculty of Tarbiyah IAIN Parepare who has organized positive education for students at the Faculty of Tarbiyah and also served as an educator who has offered abundant positive and meaningful guidance to the writer, which has proven useful not only for this research but also for other forms of academic writing.
3. Yulie Asni, S. Pd., M. Pd. As Chair of English Education Program in IAIN Parepare who has given her motivation, guidance and suggestion that very helpful to complete the thesis of the writer. Thanks sincerely for the good advice and valuable input.
4. The writer would like to express sincere gratitude to Kalsum, M. Pd. and Dr. Abdul Haris Sunubi, M. Pd. as examiner in the research proposal seminar for all the helpful opinions and constructive comments to the writer input to her thesis.
5. Special and deepest appreciation and also gratitude for all the lectures of English Education and Tarbiyah Faculty, and all the staffs of IAIN Parepare for the time, knowledge, advices, and constructive motivations that have given the writer since she is studying in this marvelous university.
6. To my brother Mohd Afiq Amiruddin, for all his support and motivation during the process of writing this thesis.
7. The writer would like to express sincere gratitude to all her university's friends and close companions who have always spend their time to patiently help the writer to accomplish this thesis. Your constant support, encouragement, and vii understanding have helped the writer get through many challenging and clueless moment during the journey

8. Lastly, I would like to express my deepest gratitude to myself for preserving and reaching this point. And thank you for the hard work, patience and relentless effort

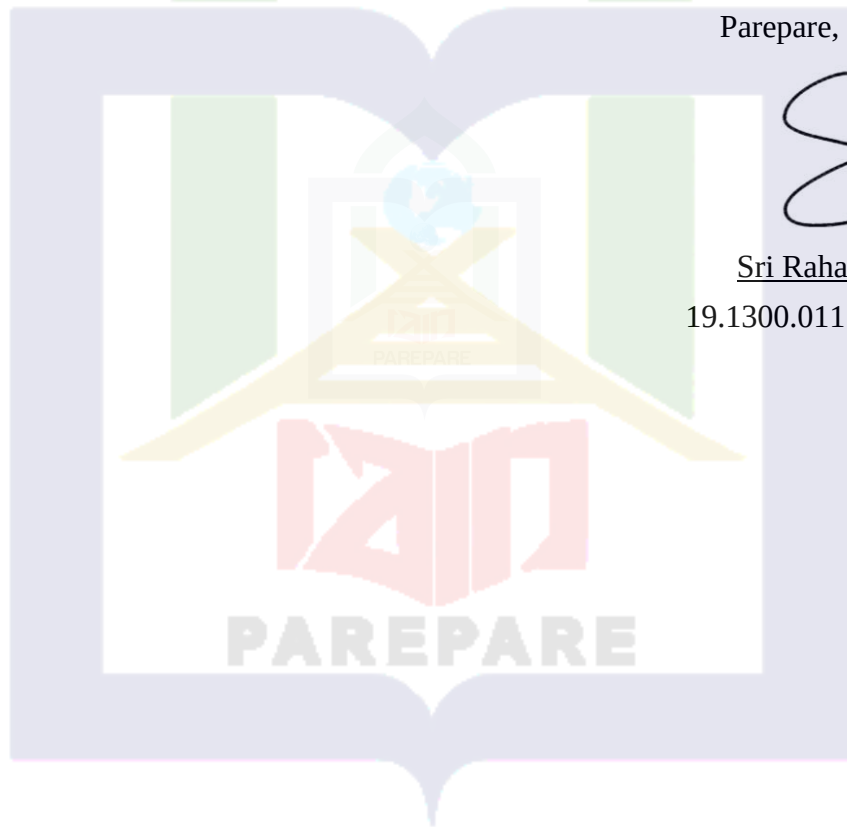
Finally, the writer also would like to say big thanks to all his amazing friends and awesome people that writer cannot mention the names, that have helped and supported her sincerely, the writer hopes that this Thesis can be useful for us and become a reference for the next research. Aamiin

Parepare, 20 July 2026



Sri Rahayu Putri Ruli

19.1300.011



STATEMENT OF THESIS AUTHENTICITY

The undersigned students:

Name : Sri Rahayu Putri Ruli
NIM : 19.1300.011
Place and Date of birth : Tawau, 08 November 1999
Study Program : English Education
Faculty : Tarbiyah
Thesis Title : Improving Students' Writing Ability:
Composing English Words Correctly
by Using Duolingo Application at
SMP Negeri 5 Parepare

I declare that truly and with full awareness that this thesis is truly my own work. If it is later proven that I have duplicated, imitated, plagiarized or that this work was made by someone else in part or in whole, then thesis and the degree obtained because of it will be legally void.

Parepare, 20 July 2026
Compiler,



Sri Rahayu Putri Ruli
19.1300.011

ABSTRACT

SRI RAHAYU PUTRI RULI, *Improving Students' Writing Ability: Composing English Words Correctly by Using Duolingo Application at SMP Negeri 5 Parepare* (Supervised by Arqam and Munawir)

The students' ability in composing English words correctly was still low because of limited vocabulary and monotonous learning without interactive feedback. Although Duolingo offers spaced repetition and instant feedback, its effectiveness in improving accuracy in composing English words has not been specifically examined. Therefore this study aimed to determine the effectiveness of Duolingo in improving writing students' writing ability especially in composing English words

This quasi-experimental study with pre-test and post-test involved 7th grade students at SMP Negeri 5 Parepare. Class E1 used Duolingo with high-intensity, class E2 with low intensity and the control class used conventional methods

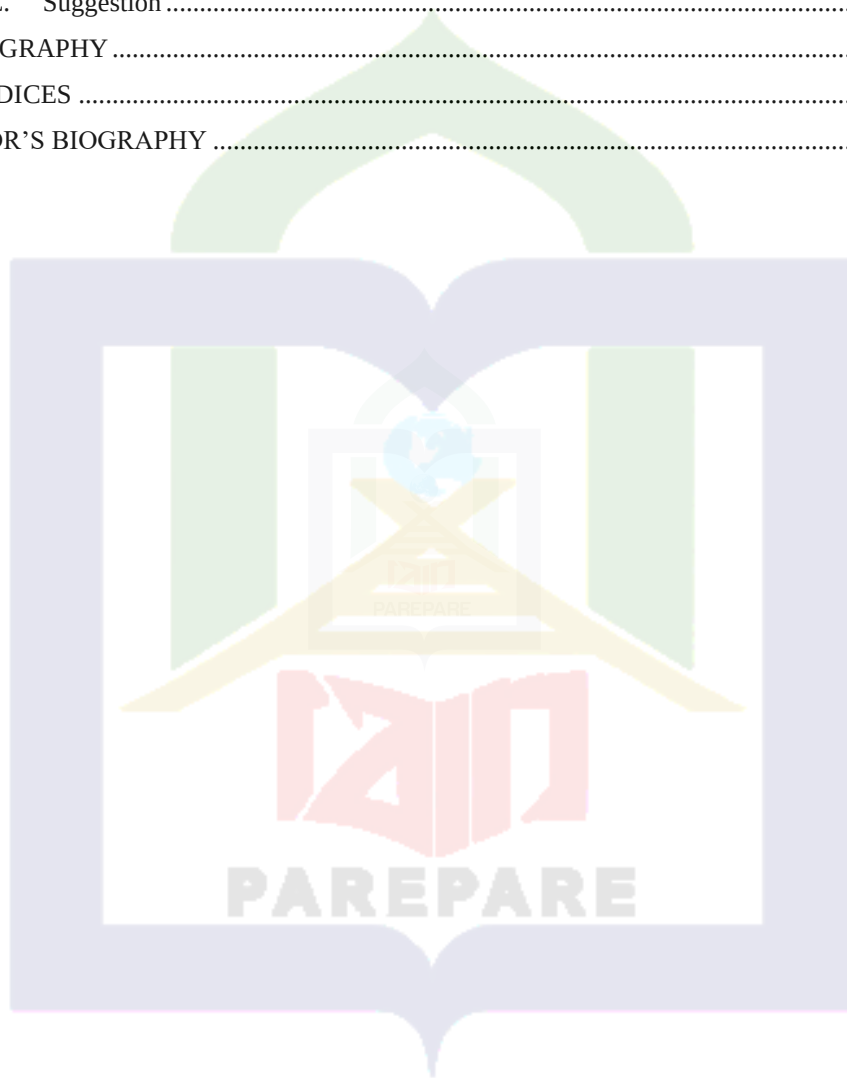
The results indicate that class E1 obtained an N-gain of 0.55, class E2 0.36 and control class 0.13. It can be concluded that Duolingo was effective in improving students' ability especially in composing English words and higher intensity of use led to better improvement. The findings are consistent with Ebbinghaus's Spaced Repetition Theory

Keywords: Duolingo Application, Writing Ability, Composing English Words, Learning Intensity

LIST OF CONTENT

	Page
COVER	i
SUPERVISORY COMMISSION APPROVAL	ii
APPROVAL OF THE EXAMINING COMMISSION	iii
ACKNOWLEDGEMENT	iv
STATEMENT OF THESIS AUTHENTICITY	vii
ABSTRACT	viii
LIST OF CONTENT	ix
LIST OF TABLES	xi
LIST OF PICTURES	xii
LIST OF APPENDIX	xii
CHAPTER I INTRODUCTION	1
A. Background of the Research	1
B. Research Question	4
C. Objective of the Research	4
D. Significant of the Research	4
CHAPTER II REVIEW OF RELATED LITERATURE	6
A. Theoretical Review	6
B. Previous Related Research Findings	7
C. Some Pertinent Ideas	11
D. Conceptual Framework	31
E. Variable and Operational Definition	32
F. Hypotesis	33
CHAPTER III RESEARCH METHOD	35
A. Research Design	35
B. Location and Duration of the Research	36
C. Population and Sample	37
D. Technique of Class Assignment	37
E. Instrument of the Research	37
F. The Procedure for Collecting Data	41
G. Technique of Data Analysis	43
CHAPTER IV FINDINGS AND DISCUSSION	46

A. Findings	46
B. Discussion	61
CHAPTER V CONCLUSION & SUGGESTION	63
A. Conclusion	63
B. Research Limitations	64
C. Suggestion	64
BIBLIOGRAPHY	66
APPENDICES	70
AUTHOR'S BIOGRAPHY	81



LIST OF TABLES

No	Titles of Tables	Pages
3.1	Structure of the Research Design	35
3.2	Blueprint of English	38
3.3	Dichotomous Scoring Rubric	40
4.1	Descriptive Results of Pre-test, Post-test and N-gain Scores Each for Class	47
4.2	Baseline Equivalent Test Result	48
4.3	Shapiro-Wilk Normality Test	48
4.4	Levene's Test for Homogeneity Result	49
4.5	Result Homogeneity of the Homogeneity of Regression Slopes	49
4.6	Comparative ANOVA Results	50
4.7	Descriptive Results of N-gain	51
4.8	One-way ANOVA Results for N-gain	51
4.9	Tukey Pst-Hoc Test Results for N-gain	52
4.10	Pre-test and Post-test Scores of Seventh-grade Students at SMP Negeri 5 Parepare (Class E1)	53
4.11	Distribution of Class E2 Pre-test Scores	54
4.12	Distribution of Class E1Post-test Scores	55
4.13	Class E1 Students Improvement	55
4.14	Pre-test and Post-test Score Class E.2	55
4.15	Distribution of Class E2 Pre-test Scores	57
4.16	Distribution of Class E2 Post-test Scores	57
4.17	Class E2 Students Improvement	57

4.18	Pre-test and Post-test Scores of the Control Class	58
4.19	Distribution of Class Control Pre-test Scores	59
4.20	Distribution of Class Control Post-test Scores	59

LIST OF PICTURES

No	Titles of Pictures	Pages
2.1	Duoligo Application	24

LIST OF APPENDIX

Number of Appendices	Titles of Appendices	Pages
01	Research Instrument	73
02	Administration	78
03	Documentation	81
04	Jamovi Application Analysis	82

CHAPTER I

INTRODUCTION

A. Background of the Research

English is one of the international languages that play a significant role in global communication. In today's era of globalization, English proficiency has become an essential skill in various fields of life, including education, economics, technology, tourism, and international relations. English serves as a primary tool for bridging communication among nations and is widely used as the medium of instruction in many educational institutions and workplaces. Therefore, mastering the English language has become an urgent necessity for every individual, especially the younger generation who must compete at the global level.

In Indonesia, English has been established as a compulsory subject from elementary to secondary education levels. This reflects an awareness of the importance of English proficiency as both an academic and professional asset. However, in practice, Indonesian students still face various challenges in mastering the English language.¹ One of the English language skills that students often find difficult is writing. Writing requires not only a solid understanding of grammar and vocabulary, but also the ability to think critically, organize ideas logically, and choose appropriate words based on context.

Writing in a foreign language, particularly English, requires a complex set of skills.² Students are not only expected to understand grammatical rules but also to

¹ Ken Hyland, *Second Language* (Cambridge: Cambridge Univ. Press, 2020).

² Ken Hyland, *Second Language* (Cambridge: Cambridge Univ. Press, 2020).

construct sentences with proper structure and express ideas coherently. In the context of learning English as a Foreign Language (EFL), these challenges become even greater due to the limited opportunities for daily language practice. Many students lack confidence in writing because they fear making mistakes. This fear eventually leads to low motivation to actively improve their writing skills.³

Various studies have indicated that students' low writing proficiency is influenced by several factors, including monotonous teaching methods, a lack of practical writing exercises, limited use of engaging learning media, and insufficient support from the learning environment. Based on the information obtained during the preparation stage and supported by previous research, it was found that many students at SMP Negeri 5 Parepare have difficulty in composing English sentences. They struggle not only with sentence structure and grammar, but also with vocabulary and understanding how to composing English words correctly.

To overcome these challenges, an innovative and contextual learning approach is needed. The use of digital technology offers a viable solution to enhance students' motivation and engagement in learning English. One form of technology that can be utilized is digital-based learning applications. Duolingo, for instance, has been widely used as a tool for learning foreign languages and is considered effective in helping users study independently and enjoyably.⁴

Several previous studies have shown that the use of the Duolingo application can make a positive contribution to language learning, particularly in improving

³ Jack C. Ricards and Willy A. Renandya, *Methodology in Language Teaching: An Antology of Current Practice* (Cambridge: Cambridge Univ. Press, 2020).

⁴ Pilar Munday, "The Case for Using Duolingo as Part of the Clasroom Experience," (AIESAD) *Asociation Iberoamericana de Education Superior a Distancia* 19: 1, 2016, pp 83–101 (2016): 83.

students' writing skills. Given the potential that Duolingo offers, the researcher is interested in conducting a further study on the effectiveness of this application in improving students' writing skills, particularly in constructing English words and sentences correctly.

In addition, the intensity of Duolingo usage also determines students' learning outcomes. This is in line with Skinner's theory, which states that repeated practice over a longer period of time can strengthen students' memory and understanding of learning materials. Therefore, in this study, the class with higher intensity of Duolingo use will encounter new vocabulary and practice simple English sentence patterns more frequently than students with lower intensity of use. As a result, it is predicted that the writing ability of students with higher intensity will show better improvement.

However, research that discusses the comparison of Duolingo application usage intensity in Indonesia is still very limited. Therefore, this study, entitled *"Improving Students' Writing Ability: Composing English Words Correctly by Using Duolingo Application at SMP Negeri 5 Parepare"*, was conducted to examine whether there is a difference in the improvement of writing ability, specifically in composing English words, between classes with different intensities of Duolingo use.

The findings of this study are expected to provide a clear understanding of the impact of using the Duolingo application on students' writing abilities. In addition, the results are also expected to serve as a reference for teachers and educational practitioners in integrating technology into the process of teaching English, thereby creating a more engaging, enjoyable, and relevant learning environment that aligns with the needs of 21st-century learners.

B. Research Question

Based on the above background, the researcher takes the formulation of the problem in this study as follows:

1. Is the use of the Duolingo application effective in improving students' writing ability, specifically in word arrangement skills, among seventh-grade students at SMP Negeri 5 Prepare?
2. Is there any significant difference in the improvement of writing ability, specifically in word arrangement skills, between the use of the Duolingo application with higher intensity and lower intensity among seventh-grade students at SMP Negeri 5 Prepare?

C. Objective of the Research

1. To determine the effectiveness of using Duolingo application in improving the ability to write English words, especially in composing English words for 7th grade students at SMP Negeri 5 Prepare
2. To find out whether there is a significant difference in the improvement of students ability to write English words, especially in composing English words, between the use of Duolingo application with high intensity and low intensity among 7th grade students at SMP Negeri 5 Prepare

D. Significant of the Research

1. Theoretical Contribution

The results are anticipated to expand existing knowledge on educational technology, particularly the use of Duolingo for developing English writing skills. This research especially addresses the impact of varying intensity levels of

Duolingo application, offering insight for subsequent studies exploring how learning duration affects writing performance

2. Practical Contribution

a. For Teacher

The findings can serve as a guide for selecting the optimal time and frequency for using Duolingo. Educators can identify whether high intensity or low intensity use yields better results in enhancing students' word composition skills.

b. For Students

Learners may experience a more interactive and autonomous learning process. Understanding the ideal intensity allows students to maximize Duolingo for independent writing practice beyond school.

c. For School

SMP Negeri 5 Parepare can utilize the outcomes to formulate policies on tech-based learning and to support facilities for implementing apps like Duolingo at an appropriate intensity level.

CHAPTER II

REVIEW OF RELATED LITERATURE

A. Theoretical Review

Behaviorist theory views learning as the formation of new behaviors through the association between a stimulus and a response. According to Skinner, when a behavior is followed by positive reinforcement, the likelihood of that behavior recurring increases. Conversely, in the absence of reinforcement, the behavior will gradually diminish over time⁵

The second theory is Spaced Repetition, proposed by Ebbinghaus. This theory explains that newly acquired information tends to be forgotten quickly, especially within the first 24 hours. Therefore, the concept of spaced learning is essential. Spaced repetition involves distributing learning material across several sessions with specific time intervals. This approach leads to better retention compared to cramming all the material at once.⁶

In addition, Stephen D. Krashen proposed the Input Hypothesis, which states that second language acquisition occurs when learners are exposed to comprehensible language input. The input should be slightly above the learner's current proficiency level. This condition is referred to as $i+1$. If the input is too easy, no progress occurs. However, if it is too difficult, learners will struggle to understand it⁷

⁵ B. F. Skinner, *Science and Human Behavior* (New York: The Macmillan Company, 1953).

⁶ Herman Ebbinghaus, *Memory a Contribution to Experimental Psychology* (New York: Teacher College, Columbia University, 1885).

⁷ Stephen D. Krashen, *The Input Hypothesis: Issues and Implications* (London: Longman Group Uk Limited, 1985).

In conclusion, these three theories suggest that the Duolingo application has the potential to enhance students' English proficiency. The principle of Behaviorism is reflected in Duolingo's reinforcement system, such as XP points, streaks, badges, and immediate feedback after each exercise. These features encourage students to practice repeatedly and build a learning habit. Spaced Repetition supports the implementation of a 3x30 minutes per week learning schedule. By dividing study sessions with time gaps, information is retained longer in memory and the risk of forgetting is reduced. Meanwhile, the Input Hypothesis explains that Duolingo presents material gradually according to students' proficiency levels, supported by visuals and audio. This allows students to receive language exposure that is both understandable and slightly challenging. Thus, the combination of reinforcement, structured study intervals, and appropriate input makes Duolingo an application that aligns with all three theoretical foundations to support the improvement of students' learning abilities, particularly in composing English words.

B. Previous Related Research Findings

In this part, the researcher presents some research related to this study, and there are some of them:

Maria et al, with the title *Duolingo as a Tool to Improve Vocabulary Writing in English as a Foreign Language in 2018*. With the aim of finding out whether the Duolingo application is efficient as an English learning tool. The method used is the classroom action research method with the results showing that Duolingo can be used as a tool to improve students' writing vocabulary because it positively influences the

motivational aspect. This is because there are interactive features in this application with a gamifications model so that it can attract children's interest in learning.⁸

Didit Kurniadi and Suprpto, with the title *Using Duolingo as a Technological Tool for Assessing Student's Writing Skills in EFL Context in 2022*. This research aims to provide a report on the use of Duolingo to improve and evaluate students' writing skills. The method used is a mix-methods research design with results showing that Duolingo can improve students' English learning abilities and is used in assessing and improving students' writing.⁹

Marta Damayanti, with the title *Improving Students Writing Ability in The Procedure Text Using Duolingo Application at 8 Grade Students of SMP NEGERI 5 Pati 2023/2024*. This research aims to: 1). Be familiar with Duolingo app improvements to procedure text before using the app. 2). Learn how the Duolingo app has improved procedural text after using the app. The method used is a quantitative method, with the results showing that using the Duolingo application in procedural texts is an effective technique which can improve students' writing skills.¹⁰

Fadhilah & Emzir with the title, *The Effectiveness of Duolingo Application to Improve Students' Vocabulary Mastery*. The purpose of this study was to investigate the significant effect of the Duolingo application on students' vocabulary mastery. A quantitative method with purposive sampling was employed. Class X IPA 2 served as the experimental group, while class X IPA 3 served as the control group. The findings

⁸ Maria Silva, "Duolingo as a Tool Vocabulary Writing in English as a Foreign Language" (Universidade Federal do Ceará, n.d.).

⁹ Didit Kurniadi and Suprato, "Utilizing Duolingo as a Technological Tool for Assessing Student's Writing Skills in EFL Context," *Proceedings of the UNNES-TEFLIN National Conference 5* (2023): 209.

¹⁰ Marta Damayanti, et al., "Improving Student's Writing Ability in the Procedure Text Using Duolingo Application at 8th Grade of SMP Negeri 5 Pati 2023/2024," *ResearchGate* 1, No. 4 (2023): 3

revealed a significant difference between students who used the Duolingo application and those who did not. Furthermore, students who used the Duolingo application four times a week demonstrated greater improvement than those who used it only once a week¹¹

Wuladari & Syafrizal, with the title *The Effect of Spaced Repetition Technique on Students' Vocabulary Retention*. This study was conducted to investigate the effect of spaced repetition technique on students' vocabulary retention. The method used in this research was quasi-experiment. The sample consisted of 60 students divided into two classes: experimental class and control class. The instrument used was vocabulary retention test. And the result showed that the mean score of experimental class was higher than control class. The Sig. value was $0.000 < 0.05$. it means that spaced repetition technique significantly affects students' vocabulary retention¹²

Several previous studies have proven the effectiveness of the Duolingo application in English language learning. Maria et al. (2018) in their research showed that Duolingo can improve students' vocabulary writing because of the gamification features that are able to increase learning motivation. In line with that, Kurniadi and Suprpto (2022) reported that Duolingo is effectively used as a technological tool to assess and improve EFL students' writing ability. Damayanti's research (2023) also found that the use of the Duolingo application is effective in improving the ability to write procedure text in junior high school students. On the other hand, Fadhilah and Emzir (2022) specifically tested the frequency of using Duolingo and found that

¹¹ Fadhilah and Emzir, "The Effectiveness of Duolingo Application to Improve Students' Vocabulary Mastery," *UIN Raden Intan Lampung* 7 (2022): 1–11.

¹² Wuladari and Syafrizal, "The Effect of Spaced Repetition Technique on Students' Vocabulary Retention," *UIN Raden Intan Lampung* 14 (2021): 184–98.

students who used the application 4 times a week experienced a higher increase in vocabulary mastery compared to those who only used it 1 time a week.

Meanwhile, Wulandari and Syafrizal (2023) quantitatively proved that the spaced repetition technique has a significant effect on students' vocabulary retention. Although these studies have contributed, there are several gaps that have not been answered. First, the research by Maria et al. (2018), Kurniadi and Suprpto (2022), and Damayanti (2023) only used one experimental group without any comparison class with different treatment. Second, the research by Fadhilah and Emzir (2022) did compare frequency, but the main focus was vocabulary mastery, not on the ability to write words correctly.

Third, the research by Wulandari and Syafrizal (2023) tested spaced repetition but did not use an application media and did not link it to writing skills. Thus, there has been no research that specifically tests how differences in duration and frequency of using the Duolingo application can affect the ability of composing English words correctly in junior high school students.

Based on these gaps, this research has novelty in three aspects. First, in terms of research design, this research uses 2 experimental classes and 1 control class. Experimental class 1 uses Duolingo for 60 minutes which is divided into 3 sessions per meeting, while experimental class 2 uses Duolingo for 20 minutes which is divided into 2 sessions per meeting. This is to test the principle of spaced repetition and reinforcement from Skinner's Behaviorism theory (1953) and Krashen's Input Hypothesis (1982). Second, in terms of variable focus, this research does not only measure vocabulary mastery in general, but specifically measures writing ability in the aspect of composing English words correctly or the ability to write and spell

English words correctly. Third, in terms of location and subjects, this research was conducted at SMP Negeri 5 Parepare with class student subjects who had never been studied before using this design. Thus, this research is expected to provide new contributions related to the effectiveness of the dosage of using Duolingo on students' writing skills.

C. Some Pertinent Ideas

1. Writing Ability Theory

a. Definition of Writing Ability

Writing ability is one of fundamental skills that students must possess, enabling them to express their ideas, understanding, experience to various parties and regardless of time and places. Furthermore, students can also enhance and broaden their knowledge through writing.¹³

According to Kellogg (2001, as cited in Fareed, Ashraf, and Bilal, 2016), writing is a cognitive process that tests memory, thinking skills, and verbal proficiency in order to successfully convey ideas.¹⁴ According to Zulkarnaini, "writing is a process lowering graphic symbols and activities giving birth to ideas, thoughts, feelings, to readers through language media in the form of writing. Good writing can be understood and the content can be understood ideas or thoughts to the reader. Regarding collecting ideas, even though you have been given a topic for writing, students find it difficult to

¹³ Tri Widyahening S S., "Media Gambar Sebagai Sarana Meningkatkan Kemampuan Menulis Atau Writing Ability Berbahasa Inggris Bagi Para Siswa Yang Belajar Bahasa Inggris" (Universitas Slamet Riyadi, 2011).

¹⁴ M. Fareed Ashraf S. and M. Bilal, "ESL Learners' Writing Skills: Problem, Factors and Suggetsion," *Scipase.Com* 4(2): 1 (2016): 82.

develop ideas. So, when writing we need high concentration, this is because in writing we have to really understand what we are writing”.¹⁵

In conclusion, writing ability is a fundamental skill that is essential for students, allowing them to effectively express their ideas, understanding, and experiences. The writing process involves cognitive skills that test memory, critical thinking, and verbal proficiency, all of which contribute to success in second language learning. Additionally, writing is an activity that conveys ideas and feelings to readers through graphic symbols. Although students often face challenges in developing ideas when given a writing topic, mastering good writing skills will enrich their communication and understanding.

b. The Importance of Writing Ability

One of the most important aspects of English is the ability and skills to write English. However, public awareness of the importance of English writing skills is still very lacking. Even though they don't know, there are many benefits and how important it is to practice our English writing skills. There are several reasons why English writing skills are important, namely as follows:

1) Can Communicate More Widely with Various Kinds of People

With good English writing skills, it makes it easier for us to communicate with other people from various countries. For example, we can establish communication by utilizing social media.

¹⁵ Zulkarnain Diran, *Menikmati Proses Dan Hasil Menulis* (Indramayu: CV. Adanu Abimata, 2023).

2) Opportunity to Get a Scholarship Abroad

As we already know, one of the requirements for getting a scholarship abroad is to use English. Therefore, we are required to write a number of words in English that contain motivation to study at the desired university, so we need to improve our writing skills to get the scholarship.

3) Have extensive knowledge

With the skills and ability to write English, we will expand our knowledge. This is because when we write, we will look for various sources information from either books or the internet to produce good writing.

4) Passive Income

It can be said that writing skills are much needed by companies, especially writing in English. Many companies are looking for freelance writers to write in English, so with this ability it can be an opportunity for us to make money.

5) Practicing English Writing Creativity

Writing English is the same as practicing creativity. This is because when we diligently write writing that is of interest to many people, our creativity becomes more developed. Therefore, we can take various English writing training to improve our skills.¹⁶

So, we can say that writing English is a skill that really requires good understanding. There are many things to pay attention to and need to

¹⁶ Nada Nisrina, "5 Manfaat Dan Pentingnya Keterampilan Menulis," *ICAN English*, 2023, <https://www.icanenglish.net/news/keterampilan-menulis-bahasa-inggris/>.

understand in writing English, so that we are able to produce good and correct writing.

2. Concept of Composing Words

a. Definition of Word and Composing Words

A word is defined as a combination of sounds or sound utterances in oral form and symbolizing a meaning consisting of one morpheme or even a combination of several morphemes. According to Keraf (1999, as cited in Yulia, 2011), a word is the smallest unit obtained after a sentence is broken into its parts, each of which contains an idea.¹⁷

Composing words is defined as the foundation of the beauty of language. In the world of literature, beautiful and memorable writing begins with a person's ability to arrange words into meaningful sentences. Composing words is one of the learning activities while playing with the aim of honing students' abilities in a simple way. Where this learning has simple rules, namely students have to arrange scrambled words into words that are correct and have meaning which can train students' thinking power and creativity. Apart from that, by learning to arrange words, students are trained to solve puzzles, train children's brain sharpness, train students' cooperation (if done in groups) and train students to solve problems with their own abilities.¹⁸

So we can say that composing words is a learning activity where student's to be more active during the learning process. This aims to improve

¹⁷ Yulia Anjas Indriani, "Penggunaan Konjungsi Bahasa Indonesia" (Universitas Muhammadiyah Purwokerto, n.d.).

¹⁸ Hsin Ting Hung et al., "A Scoping Review of Research on Digital Game-Based Language Learning," *Elsevier* 126 (2018): 104.

student's thinking abilities, student's reactivity, increase student's vocabulary and student's learn to complete tasks either individually or in groups. With learning like this, it will slowly help students to improve their abilities

b. The Important of Learning to Compose English Words

Some of the importance of learning to compose English words is as follows:

- 1) By arranging scrambled words, the students' role in the class will be more active so that the class does not give the impression that only the teacher is actively speaking.
- 2) By arranging words, students will learn a lot of new vocabulary that they may not know yet.
- 3) If vocabulary learning is carried out in groups, then cooperation among students is trained to complete it together. On the other hand, if students work on assignments individually, it will train students to solve existing puzzles to the best of their abilities.
- 4) With this activity, students' brain sharpness in thinking and creativity in composing words will be trained.
- 5) Learning to compose words is the same as playing with words, so students don't get bored quickly and it gives the impression of learning as fun.

c. Difficulty Writing and Composing English Words

Some of the difficulties faced by students in writing are as follows:

1) Lack of Understanding

Vocabulary can be said to be key when we want to learn a new language. One of the difficulties that students often encounter in writing,

especially in English, is their lack of mastery of understanding, which makes them difficult to write and compose English words.

2) Poor Mastery of Language Grammar

The use of grammar in writing and arranging words is also very important in English. Good use of grammar will produce sentences with the right meaning. And this is what makes it difficult for students to write and compose English words.

3) Poor English Language Skills

Poor English language skills will also have an impact on students' learning process, especially in writing and composing English words.

4) Lack of Student Motivation to Learn

Motivation in learning is the main thing. This is because if students are not motivated to take part in learning English, then the learning material provided will not be well received so that when practicing writing and composing words they will have difficulty. For this reason, a teacher must be smart in increasing students' learning motivation.

5) Use of Inappropriate Teaching Methods

Teaching methods are strategies used as tools achieve learning goals. There for, we can say that teaching methods support the success of the learning process. The use of inappropriate methods is sometimes the cause of student's difficulties in receiving learning material.

For this reason, a teacher must be required to choose appropriate and creative teaching methods. For example, when the learning objective is to

improve student's writing and composing skills, then the method used for most of the learning process is that students are given lots of practice exercises.¹⁹

d. How to Compose English Words

In learning English, composing several words into a sentence is a very necessary for a student. Where composing words into sentence is a basics English language skill to start communication, either verbally or in writing. There are basic ways of arranging words into sentences in English.

1) Get to Know English Sentence

In learning English, we must first understand what each word means and the definition of the meaning of the sentence so that it is easy for us to compose it. In English itself, a sentence is a collection of words with the composition of a subject, verb and object.

A simple sentence is a sentence that consists of one independent clause that conveys one main idea. Where this sentence only has a subject and predicate and can stand alone as a complete statement.²⁰ According to Huddleston, a simple sentence is a sentence that has one subject and one predicate, which does not have a subordinate or coordinate clause.²¹

2) Get to Know English Simple Sentence Function

In English communication, simple sentences are one of the most basic and important sentences. Simple sentences are used in various

¹⁹ Ejona Demneri, "Student's Difficulties in Writing in English Language," *Proceedings of the Internasional Conference on Modern Research in Education* 3, No.1, (2024) (2024): 39–40.

²⁰ Raymond Murphy, *English Grammar in Use* (Cambridge: Cambridge Univ. Press, 2019).

²¹ Rodney Huddleston, *The Cambridge Grammar of the English Language* (Cambridge: Cambridge Univ. Press, 2017).

everyday contexts, from everyday conversations to formal writing. Therefore, it is very important for us to know what the functions of simple sentences are so that we can communicate effectively.

Here are some of the functions of simple sentences, namely:

- a) Conveying simple information, facts or truths clearly
- b) Expressing ideas or opinions
- c) Giving short commands or instructions
- d) Conveying simple messages effectively²²

3) Get to Know Simple Sentence Structure

Simple sentence is one of the most basic and important types of sentences to learn. Simple sentences are used to convey one main idea or information to others. Therefore, understanding the structure of a simple sentence is essential for anyone who wants to communicate effectively in English.

The structure of simple sentences and examples are as follows:

$(S+V (+O)(+Adj/Adv)^{23}$

Where:

S : Subject

V : Predicate or action

O : Object (optional)

Adj : Adjective (optional)

Adv : Adverb (optional)

²² Rodney Huddleston, *The Cambridge Grammar of the English Language* (Cambridge: Cambridge Univ. Press, 2017).

²³ Michael C. Combs, *Basic English Grammar: A to Z Elementary English Course* (British Columbia: Sorensen Books, 2024).

e. Example of Simple Sentence

1) Simple Sentence with Subject and Predicate (S+V)

- a) She Laughs = She (S)
Laughs (V)
- b) Amel Sleeps = Amel (S)
Sleeps (V)

2) Simple Sentence with subject, predicate and object (S+V+O)

- a) She eats a banana = She (S)
Eats (V)
A banana (O)
- b) He reads a comic = He (S)
Reads (V)
Comic (O)

3) Simple Sentence with Subject, Predicate and Adjective (S+V+ADJ)

- a) Wia is Happy = Wia (S)
Is (V)
Happy (Adj)
- b) He is tall = He (S)
Is (V)
Tall (Adj)

4) Simple Sentence with subject, predicate and Adverb (S+V+ADV)

- a) Ayu sings beautifully = Ayu (S)
Sings (V)
Beautifully (Adv)

5) Simple Sentence with Subject, Predicate, Object and Adjective

(S+CV+O+ADJ)

- a) Afis eats a delicious cake = Afis (S)
 Eats (V)
 Delicious (Adj)
 Cake (O)
- b) Daffa buys a new car = Daffa (S)
 Buys (V)
 New (Adj)
 Car (O)

6) Simple Sentence with Subject, Predicate, Object and Adverb

(S+V+O+ADV)

- a) He plays drum loudly = He (S)
 Plays (V)
 Drum (O)
 Loudly (Adv)
- b) He drivers car carefully = He (S)
 Drivers (V)
 Car (O)
 Carefully (Adv)

3. The Concept of Learning Intensity

Every learning process essentially requires a certain amount or level of exposure to achieve goals effectively. This level involves how much time is spent in each learning session and how often the activity is repeated within a given period. When the amount is too little, the impact on learning becomes minimal. On the other hand, when it is excessive without breaks, students are more likely to

experience fatigue or boredom. It is this balance that makes intensity an important concept to examine in depth, especially for researchers who aim to test the relationship between the strength of a treatment and the learning outcomes of students.

The level of intensity in instruction often determines how successful an intervention is, especially when researchers need to identify the right “dosage” to produce a noticeable effect.²⁴ Conceptually, intensity describes the combination of total duration and how often a treatment is administered within a specific timeframe. In experimental methodology, this combination is referred to as treatment dosage. Two key aspects are involved.²⁵ So, the first aspect is duration, which means the number of minutes for each meeting. The second aspect is frequency, which refers to how many sessions are scheduled per week. If these two aspects are not understood accurately, researchers will struggle to confirm whether gains in learning outcomes truly come from the intervention, or are instead influenced by other variables.

This understanding is also essential to prevent double meanings when setting up treatments in an experimental class. Adjusting intensity is intentionally done to observe dose-response patterns. In short, researchers aim to test whether

²⁴ Carolyn Denton et al., “Interventions for Students with Persistent Reading Difficulties: A Focus on Intensity,” *Learning Disabilities Research & Practice* 37, no. 2 (2022): 77–85

²⁵ Deborah C. Simmon, Lynn S. Fuchs, and Douglas Fuchs, “Word Problem Intervention for Students with Mathematics Difficulties: A Meta-Analysis,” *SAGE Publications* 87, no. 4 (2021): 409

longer and more frequent sessions actually lead to higher student achievement.²⁶ Specifically in foreign language learning, intensity plays a central role. The reason is that mastering a language cannot happen instantly learners need regular and repeated exposure so that material can enter and remain in long-term memory effectively.²⁷

4. Mobile Assisted Language Learning (MALL)

In addition to the inappropriate selection of teaching methods, another challenge in English learning at school is the limited practice time for students outside class hours. This condition causes students to receive insufficient exposure to master vocabulary and comprehend basic sentence structures. To address this issue, students need alternative media that can be accessed independently without depending on the teacher. Mobile-based media offers a solution because it can be used flexibly anytime and anywhere. Based on this condition, the Mobile Assisted Language Learning approach is considered relevant to be examined more deeply as the foundation for intervention in this study.

Mobile Assisted Language Learning or MALL is a language learning approach that utilizes mobile devices such as smartphones, tablets, or laptops as the main media. Through this approach, learners can access learning materials anytime and anywhere in accordance with the concept of anytime anywhere

²⁶ Russell Gertsen et al., *Assisting Students Struggling with Mathematics: Response to Intervention (RTI) for Elementary and Middle Schools* (Washington: National Center for Education Evaluation and Regional Assistance, 2009).

²⁷ Dough Rohrer, Harold Pashler, and Michael C. Mozer, “The Role of Spacing in Learning and Memory,” *Current Direction in Psychological Science* 29, no. 6 (2020): 582–88

learning.²⁸ The advantages of MALL lie in four main characteristics, namely: high mobility, adaptation to individual learning styles, stable internet connectivity, and the application of the microlearning principle. The microlearning principle allows material to be broken down into short learning sessions with varying durations in each meeting. This flexible duration is what makes MALL suitable for manipulating the intensity variable, because the length of study time can be adjusted without having to switch to another application.

Findings from previous studies show that the Duolingo application is effective in improving students' language skills, especially in the aspects of vocabulary and simple sentence structure. Optimal results are seen when the application is used consistently with an appropriate time allocation. The effectiveness of Duolingo is supported by gamification features, daily practice systems, and spaced repetition methods.²⁹ Based on these considerations, Duolingo is determined as the intervention tool in this study. This media is used to compare the effects of high intensity, low intensity, and no use of Duolingo on the sentence construction skills of seventh-grade students at SMP Negeri 5 Parepare

²⁸ Agnes Kukulska Hulme, "Mobile Language Learning and Education," in *Routledge Encyclopedia of Research Methods in Applied Linguistics* (London: Routledge, 2021), 83–90.

²⁹ Chia-Ju Lin and Chin-Yu Lin, "The Effect of Duolingo on EFL Learner's Vocabulary Learning: A Meta-Analysis," *SAGE Open* 12, no. 4 (2022): 215, <https://doi.org/10.1177/21582440221139277>.

5. Duolingo Application



Picture 2.1 : Duolingo Application (Source: Google)

In today's digital era, we can learn English from various sources and of course with different learning sensations. If in general learning is only done face to face and continuously being given material it will make students bored. Therefore, learning can be done by utilizing increasingly sophisticated technology, one of which is learning using the Duolingo application and experiencing the sensation of learning while playing.

a. Definition of Duolingo Application

Duolingo is a language learning platform launched in 2011 with over 30 languages available to learn and over 500 million users. Therefore, this app is designed with a gamification system to make the learning process more creative and engaging. As the app was designed, it serves as a game with scientifically proven activities, ensuring effective language learning.³⁰

³⁰ Musa Nushi and Mohamad Hosein Egbali, "Duolingo: A Mobile Application to Assist Second Language Learning," *Duolingo* 17(1), 89–98 (2020): 90.

Below are the top 10 language that we can learn on the Duolingo application:

- 1) English
- 2) Spanish
- 3) French
- 4) German
- 5) Japan
- 6) Korea
- 7) Italia
- 8) Hindi
- 9) Mandarin
- 10) Portuguese³¹

b. Features of Duolingo Application

There are 6 features provided by the Duolingo application as quoted in the journal created by Gitrif Pahlevi, Muhammad R. Putra Hardiyanto and Muhammad F. Nugroho:

1) Interactive Lessons

Duolingo offers lessons in the form of interactive games and exercises. Users will undergo various types of exercises, such as answer multiple choice questions, spell words, translates sentences and so on.

³¹ Duolingo, *Duolingo Language Report* (2020, n.d.), <https://blog.duolingo.com/global-language-report-2023/>.

2) Available Languages

Duolingo provides lessons for many different languages, including vernaculars popular like English, Spanish, French, German, and much more. Additionally, there is the option to learn languages rarer foreign.

3) Various Levels of Difficulty

This application is suitable for beginners to advanced level. User can select level difficulty commensurate with their abilities.

4) Progress Tracking

Duolingo makes it possible users to track their progress in learn language. It includes statistics about how many exercises have been completed and how well you perform in each exercise.

5) Free (with Optional In-App Purchase)

Duolingo can be downloaded and used for free. However, there is also the option to subscribe to Duolingo Plus, which removes ads and provides some features addition.

6) Multiplatform Access

Apart from apps mobile, Duolingo can also be accessed via the website, so users can learn languages in various devices.³²

c. How to use Duolingo Application

The ways to use the Duolingo application from creating an account to the end are as follows:

³² Muhammad R. Putra Hardiyanto, et al., "Pengaruh Fitur-Fitur Aplikasi Duolingo Terhadap Popularitasnya," *Universitas Islam Indonesia* 3 No. 1(2024): 24.

1. First of all, we download the Duolingo application on the App Store and Play Store
2. After downloading, open the application and select create an account (if we don't have an account yet).
3. Select the language we want to learn (English).
4. On this page, you will be asked to select the source from which you learned about the Duolingo Application
5. The next stage you will be asked for reasons why you are studying. After that, choose your daily goal.
6. Next you will take a placement test or basic lessons as a beginner.
7. After that we will be directed to choose our learning targets
8. On this page we have to fill in the email address connected to your cellphone
9. Enter the password to access your email account and make sure the password you choose is easy for you remember.
10. If a display like this appears, it means you are logged in and have a Duolingo account. And now you can complete the existing challenges according to the learning targets you have previously chosen and collect as many points as possible.³³

³³ Cindy Blanco, "Duolingo 101: Cara Belajar Bahasa Di Duolingo," *Duolingo Blog*, 2021, <https://blog.duolingo.com/duolingo-101-how-to-learn-a-language-on-duolingo/>.

d. Benefits of Using Duolingo Application

In his digital era, technology has become very important in the learning process as additional media. One of the language applications that is quite popular is the Duolingo Application. Duolingo is an interactive and fun language learning application with a gamification system so that learning feels more fun. Following are some the advantages of the Duolingo application:

1. Attractive Design

Duolingo has an interactive and attractive design, so that the learning process feels more fun

2. Structured Material

In the Duolingo application the learning material is arranged in stages starting basic vocabulary, simple structures to more complex grammatical sentences making it easier for users to understand the material well.

3. Flexibel

The Duolingo application can be accessed using anything and anywhere, be it a cellphone, computer or other electronic device making it easier for users to access it whenever they want.

4. Free

The Duolingo application can be downloaded and accessed for free without any cost (although several subscription fee features are

available), but we can also access several features for free to support the learning process.

5. Active Community

In the Duolingo application there is an active and quite large community, this allows us to interact with other users, exchange information, find friends from various countries and improve our language skills.

6. Review and Practice Features

This feature allows us to repeat material that has been studied with the aim of helping us to test and strengthen our language skills.

7. Many Languages to Learn

In this application there is a lot of learning in various languages, this aims to make it easier for us to learn various languages with just one application

8. Monitoring Learning Progress

In this application we can monitor our learning process, find out the achievement of learning targets at the beginning and find out what needs to be improved

9. Game Based Learning

The gamification system in the Duolingo application will make the learning atmosphere feel more relaxed with prizes and challenges that makes us want to continue.

e. Tips for Using Duolingo Application

In the digital age, learning a new language has become more accessible than ever, thanks to innovative apps like Duolingo application. This platform offers an engaging and interactive way to learn a foreign language. Here are some tips to help you get the most out of Duolingo:

1. Continuously Complete the Challenges Gradually

Duolingo is an application designed to help you learn language gradually. So you can monitor your learning progress. Therefore, continue to complete the challenges gradually to know the progress of your language skills consistently.

2. Take Advantage of all the Features Available in Duolingo

In Duolingo, there are many features that can support your language learning process. By utilizing these features, you can maximize language learning and make the learning process more enjoyable.

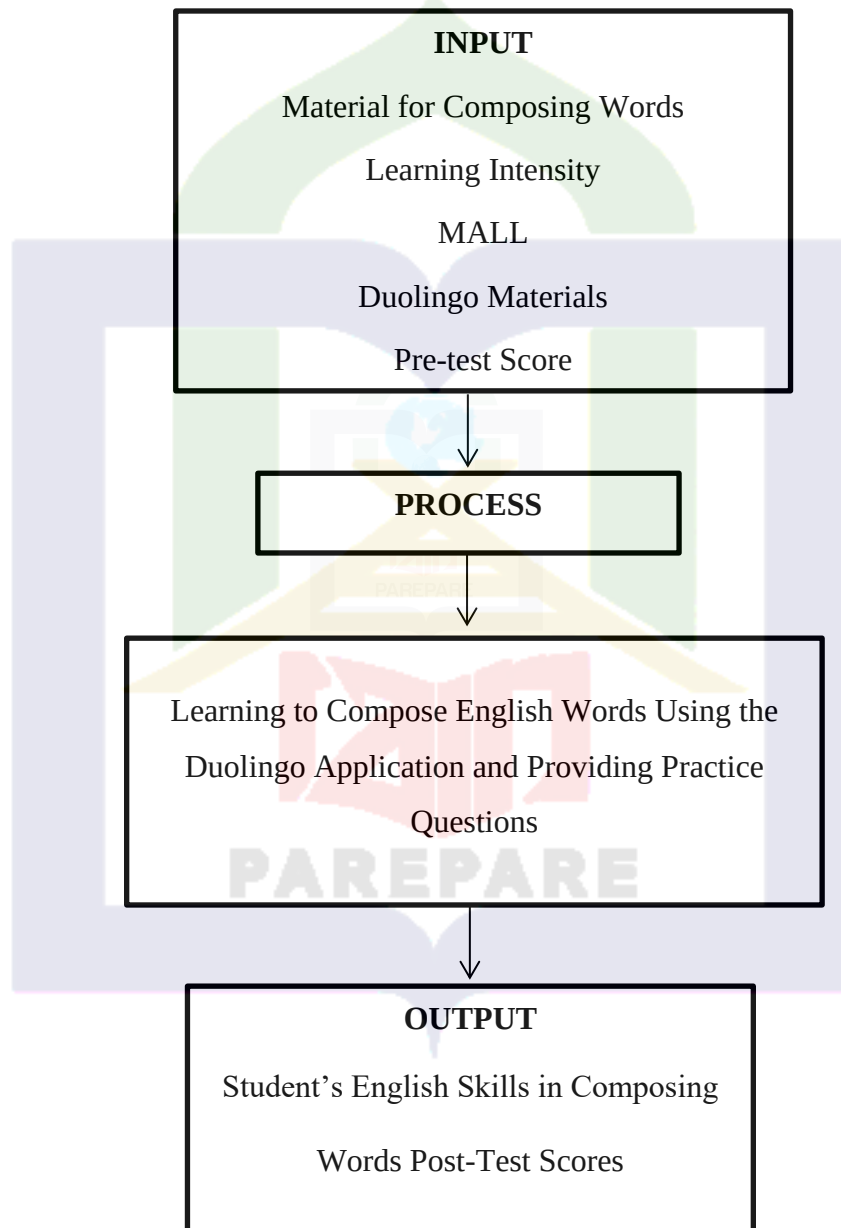
3. Adjust Duolingo Application to Fit Your Activities

The Duolingo application is very flexible and can be accessed anywhere and anytime. You can set your study time, choose interesting topics and even invite friends to learn together. With this, you can make learning a language a fun daily activity³⁴

³⁴ Germán García Botero, Srinivasam Gopalakrishnan, and Jorge Palacios, “Gamification and Mobile Language Learning: A Comparative Study between Duolingo and Memrise,” *Universitat Politècnica de València* 14 (2019): 39.

D. Conceptual Framework

In this study, the conceptual framework will help identify key concept, develop hypotheses and analyze data related to use the Duolingo application in improving students writing skills.



In the diagram above there are three elements, namely:

1. The input section contains material about composing words, the Duolingo application and pre-test scores as initial data before students are given treatment.
2. At the process stage students are given teaching related to composing words, intensity learning, MALL, using the Duolingo application and practice questions.
3. At the output stage the researcher obtained the students' post test scores as a result of the research, whether the students experienced improvement or not after using the Duolingo application.

E. Variable and Operational Definition

1. Variable

In this research there are two variables, namely the dependent variable and independent variable:

a. Independent variable

Intensity was defined as *treatment dosage*, which was the product of frequency and duration of Duolingo use. Operationally, the intensity was categorized into three levels:

1. High Intensity: Students used Duolingo in 4 meetings per month with a total duration of 60 minutes per meeting. Each meeting was divided into 3 sessions. Total dosage: 240 minutes per month
2. Low Intensity: Students used Duolingo in 4 meetings per month with a total duration of 20 minutes per meeting. Each meeting was divided into 2 sessions. Total dosage: 80 minutes per month

3. Control Class: Students did not use the Duolingo application and were taught using conventional methods
 - b. Dependent variable: Students' ability in composing English words was measured through pre-test and post-test scores of 7th grade students at SMP Negeri 5 Parepare
2. Operational Definitional of variable
- a. Duolingo is a free language learning application that uses gamification methods to help users learn new languages in a fun and interactive way.³⁵ Intensity of Duolingo use refers to the duration of time students spend using the Duolingo application daily for learning vocabulary and sentence structure over 4 weeks. In this study, intensity is operationalized into three treatment groups (high, low and without Duolingo)
 - b. Students' ability in composing English words refers to the ability to arrange scrambled English words to form grammatically correct words. Operationally, this ability is measured by the students's scores on a test assessing word structure, spelling accuracy and meaning

F. Hypotesis

The hypothesis of this research is formulated as follows:

1. Null Hypothesis (H₀): There is no significant difference in students' ability in composing English words among seventh-grade students at SMP Negeri 5 Parepare in the high-intensity class, low-intensity class and control class

³⁵ Shawn Loewen et al., "Mobile Assisted Language Learning: A Dolingo Case Study," *ResearchGate* 31, No. 3 (2019): 3.

2. Alternative Hypothesis (H_a): There is a significant difference in students' ability in composing English words among seventh-grade students at SMP Negeri 5 Parepare in the high-intensity class, low-intensity class and control class



CHAPTER III

RESEARCH METHOD

This section contains instructions for achieving research objectives. This section also contains information for readers about research methods, location, duration, research objects, data collection and analysis.

A. Research Design

This research used a multi-group quasi-experimental design with two experimental class and one control class. This design was chosen to compare the effect of using the Duolingo application on student's writing ability, especially in composing English words, across two different experimental classes by comparing the results with those of the control class, which did not received any treatment

Therefore the structure of the research design can be described as follows:

Group	Pre-Test	Treatment	Post-Test
High Intensity Class (60 minutes per meeting divided into 3 sessions)	O_1	X_1	O_2
Low Intensity Class (20 minutes per meeting divided	O_3	X_2	O_4

2 sessions)			
Control Class (Without Duolingo Application)	O_5	-	O_6

Table 3.1 Structure of the Research Design

1. Experiment 1` : Group who used the Duolingo Application with high intensity (60 minutes per meeting divided into 3 sessions)
2. Experiment 2 : Group who used the Duolingo Application with low intensity (20 minutes per meeting divided into 2 sessions)
3. Control : Groups that don't use Duolingo Application
4. O_1, O_3, O_5 : Initial data to measure student's abilities before being given treatment
5. O_2, O_4, O_6 : Final test to measure student's abilities after treatment
6. X_1 : Treatment using Duolingo applicaion with high intensity
7. X_2 : Treatment using Duolingo application with low intensity

B. Location and Duration of the Research

This research was conducted at SMP Negeri 5 Parepare, located on Bau Massepe Street No. 24, Bacukiki Barat District, Parepare City, South Sulawesi. The study was carried out over four meetings within a one-month period.

The reason for selecting this school as the research site is that the English teaching methods used there are still relatively monotonous and traditional, relying

heavily on textbooks. The researcher observed that such approaches have not yet maximized the potential of digital technology in language learning. Therefore, through this study, the researcher aims to introduce the use of the Duolingo Application as a form of technology-based learning innovation to help improve students' ability to accurately compose English words.

C. Population and Sample

1. Population

The population of this study was all 7th grade students of SMP Negeri 5 Parepare in the academic year 2025/2026, consisting of 92 students in 3 classes, namely class 7.1, 7.2 and 7.3

2. Sample

The sample of this study was all students of the population, totaling 92 students. Since the entire population was used as the research subjects, this study was a population study or census. Therefore, no sampling technique was employed

D. Technique of Class Assignment

The assignment of classes into experimental and control class was carried out using the intact group technique. The three existing classes were not randomly assigned, but were purposively assigned into 3 conditions: class 7.1 was assigned as experimental class 1, class 7.2 was assigned as experimental class 2 and class 7.3 was assigned as the control class.

E. Instrument of the Research

So the instrument used in this research was the Duolingo application, and the tests that were given were a pre-test and a post-test. The pre-test was used as initial

data determine student's English writing skills, especially in composing English words. After that, students were given a post-test after learning to use Duolingo application

1. Blueprint of English

Subject	: English
Grade	: 7 SMP
Topic	: Simple Sentence
Test Form	: Essay – Composing English Words and Translation
Total Item	: 20 Items
Maximum Scores	: 100
Time Allocation	: 60 Minutes

Basic Competence	Learning Indicator	Cognitive Level	Pre-test Item No.	Post-test Item No.	Total
3.6 Applying social function, text structure and language features of interpersonal interaction	3.6.1 Composing English words into positive simple sentences	C3: Application	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	1, 2, 3, 4, 5, 6, 7, 10, 11, 13, 14, 15	27

text					
	3.6.2 Composing English words into simple sentences with time/place adverb	C3: Application	2, 7, 8, 10, 12, 13	1, 3, 4, 6, 10, 15	12
	3.6.3 Composing English words into simple sentences with adjective/adverb	C.4: Analysis	9, 11, 14	2, 5, 14	6
4.6 Composing interpersonal interaction texts orally and in writing	4.6.1 Translating sentences from Indonesian into English by composing English words	C.4: Analysis	16, 17, 18, 19, 20	16, 17, 18, 19, 20	10
Total			1-20	1-20	40

Table 3.2 Blueprint of English

2. Assessment Techniques and Rubrics

A dichotomous scoring technique was used. Each item has a maximum score of 5. The scoring criteria are presented in this table:

No	Scoring Criteria	Score
1	The answer is entirely correct according to the answer key. Composing English words into grammatically correct sentences	5
2	The answer is incorrect, incomplete or not answered	0

Table 3.3 Dichotomous Scoring Rubric

Based on the table above, scoring was conducted objectively using a correct-incorrect system. Assigning a score of 5 for correct and 0 for incorrect answers aim to minimize scorer subjectively

Maximum Score: 20 items x 5 = 100

$$\text{Final Score} = \frac{\text{Obtained score}}{\text{Maximum Score}} \times 100^{36}$$

3. Validity and Reliability

1. Validity

Content validity was conducted through expert judgement by 2 expert lecturers. The experts assessed the alignment of test items with indicators and learning objectives. The validation results showed that the instrument was declared valid and suitable for use³⁷

³⁶ Suharsimi Arikunto, "Dasar-Dasar Evaluasi Pendidikan," *Bumi Aksara*, 2019, 245.

³⁷ Michael T. Kane, "Valiation," in *Educational Measurement*, 4th ed. (Washington: American Council on Education and praeger, 2006), 17–64.

2. Reliability

The reliability of the instrument in this study was ensured through expert validity. The instrument, in the form of an English word arrangement test, was validated by an English lecturer. The validator stated that the instrument was suitable for use with minor revisions. Therefore, the learning achievement test instrument on Simple Sentence material was declared reliable and could be used in the research.

F. The Procedure for Collecting Data

Data collection procedures in this study were conducted for one month in parallel across the three classes. The data collection stages consisted of preparation, pre-test, treatment and post-test.

1. Preparation

In the preparation stage, the researcher attempted to gather information regarding the problems in English language learning among seventh-grade students at SMP Negeri 5 Parepare. Based on the information obtained and supported by previous research conducted by Andrini Safitri (2022), as well as a brief conversation with the subject teacher, it was found that students' writing skills, especially in composing English words, are still very low. This is caused by several factors, including monotonous teaching methods and students' lack of vocabulary mastery.³⁸

³⁸ Andrini Safitri, "Using Word Web Technique in Teaching Vocabulary to Seventh Grade Students' of SMPN 5 Parepare" (Iain Parepare, 2024).

2. Pre-test

The pre-test was administered the first meeting before the treatment was given to the three classes according to the lesson schedule. This stage aimed to determine student's initial ability in composing English words before the treatment was administered.

3. Treatment

After the pre-test, the three classes received different treatments for 4 weeks

a. Experiment Class (E1) – High Intensity

In this class, students used the Duolingo application for 60 minutes per meeting, divided into 3 sessions

b. Experiment Class (E2) – Low Intensity

In this class, students used the Duolingo application for 20 minutes per meeting, divided into 2 sessions

c. Control Class -

In the control class, students participated in conventional English learning according to the applicable curriculum, without using the Duolingo application

4. Post-Test

After 4 weeks of treatment, the three classes were given a post-test using the same instrument as the pre-test but with different questions. This post-test aimed to measure student's ability and the improvement of their ability in English words composition after receiving treatments with different intensities

G. Technique of Data Analysis

The existing data will be analyzed or calculated using Jamovi Application version 2.4

1. N-Gain Score Test

N-gain test was used to measure the effectiveness of learning improvement from pre-test and post-test. The calculation uses the N-gain formula:

$$N\text{-gain} = \frac{\text{Posttest Score} - \text{Pretest Score}}{\text{Maximal Score} - \text{Pretest Score}}$$

Criteria for Interpreting N-gain Score:

1. High : $g \geq 0.70$
2. Medium : $0.30 \leq g < 0.70$
3. Low : $g < 0.30$ ³⁹

2. Initial/ Equivalence Test/Baseline

This testing conducted to determine whether the pre-test scores of the experimental and control class were equivalent/baseline prior to the administration of the treatment

3. ANCOVA

- a. Test for Homogeneity of Regression Slopes

³⁹ Richard R. Hake, "Interactive-Engagement vs Traditional Methods: A Six-Thousand Student Survey of Mechanics Test Data for Introductory Physics Courses," *AAPT (American Association of Physics Teachers)* 89, no. 9 (2021): 841–52,

The purpose of the test of homogeneity of regression slopes was to examine whether the relationship between the covariate and the dependent variable was the same across all groups⁴⁰

b. ANCOVA Test for Comparison

The purpose of the ANCOVA test for comparison was to examine whether there was a significant difference in the dependent variable among groups after controlling for the effect of the covariate or pre-test scores.⁴¹

c. Normality Test Shapiro-Wilk Test

This test was used because the sample size was $n < 50$ per group, where data are considered normally distributed if the Sig. value > 0.05 ⁴²

d. Homogeneity Test – Levene’s Test

This test was used to examine the equality of variances, where the data are considered homogeneous when the Sig. value > 0.05 ⁴³

4. One-Way ANOVA Hypothesis Test

This test was used to examine differences in the mean post-test scores among the three classes. The data are considered statistically significant when the Sig. value < 0.05 . The ANOVA test was chosen because this study involved

⁴⁰ Leif Engqvist, “The Mistreatment of Covariate Interaction Terms in Linear Model Analyses of Behavioural and Evolutionary Ecology,” *Elsevier* 70, no. 2 (2005): 501.

⁴¹ Geoffrey A. Miller and Jean P. Chapman, “Misunderstanding Analysis of Covariance,” *American Psychological Association* 110, no. 1 (2001): 40.

⁴² Nornadiah Mohd Razali and Yap Bee Wah, “Power Comparisons of Shapiro-Wilk, Kolmogrov- Smirnov, Liliefors and Anderson- Daring Test,” *University Utara Malaysia Press* 2, no. 1 (2023): 21–33.

⁴³ Joseph L. Gastwirth, et al., “The Impact of Levene’s Test of Equality of Variances on Statistical Theory and Practice,” *Wayne State University Library System* 12, no. 1 (2020).

three independent groups: Class 7.1 and Class 7.2 as experimental classes, and Class 7.3 as the control class.⁴⁴

5. Post- Hoc Test – Tukey HSD

If the ANOVA result is significant where $p < 0.05$, the analysis is continued with Tukey HSD test because it can control the Type I error rate when conducting multiple pairwise comparisons between groups⁴⁵

6. Effect Size

This test was used to measure the magnitude of the treatment effect, with the interpretation: 0.01 = small, 0.06 = medium and 0.14 = large.⁴⁶

⁴⁴ Rebecca M. Warner, *Applied Statistics: BAsic Bivariate Techniques*, 3rd ed. (Thousand Oaks, CA: SAGE Publications, 2021).

⁴⁵ H. J. Keselman, et al., “Robustness of the Tukey HSD Test,” *British Psychological Society* 75, no. 2 (2022): 310–25

⁴⁶ Daniel Lakens, “Calculating and Reporting Effect Size to Facilitate Cumulative Science: A Practical Primer for T-Test and ANOVA,” *Frontiers Media S.A Swiss* 4 (2013): 863,

CHAPTER IV

FINDINGS AND DISCUSSION

A. Findings

The Research was conducted at SMP Negeri 5 Parepare. This school is one of the public junior high schools in the Bacukiki Sub- District, Parepare city, South Sulawesi. The UPTD of SMP Negeri 5 Parepare was established in 1979, with the established decree number 030/U 1979, under the auspices of the Ministry Education and Culture.

The Principal of SMP Negeri 5 Parepare is Rahmaniar S.S., S. Pd., M. Hum., G. r who officially took office on 12 February 2026. She is known as the winner of the outstanding, creative and innovative teacher competition (GRIVA) at the junior high school level in Parepare city and launched the PETANRA program.

This study was conducted from 12 February – 16 March 2026. And this study targeted all 7 grade students at SMP Negeri 5 Parepare, with the title “Improving Student’s Writings Ability: *Composing English Words Correctly By Using Duolingo Application at SMP Negeri 5 Parepare*. When this study implemented learning materials using the language learning application, Duolingo application, with the aims of improving students writing English skills, particularly in constructing English words into simple sentences

1. Description of Pre-test, Post-test, and N-gain scores for each class

Descriptives				
	Class	Pre	Post	Ngain
N	E1	30	30	30
	E2	30	30	30
	Control Class	32	32	32
Mean	E1	42.7	74.2	0.551
	E2	44.5	64.3	0.364
	Control Class	32.7	41.9	0.137
Median	E1	42.5	75.0	0.592
	E2	45.0	65.0	0.360
	Control Class	32.5	45.0	0.106
Standard deviation	E1	11.0	11.1	0.161
	E2	11.5	11.0	0.140
	Control Class	13.1	12.7	0.0909
Minimum	E1	20	50	0.0909
	E2	20	50	0.100
	Control Class	10	20	0.00
Maximum	E1	65	90	0.800
	E2	70	90	0.778
	Control Class	55	65	0.313

Table 4.1 Descriptive Results of Pre-Test, Post-Test and N-Gain Scores for Each Class

The descriptive results showed that group E1 had the highest improvement in writing ability. E1 had a pre-test mean of 42.7, a post-test mean of 74.2, and an N-gain of 0.551. E2 had a pre-test mean of 44.5, a post-test mean of 64.3, and an N-gain of 0.364. Meanwhile, the Control Class had the lowest scores, with a pre-test mean of 32.7, a post-test mean of 41.9, and an N-gain of 0.137. Therefore, it was concluded that students who used Duolingo more intensively achieved greater improvement than those with less intensity or no treatment

2. Baseline Equivalence Test

ANOVA - Pre					
	Sum of Squares	Df	Mean Square	F	P
Class	2542	2	1271	8.91	<.001
Residuals	12703	89	143		

Table 4.2 Baseline Equivalence Test Results

The ANOVA pre-test results showed an F value of 8.91 with a significance of <0.001. Since the significance value was < 0.05, it was concluded that there was a significant difference in initial ability among the groups before treatment.

3. ANCOVA

a. Shapiro-Wilk Normality Test

Normality Test (Shapiro-Wilk)	
Statistic	P
0.985	0.365

Table 4.3 Shapiro-Wilk Normality Test Results

The Shapiro-Wilk normality test showed a statistic value of 0.985 with a significance of 0.365. Since the significance value of $0.365 > 0.05$, the research data were normally distributed. Thus, the normality assumption for ANCOVA was met.

b. Levene's Test – Homogeneity Test

Homogeneity of Variances Test (Levene's)

F	df1	df2	P
1.80	2	89	0.172

Table 4.4 Levene's Test for Homogeneity Results

The Levene's Test for homogeneity showed an F value of 1.80 with a significance of 0.172. Since the significance value of $0.172 > 0.05$, it was concluded that the data variances across groups were homogeneous. Therefore, the homogeneity assumption for ANCOVA was also met.

c. Homogeneity of Regression Slopes

ANCOVA – Post

	df	Mean Square	F	P
Class	2	962.6	15.75	<.001
Pre	1	6000.9	98.18	<.001
Class * Pre	2	124.5	2.04	0.137
Residuals	86	61.1		

Table 4.5 Results of the Test for Homogeneity of Regression Slopes

The results showed that the interaction Class * Pre had an F value of 2.04 with a significance of 0.137. Since $0.137 > 0.05$, it was concluded that the assumption of homogeneity of regression slopes was met. This indicated that the relationship between the pre-test and post-test scores was the same across all groups, so the data were appropriate for ANCOVA analysis.

4. Comparative ANCOVA

ANCOVA – Post					
	Sum of Squares	Df	Mean Square	F	p
Pre	6001	1	6000.9	98.18	<.001
Class	1925	2	962.6	15.75	<.001
Class * Pre	249	2	124.5	2.04	0.137
Residuals	5257	86	61.1		

Table 4.6 Comparative ANCOVA Results

ANCOVA results to examine the effect of treatment after controlling for initial scores. The results showed that Class had an F value of 15.75 with a significance of <.001, and Pre had an F value of 98.18 with a significance of <.001. Since the significance for Class was $<.001 < 0.05$, it was concluded that there was a significant difference in students' writing ability among groups after controlling for pre-test scores. In other words, the intensity of Duolingo use had a significant effect on students' writing skills.

5. N-gain Description

ANOVA – Ngain					
	Sum of Squares	Df	Mean Square	F	p
Class	2.67	2	1.3362	75.4	<.001
Residuals	1.58	89	0.0177		

Table 4.7 Descriptive Results of N-gain

The ANOVA results for N-gain showed that Class had an F value of 75.4 with a significance of <.001. Since the significance value was $<.001 < 0.05$, it was concluded that there was a significant difference in the N-gain scores among the groups. This indicated that the intensity of Duolingo use had a significant effect on students' improvement in writing skills.

6. One-Way ANOVA on N-gain

Group Descriptives					
	Class	N	Mean	SD	SE
Ngain	E1	30	0.551	0.1609	0.0294
	E2	30	0.364	0.1403	0.0256
	Control Class	32	0.137	0.0909	0.0161

Table 4.8 One-Way ANOVA Results for N-Gain

The descriptive analysis showed that the Control Class consisted of 32 students with a mean N-gain score of 0.137 and a standard deviation of 0.0909. This mean score was the lowest compared to the other groups. It indicated that students who did not receive Duolingo treatment had the smallest improvement in writing ability.

7. Tukey Post-Hoc Test on N-gain

Tukey Post-Hoc Test – Ngain				
		E1	E2	Control Class
E1	Mean difference	—	0.187	0.414
	p-value	—	<.001	<.001
E2	Mean difference		—	0.227
	p-value		—	<.001
Control Class	Mean difference			—
	p-value			—

Table 4.9 Tukey Post-Hoc Test Results for N-gain

The Tukey Post-Hoc test was conducted to determine which groups differed significantly. The results showed that the mean difference between E1 and E2 was 0.187 with a p-value of <.001. The mean difference between E1 and Control Class was 0.414 with a p-value of <.001. The mean difference between E2 and Control Class was 0.227 with a p-value of <.001. Since all p-values were <.001 < 0.05, it was concluded that there were significant differences in N-gain scores between all groups.

8. Effect Size

Effect size testing is conducted to determine the magnitude of the influence of the independent variable on the dependent variable beyond statistical significance.⁴⁷ In this study, effect size was measured using Partial Eta Squared η_p^2 with the interpretation criteria from Cohen (1988).

⁴⁷ Jacob Cohen, *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed. (Hillshade: Lawrence Erlbaum Associates, 1988).

Based on the results of the One-Way ANOVA on N-gain scores a very large effect size was found with $\eta_p^2 = 0.628$. This indicates that 62.8% of the variance in students' improvement in composing English words was explained by the intensity of Duolingo use.

9. Pre-test and post-test scores of seventh-grade students at SMP Negeri 5

Parepare (Class E1)

No	Name	Class	Pre-test	Post-test
1	Agung Alamsyah	E1	40	75
2	Andi Nuralia Amalia Syam	E1	50	80
3	Andika	E1	55	75
4	Ariyanti	E1	40	80
5	Chantika Enang	E1	55	70
6	Haurah Hazilia	E1	40	80
7	Lilis Apriliani	E1	50	70
8	Muhammad Anugrah	E1	30	75
9	Muhammad Ardha	E1	50	80
10	M, David Rama Saputra	E1	45	50
11	Muhammad Fahrijal	E1	40	60
12	Muhammad Fajri	E1	45	70
13	Muhammad Haikal Hafi Rusdi	E1	30	85
14	Muhammad Hasbi	E1	40	75
15	Muhammad Iqbal	E1	20	50
16	Muhammad Iqbal Azzahir	E1	30	85
17	Muhammad Jumadil	E1	55	80

18	Muhammad Kiswandi	E1	30	50
19	Nizar Rauzan Fikri	E1	40	75
20	Nur Azizah Wahdania	E1	50	85
21	Nur Ferbriyansyah	E1	30	75
22	Nur Farhan Adityia	E1	50	90
23	Nurhafidzah Anas	E1	50	80
24	Nurjihan	E1	40	70
25	Nurul Ain Batisya	E1	50	80
26	Nurul Ilmiy Arfian	E1	50	80
27	Nurul Putri Atira	E1	55	80
28	Salsabila	E1	20	55
29	Siti Khadijah	E1	65	90
30	Sugli Ramadhan	E1	35	75

Table 4.10 Pre-test and Post-test Scores of Seventh-grade Students at SMP Negeri 5 Parepare (Class E1)

a. Distribution of Class E1 Pre-test Scores

Category	Score Range	Number of Students	%
High	71 – 100	0	0%
Medium	56 – 70	1	3.3%
Poor	41 – 55	12	40.0%
Very Poor	< 40	17	56.7%

Table 4.11 Distribution of Class E2 Pre-test Scores

b. Distribution of Class E1 Post-test Scores

Category	Score Range	Number of Students	%
High	71 – 100	20	66.7%
Medium	56 – 70	7	23.3%
Poor	41 – 55	3	10.0%
Vety Poor	< 40	0	0%

Table 4.12 Distribution of Class E1 Post-test Scores

c. Class E1 Students Improvement

Description	Number of Students	%
Experienced Improvement	30	100%
Remained the same /decreased	0	0%

Table 4.13 Class E1 Students Improvement

10. Pre-test and post-test scores of seventh-grade students at SMP Negeri 5

Parepare (Class E2)

No	Name	Class	Pre-test	Post-test
1	Aila Assifah	E2	55	90
2	Alif Hidayatullah Mustapa	E2	40	65
3	Andi Arqam	E2	35	55
4	Andi Muh. Rafif Sava	E2	55	70
5	Aqila Humaira	E2	70	85
6	Adiyasta Satya	E2	55	65
7	Fatma Nur Ani	E2	50	55
8	Muhammad Tasbih	E2	50	65
9	Indra Vahlery	E2	40	50

10	Kayla Ramadhani	E2	60	80
11	Mentari Senja Fajerina	E2	50	75
12	Meysia Sapira Putri Perama	E2	40	60
13	Nur Syuhada Nur Ain	E2	55	75
14	Muh. Wahyu Ramadhan	E2	50	55
15	Muhammad Akbar Aldiansyah	E2	50	70
16	Muhammad Al Qareal	E2	40	55
17	Muhammad Arif Dzatwan	E2	35	65
18	Muhammad Farhan	E2	30	50
19	Muhammad Qhaeril Zhakry	E2	40	55
20	Muhammad Rafa Febrian	E2	45	60
21	Muhammad Rehan	E2	35	50
22	Muhammad Rizky Al-Fatih	E2	55	75
23	Nur Aqila	E2	30	55
24	Nur Fadiya Azzahra	E2	60	80
25	Nur Saskina	E2	45	65
26	Qaisyar Abiyas	E2	40	60
27	Muh. Arhan	E2	20	55
28	Wahyu	E2	45	70
29	Zahira	E2	40	70
30	Mosya Tsrsiyah Arisha	E2	20	50

Table 4.14 Pre-test and Post-test Score Class E.2

a. Distribution of Class E2 Pre-test Scores

Category	Score Range	Number of Students	%
High	71 – 100	0	0%
Medium	56 – 70	2	6.7%
Poor	41 – 56	14	46.7%
Very Poor	< 40	14	46.7%

Table 4.15 Distribution of Class E2 Pre-test Scores

b. Distribution of Class E2 Post-test Scores

Category	Rentang Nilai	Jumlah Siswa	%
High	71 – 100	12	40.0%
Medium	56 – 70	15	50.0%
Poor	41 – 56	3	10.0%
Very poor	< 40	0	0%

Table 4.16 Distribution of Class E2 Post-test Scores

c. Class E2 Students Improvement

Description	Number of Students	%
Experienced Improvement	30	100%
Remained the same/decreased	0	0%

Table 4.17 Class E2 Students Improvement

11. Pre-test and Post-test Scores of the Control Class

No	Name	Class	Pre-test	Post-test
1	Adiyasta Satya Baim	Control Class	50	55
2	Andi Zhulfy Magfirah	Control Class	20	25
3	Aufah Mujtahidin	Control Class	40	45

4	Fildzah Farhana	Control Class	50	55
5	Fildzan Novel Bacthiar	Control Class	50	55
6	Hafidz Nur Akhbar	Control Class	45	55
7	Kasih Nur Husna	Control Class	10	30
8	Muhammad Aufar Apriansyah	Control Class	35	35
9	Muhammad Faisal	Control Class	55	60
10	Muhammad Fajrin	Control Class	40	55
11	Muhammad Qhoyril Akram	Control Class	40	40
12	Muhammad Ramadhan Andi	Control Class	30	35
13	Muhammad Rifansyah	Control Class	30	30
14	Muhammad Rizky	Control Class	20	30
15	Muhammad Tasbih Ramadhan	Control Class	20	25
16	Muhammad Waly Dhany	Control Class	45	50
17	Mutiara Afira	Control Class	20	25
18	Nur Ain Natasya	Control Class	35	55
19	Nur Fajriani	Control Class	45	60
20	Nur Fhatiha	Control Class	30	45
21	Nurhidayah	Control Class	30	35
22	Nurul Hidayah	Control Class	40	50
23	Rany Fawziah	Control Class	30	35
24	Rifaldi Ramadhan	Control Class	40	50
25	Rusdiansyah	Control Class	10	20
26	Nizam	Control Class	40	45
27	Ulfa Ramadhani	Control Class	20	25

28	Wahyu Imanzyah	Control Class	50	65
29	Wirania Fitria Jayadi	Control Class	30	45
30	Muhammad Rahel Mubarak	Control Class	20	45
31	Tri Putra	Control Class	15	35
32	Reynaldi	Control Class	10	25

Table 4.18 Pre-test and Post-test Scores of the Control Class

a. Distribution of Class Control Pre-test Scores

Category	Score Range	Number of Students	%
High	71 – 100	0	0%
Medium	56 – 70	0	0%
Poor	41 – 56	10	31.3%
Very poor	< 40	22	68.8%

Table 4.19 Distribution of Class Control Pre-test Scores

b. Distribution of Class Control Post-test Scores

Category	Scores Range	Number of Students	%
High	71 – 100	0	0%
Medium	56 – 70	3	9.4%
Poor	41 – 56	15	46.9%
Very poor	< 40	14	43.8%

Table 4.20 Distribution of Class Control Post-test Scores

12. Difference in Improvement between Class e1 (with high-intensity) and Class E2 (with low-intensity)

The difference between class E1 with high-intensity use and class E2 with low-intensity use showed a difference in both the number and quality of

students' improvement. In class E1, all students (100%) experienced an improvement, with 30 students showing an increase in scores between the pre-test and post-test. Meanwhile, in class E2, only 29 students out of 30 students experienced an improvement.

In terms of N-gain scores, class E1 had 5 students in the high category, 23 students in the medium and 2 students in the low medium. In contrast, class E2 had only 1 student in the high category, 21 students in the medium and 8 students in the low category. This indicates that class E1 with high-intensity use was not only able to improve all of students with high improvement compared to class E2 with low-intensity use.

13. Difference Between Class E1 (with high-intensity) and Control Class

The difference between class E1 and the control class, which used conventional methods, was very striking. In class E1 with high-intensity use, all 30 students experienced improvement, with no students showing stagnant scores. In contrast, in the control class, only 28 out of 32 students experienced improvement, while 4 students showed no improvement at all. In terms of the quality of improvement, class E1 with high-intensity use had 5 students in the high category. Whereas the control class had no students in the high category. This indicates that the use of Duolingo with high intensity was far more effective and evenly distributed in improving students' English composition ability than using only conventional teaching methods.

14. Difference Between Class E2 (with low-intensity) and Control Class

The difference between the low-intensity class (E2) and the control class was also significant. The low-intensity class consisted of 30 students, of

whom 29 students (96.7%) showed an improvement, while 1 student experienced only a minimal increase. Meanwhile, the control class consisted of 32 students, of whom only 28 students showed improvement and 4 students showed no improvement at all. This finding indicates that even with low intensity, class E2 was still able to have a positive influence by improving more students and producing better improvement than the control class, which relied solely on conventional methods.

B. Discussion

This study was conducted at SMPN 5 Parepare. The results of this study demonstrate that the use of the Duolingo application significantly improved seventh-grade students' ability in composing English words correctly. The One-Way ANOVA on N-gain scores showed a significant difference among the three groups $F(2,89)=75.4$, $p < .001$, with the high-intensity class E1 achieving the highest mean N-gain of 0.551, followed by the low-intensity class E2 with 0.364, and the control class with 0.137.

The Tukey post-hoc test confirmed that all groups differed significantly from each other $p < .001$. The large effect size of $\eta_p^2 = 0.628$ indicates that 62.8% of the variance in students' improvement was explained by the intensity of Duolingo use. The Cohen's d between E1 and the control class of 3.21 further shows a very large practical effect. In terms of distribution, 100% of students in both E1 and E2 experienced improvement, while only 87.5% in the control class improved. In quality, E1 had 5 students in the high N-gain category, E2 had 1, and the control class had none.

Moreover, the percentage of students in the "High" post-test category increased from 0% to 66.7% in E1 and from 0% to 40% in E2, while the control class only reached 9.4%. This suggests that higher intensity of Duolingo use not only increases the number of students who improve but also the quality of improvement.

These findings can be explained by three theoretical frameworks. First, from the perspective of B.F. Skinner's Behaviorism Theory, Duolingo provides immediate feedback, points, and streaks that function as positive reinforcement. Every correct answer is rewarded, which strengthens the behavior of composing words correctly. This explains why 100% of students in E1 and E2 improved, because the application continuously reinforced accurate responses. Second, the results support Spaced Repetition Theory by Ebbinghaus, which emphasizes that reviewing material at increasing intervals enhances long-term retention. Duolingo's algorithm automatically repeats words and structures, and students in E1 who used Duolingo with high intensity received more frequent repetitions, resulting in the highest N-gain of 0.551.

Third, the findings are in line with Krashen's Input Hypothesis. Duolingo provides comprehensible input at the " $i+1$ " level through short exercises and examples. With higher intensity, E1 students were exposed to more input, allowing them to internalize correct word forms and structures, which is reflected in the very large effect size compared to the control class. Overall, this study confirms that Duolingo is not only effective but that the intensity of use is a critical factor. Even low-intensity use was better than conventional methods, but high-intensity use produced the most optimal results.

CHAPTER V

CONCLUSION & SUGGESTION

A. Conclusion

Based on the findings, it can be concluded that the use of the Duolingo application significantly improves seventh-grade students' ability in composing English words correctly. Students who used Duolingo with high intensity showed the highest improvement with a mean N-gain of 0.551, followed by low-intensity with 0.364, and the control class with 0.137. Statistical tests confirmed significant differences among all groups with a large effect size of $\eta_p^2 = 0.628$.

The effectiveness of Duolingo is supported by three theories. According to Behaviorism Theory, Duolingo's immediate feedback and rewards reinforce correct word composition behavior. In accordance with Spaced Repetition Theory, the application's algorithm helps students retain vocabulary through repeated and timed exposure, which was most evident in the high-intensity group. Furthermore, Input Hypothesis explains that Duolingo provides comprehensible input that enables students to acquire correct language structures gradually. Therefore, Duolingo is recommended as an effective supplementary tool in English writing instruction. Teachers are advised to encourage high-intensity use to achieve optimal results. For future research, it is suggested to examine the long-term effects of Duolingo use and to apply it to other language skills.

B. Research Limitations

The researcher acknowledges that this study has several limitations, as follows:

1. No randomization was used. The experimental and control classes were determined based on existing classes at the school. This may have resulted in differences in students' initial characteristics between classes, which could have affected the results of the study.
2. The study was conducted in only one school. This research was carried out only at SMP Negeri 5 Parepare. Therefore, the results of this study cannot be generalized broadly to a larger population with different characteristics
3. The treatment duration was relatively short. The limited time of the study means that the long-term effects of using the Duolingo application on students' English language ability, particularly in composing English words, could not be determined.
4. A limitation of this study was the lack of baseline equivalence among the groups. The control group had a significantly lower pre-test mean score compared to the experimental groups. This issue was statistically controlled by employing ANCOVA as the main analysis

C. Suggestion

1. For Teachers

In the learning process, using creative methods will make the classroom atmosphere more enjoyable for students. One of is the using the Duolingo

application as a support learning as it has many excellent features to improve student's writing skills. Additionally, Duolingo can be used as a warm-up tool or an enjoyable additional assignment for students

2. For Students

Utilize the facilities provided by your parents, such as smartphone, to gain more learning opportunities. Use the Duolingo app as an additional learning medium that you can access outside of school. Maximize all the features available in Duolingo, such as the voice feature to practice your English speaking confidence.

3. For School

Conduct training for all teachers by holding sharing sessions on effective ways to manage technology-based classes. In addition, support adequate school facilities and infrastructure to improve the success of the learning process.

4. For Future Researchers

It is recommended to use a randomization technique in determining the experimental and control classes so that students' initial characteristics are more equivalent, expand the study to several schools with different characteristics so that the results can be generalized more broadly, and extend the treatment duration in order to examine the long-term effects of using the Duolingo application on students' writing ability, particularly in composing English words.

BIBLIOGRAPHY

Al-Qur'an Al-Karim

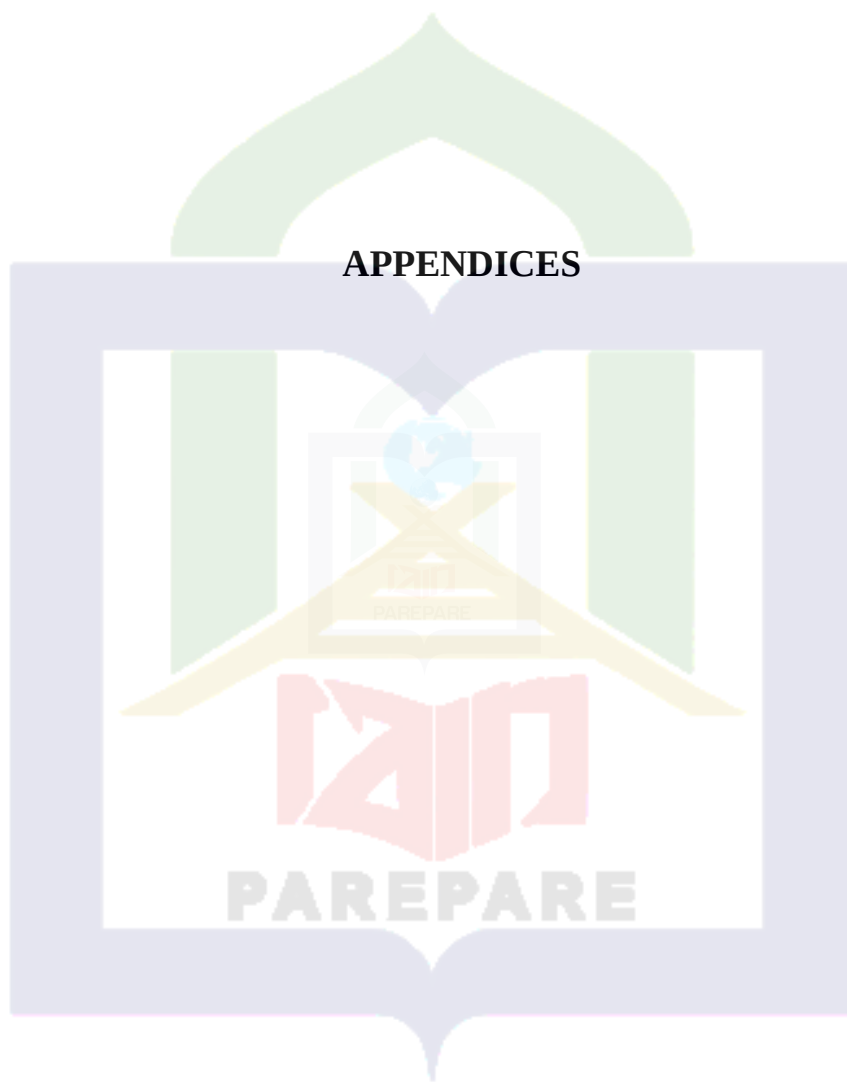
- Arikunto, Suharsimi. "Dasar-Dasar Evaluasi Pendidikan." *Bumi Aksara*, 2019
- Ashraf, M. Fareed, S., and M. Bilal. "ESL Learners' Writing Skills: Problem, Factors and Suggetsion." *Scipase.Com* 4(2): 1, (2016)
- Blanco, Cindy. "Duolingo 101: Cara Belajar Bahasa Di Duolingo." *Duolingo Blog*, 2021. <https://blog.duolingo.com/duolingo-101-how-to-learn-a-language-on-duolingo/>.
- Cohen, Jacob. *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Hillshade: Lawrence Erlbaum Associates, 1988.
- Combs, Michael C. *Basic English Grammar: A to Z Elementary English Course*. British Columbia: Sorensen Books, 2024.
- Damayanti, Marta, et al., "Improving Student's Writing Ability in the Procedure Text Using Duolingo Application at 8th Grade of SMP Negeri 5 Pati 2023/2024." *ResearchGate* 1, No. 4 (2023)
- Demneri, Ejona. "Student's Difficulties in Writing in English Language." *Proceedings of the Internasional Conference on Modern Research in Education* 3, No.1, (2024)
- Denton, Carolyn, et al., "Interventions for Students with Persinent Reading Difficulties: A Focus on Intensity." *Learning Disabilities Reseach & Practice* 37, no. 2 (2022)
- Diran, Zulkarnain. *Menikmati Proses Dan Hasil Menulis*. Indramayu: CV. Adanu Abimata, 2023.
- Duolingo. *Duolingo Language Report*. 2020, n.d. <https://blog.duolingo.com/global-language-report-2023/>.
- Ebbinghaus, Herman. *Memory a Contribution to Experimental Psychology*. New York: Teacher College, Columbia University, 1885.
- Engqvist, Leif. "The Mistreatment of Covariate Interaction Terms in Linear Model Analyses of Behavioural and Evolutionary Ecology." *Elsevier* 70, no. 2 (2005)

- Fadhilah, and Emzir. "The Effectiveness of Duolingo Application to Improve Students' Vocabularu Mastery." *UIN Raden Intan Lampung* 7 (2022)
- Garcia Botero, et al., "Gamification and Mobile Language Learning: A Comparative Study between Duolingo and Memrise." *Universitat Politècnica de València* 14 (2019).
- Gastwirth, Joseph L, et al., "The Impact of Levene's Test of Equality of Variances on Statistical Theory and Practice." *Wayne State University Library Systmen* 12, no. 1 (2020)
- Gertsen, Russell, et al., *Assisting Students Struggling with Mathematics: Response to Intervention (RTL) for Elementary and Middle Schools*. Washington: National Center for Education Evaluation and Regional Assistance, (2009)
- Hake, Richard R. "Interactive-Engagement vs Traditional Methods: A Six-Thousand Student Survey of Mechanics Test Data for Introductory Physics Courses." *AAPT (American Association of Physics Teachers* 89, no. 9 (2021)
- Hardiyanto, Muhammad R. Putra, et al., "Pengaruh Fitur-Fitur Aplikasi Duolingo Terhadap Popularitasnya." *Universitas Islam Indonesia* 3 No. 1 (2024)
- Huddleston, Rodney. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge Univ. Press, 2017.
- . *The Cambridge Grammar of the English Language*. Cambridge: Cambridge Univ. Press, 2017.
- Hung, Hsin Ting, et al., "A Scoping Review of Research on Digital Game-Based Language Learning." *Elsevier* 126 (2018)
- Hyland, Ken. *Second Language*. Cambridge: Cambridge Univ. Press, 2020.
- . *Second Language*. Cambridge: Cambridge Univ. Press, 2020.
- Indriani, Yulia Anjas. "Penggunaan Konjungsi Bahasa Indonesia." Universitas Mhammadiyah Purworketo, n.d.
- Kane, Michael T. "Valiation." *In Educational Measurement*, 4th ed., 17–64. Washington: American Council on Education and praeager, 2006.
- Keselman, H. J., et al., "Robustness of the Tukey HSD Test." *British Psychological Society* 75, no. 2 (2022) Krashen, Stephen D. *The Input Hypothesis: Issues and Implications*. London: Longman Group Uk Limited, 1985.

- Kukulska Hulme, Agnes. "Mobile Language Learning and Education." In *Routledge Encyclopedia of Research Methods in Applied Linguistics*, 83–90. London: Routledge, (2021).
- Kurniadi, Didit, and Suprato. "Utilizing Duolingo as a Technological Tool for Assessing Student's Writing Skills in EFL Context." *Proceedings of the UNNES-TEFLIN National Conference* 5 (2023)
- Lakens, Daniel. "Calculating and Reporting Effect Size to Facilitate Cumulative Science: A Practical Primer for T-Test and ANOVA." *Frontiers Media S.A Swiss* 4 (2013)
- Lin, Chia-Ju, and Chin-Yu Lin. "The Effect of Duolingo on EFL Learner's Vocabulary Learning: A Meta- Analysis." *SAGE Open* 12, no. 4 (2022).
- Loewen, Shawn, et al., "Mobile Assisted Language Learning: A Dolingo Case Study." *ResearchGate* 31, No. 3 (2019).
- Miller, Geoffrey A., and Jean P. Chapman. "Misunderstanding Analysis of Covariance." *American Psychological Association* 110, no. 1 (2001)
- Munday, Pilar. "The Case for Using Duolingo as Part of the Classroom Experience." *(AIESAD) Asociation Iberoamericana de Education Superior a Distanca* 19: 1, 2016, pp 83–101 (2016)
- Murphy, Raymond. *English Grammar in Use*. Cambridge: Cambridge Univ. Press, 2019.
- Nisrina, Nada. "5 Manfaat Dan Pentingnya Keterampilan Menulis." *ICAN English*, 2023. <https://www.icanenglish.net/news/keterampilan-menulis-bahasa-inggris/>.
- Nushi, Musa, and Mohamad Hosein Egbali. "Duolingo: A Mobile Application to Assist Second Language Learning." *Duolingo* 17(1), (2020)
- Razali, Nornadiah Mohd, and Yap Bee Wah. "Power Comparisons of Shapiro-Wilk, Kolmogrov- Smirnov, Liliefors and Anderson- Daring Test." *University Utara Malaysia Press* 2, no. 1 (2023)
- Ricards, Jack C., and Willy A. Renandya. *Methodology in Language Teaching: An Antology of Current Practice*. Cambridge: Cambridge Univ. Press, 2020.
- Rohrer, Dough, et al., "The Role of Spacing in Learning and Memory." *Current Direction in Psychological Science* 29, no. 6 (2020)

- S, Tri Widyahening, S. "Media Gambar Sebagai Sarana Meningkatkan Kemampuan Menulis Atau Writing Ability Berbahasa Inggris Bagi Para Siswa Yang Belajar Bahasa Inggris." Universitas Slamet Riyadi, 2011.
- Safitri, Andrini. "Using Word Web Technique in Teaching Vocabulary to Seventh Grade Students' of SMPN 5 PAREPARE." Iain Parepare, 2024.
- Silva, Maria. "Duolingo as a Tool Vocabulary Writing in English as a Foreign Language." Universidade Federal do Ceará, n.d.
- Simmon, Deborah C., et al., "Word Problem Intervention for Students with Mathematics Difficulties: A Meta-Analysis." *SAGE Publications* 87, no. 4 (2021)
- Skinner, B. F. *Science and Human Behavior*. New York: The Macmillan Company, 1953.
- Warner, Rebecca M. *Applied Statistics: Basic Bivariate Techniques*. 3rd ed. Thousand Oaks, CA: SAGE Publications, 2021.
- Wulandari, and Syafrizal. "The Effect of Spaced Repetition Technique on Students' Vocabulary Retention." *UIN Raden Intan Lampung* 14 (2021)

APPENDICES



Appendix 01: Research Instrument

	KEMENTERIAN AGAMA REPUBLIK INDONESIA STATE ISLAMIC INSTITUTE (IAIN) PAREPARE TARBIYAH FACULTY Jl. Amal Bakti No. 8 Soreang 91131 Telp. (0421) 21307
VALIDASI INSTRUMEN PENELITIAN PENULISAN SKRIPSI	

Student Name : Sri Rahayu Putri Ruli

Nim : 19.1300.011

Study Program : English Education Program

Faculty : Tarbiyah

Title : Improving Student's Writing Ability: Composing
 English Words Correctly by Using Duolingo
 Applicationa at SMP Negeri 5 Parepare

ENGLISH WRITING TEST

NAMA :

KELAS :

Instruksi Umum:

1. Tulis nama lengkap dan kelas di koolom yang telah disediakan
2. Periksa lembaran soal untuk memastikan pertanyaan lengkap dan terbaca jelas
3. Baca setiap soal dengan seksama sebelum menjawab
4. Kerjakan soal dengan tenang dan sebaik yang anda bisa

A. Arrange the words below into correct sentence!

1. Have – I – bicycle – new – a

Answer:

2. Drink – morning – I – coffee – every

Answer:

3. To – school – go – we

Answer:

4. My – cooks – chicken – aunt – soup – dinner – for

Answer:

5. Every day – they – badminton – play

Answer:

6. Makes – pie – mother – apple – my

Answer:

7. Grandfather – the – in my – reads – room – living – newspaper

Answer:

8. Goes – she – library – to – week – this

Answer:

9. Drives – he – carefully

Answer:

10. In – I – work – office – the

Answer:

11. Expensive – buys – he – car

Answer:

12. His – he – guitar – friends – plays – with

Answer:

13. Will – I – later – come

Answer:

14. Clearly – the – explains – teacher

Answer:

15. Eat – I – apple – an

Answer:

B. Translate the sentence below into English by arranging the words in the box correctly!

16. Ibuku membuat kentang goreng

Makes	mother	Fries	French	my
-------	--------	-------	--------	----

Answer:

17. Mereka menonton kartun dirumah Daffa

Daffa's	At	They	cartoons	house	Watch
---------	----	------	----------	-------	-------

Answer:

18. Ayu suka membaca buku di perpustakaan

Ayu	Library	in	Like	books	The	Reading
-----	---------	----	------	-------	-----	---------

Answer:

19. Saya minum the susu

Milk	I	Tea	drink
------	---	-----	-------

Answer:

20. Mereka bermain bola setiap hari minggu

Play	Sunday	They	football	Every	Sunday
------	--------	------	----------	-------	--------

Answer:

ENGLISH WRITING TEST

NAMA : Nur Syahanda Nur Ari

KELAS : 12.2

Terjemah 10 soal:

1. Tulis nama lengkap dan kelas di hadapan yang telah disediakan
2. Periksa jawaban dan tulis kemudian sebelum pertanyaan lengkap dan terjemah jika
3. Baca setiap soal dengan seksama sebelum menjawabnya
4. Kerjakan soal dengan tenang dan sudah selesai tulis

A. Answer the short-answer and short-essay questions!

1. Here is a sample item →
Answer : 1. Hutan adalah tempat ✓
2. Meeting - meeting - 1 million - many
Answer : 1. Meeting adalah pertemuan ✓
3. To - school - go - we
Answer : 1. Kita pergi ke sekolah ✓
4. My - think - chicken - can - keep - dinner - day
Answer : 1. Ayam dapat di makan sebagai makanan ✓
5. Every day - they - basketball - play
Answer : 1. Mereka bermain basket setiap hari ✓
6. Make - you - make - apple - my
Answer : 1. Saya membuat apel ✓

7. Consider the 10 to each some thing important
Answer: They think of themselves as very hard working men ✓

8. Give the thing to work for
Answer: He has things to do ✓

9. Please be careful
Answer: Be careful ✓

10. Be 10 work often the
Answer: He has to go to work ✓

11. Remember to be on
Answer: He has to be on time ✓

12. He has to give these plans with
Answer: He has to give these plans with ✓

13. Will it take some
Answer: It will take some ✓

14. Clearly he explains that
Answer: He clearly explains that ✓

15. He is able to
Answer: He is able to ✓

16. Translate the sentence below into English by arranging the words in the box correctly!

17. (Make individual learning group)

16.

Make	under	Place	French	see
------	-------	-------	--------	-----

Answer: they are sitting under the tree ✓

17.

Shall's	at	the	entrance	before	Wanda
---------	----	-----	----------	--------	-------

Answer: Wanda is sitting at the entrance before Wanda ✓

18.

the	house	in	the	books	the	reading
-----	-------	----	-----	-------	-----	---------

Answer: she is sitting in the house in the books ✓

19.

the	in	the	area
-----	----	-----	------

Answer: I am sitting in the area ✓

20.

Place	under	the	bedroom	every	morning
-------	-------	-----	---------	-------	---------

Answer: every morning they are sitting under the bed ✓

80

ENGLISH WRITING TEST

NAMA : Muhammad Hafidza

KELAS : 11 IPA

Instructions:

1. Tulis semua langkah dan letak di bawah yang telah disediakan.
2. Pahami kegunaan dan bentuk secara umum dari penggunaan langkah dan letakannya.
3. Buat setiap langkah dengan menggunakan kata kunci yang tepat.
4. Rangkikan dan dengan menyertai data yang ada yang sudah kamu baca.

A. Arrange the words below into correct sentences!

1. To - choose - tonight - we go
Answer: We go to a cinema tonight.
2. Good - the - singer - is
Answer: She is a good singer.
3. To the cat - under - sleeping - was
Answer: The cat was sleeping under the table.
4. He - was - home - English - class - outside
Answer: He was English class outside his home.
5. A - student - he - class - is
Answer: He is a class student.
6. A - student - had - bought - 5 - papers - of
Answer: I am a student, I had bought 5 papers of.
7. Is - this - your - check - tonight
Answer: Is this your check tonight?
8. A - student - my - brother - is - graduate
Answer: My brother is a graduate student.
9. This - his - paper - was - your - friend
Answer: His paper was your friend's.
10. Have - now - I - phone - a
Answer: I have a phone now.

12. I gave away candy giving the other.
Answer: I gave giving the other candy.

13. Father is my best.
Answer: my father is a person.

14. Mother French makes my best.
Answer: My mother makes me French.

15. Please pay a very price.
Answer: They are very cheap.

16. The single brother single.
Answer: The brother single single.

17. He represented us leader us us.
Answer: He is represented us leader.

18. Translate the sentences below into English by underlining the words in the box accurately!

19. He has to make research about Africa.
Interview and to find the in Spain

Answer: He has to make research about Africa.

20. He has to be very interesting in work.
He has to be very interesting in work.

21. He has to pay for website book.
He has to pay for website book.

Answer: He has to pay for website book.

22. He has to make research about Africa.
He has to make research about Africa.

Answer: He has to make research about Africa.

19. Tapa dan dieng (sari)

1000 1000 1 500

Answer: 1 cell, 2 cm, 1000 ✓

20. Minda manusia (atas dan di) (tali)

1000 1 100 100 1000 1000 1000

Answer: They are all connected at the top ✓

[illegible]

7. One teacher - He - in my study - room - newspaper
Answer: _____

8. Give - do - thing - be - with - this
Answer: _____

9. Guess - the - carefully
Answer: be careful be careful

10. He - I - work - office - the
Answer: I work in the office

11. Exposure - help - to - cut
Answer: _____

12. He - be - guitar - bands - play - with
Answer: _____

13. Will - I - later - come
Answer: later I will come

14. Clearly - the - explore - make
Answer: they explore clearly together

15. Eat - I - apple - an
Answer: _____

8. Transcribe the sentences below into English by arranging the words in the box correctly!

16. India successful learning getting

16. Match the words with the correct form.

Misses	marries	Joins	Marries	etc.
--------	---------	-------	---------	------

Answer: _____

17. Match the words with the correct form.

Joins's	at	May	marries	Joins	Weds
---------	----	-----	---------	-------	------

Answer: _____

18. Use the words to make the sentences.

Joins	Joins	at	the	Joins	The	marries
-------	-------	----	-----	-------	-----	---------

Answer: _____

19. Use a word to make the sentences.

Weds	I	Two	at
------	---	-----	----

Answer: _____

20. Match the words with the correct form.

Joins	marries	The	Joins	Every	marries
-------	---------	-----	-------	-------	---------

Answer: _____

Appendix 02: Administration



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

Alamat : JL. Amal Bakti No. 8, Soreang, Kota Parepare 91132 ☎ (0421) 21307 📠 (0421) 24404
PO Box 909 Parepare 9110, website : www.iainpare.ac.id email: mail.iainpare.ac.id

Nomor : B-502/In.39/FTAR.01/PP.00.9/02/2026 12 Februari 2026
Sifat : Biasa
Lampiran : -
Hal : Permohonan Izin Pelaksanaan Penelitian

Yth. WALIKOTA PAREPARE
Cq. Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu
di
KOTA PAREPARE

Assalamu Alaikum Wr. Wb.

Dengan ini disampaikan bahwa mahasiswa Institut Agama Islam Negeri Parepare :

Nama : SRI RAHAYU PUTRI RULI
Tempat/Tgl. Lahir : TAWAU, 08 November 1999
NIM : 19.1300.011
Fakultas / Program Studi : Tarbiyah / Pendidikan Bahasa Inggris
Semester : XIII (Tiga Belas)
Alamat : LAPAKAKA

Bermaksud akan mengadakan penelitian di wilayah WALIKOTA PAREPARE dalam rangka penyusunan Skripsi yang berjudul :

IMPROVING STUDENT'S WRITING ABILITY: COMPOSING ENGLISH WORDS CORRECTLY BY USING DUOLINGO APPLICATION AT SMP NEGERI 5 PAREPARE

Pelaksanaan penelitian ini direncanakan pada tanggal 12 Februari 2026 sampai dengan tanggal 12 Maret 2026.

Demikian permohonan ini disampaikan atas perkenaan dan kerjasamanya diucapkan terima kasih.

Wassalamu Alaikum Wr. Wb.

Wakil Dekan I,



Bahtiar, S.Ag., M.A.
NIP 197205051998031004

Tembusan :

1. Rektor IAIN Parepare



SRN IP0000091

IZIN PENELITIAN
Nomor : 91/IP/DPM-PTSP/2/2026

Dasar : 1. Undang-Undang Nomor 18 Tahun 2002 tentang Sistem Nasional Penelitian, Pengembangan, dan Penerapan Ilmu Pengetahuan dan Teknologi.
 2. Peraturan Menteri Dalam Negeri Nomor 3 Tahun 2018 tentang Penerbitan Surat Keterangan Penelitian.
 3. Peraturan Wali Kota Parepare Nomor 31 tahun 2025 tentang Pendelegasian Wewenang Penyelenggaraan Perizinan Berusaha dan Nonperizinan Daerah Kepada Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu.

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

M E N G I Z I N K A N

KEPADA : **SRI RAHAYU PUTRI RULI**
 NAMA

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

JUDUL PENELITIAN : **IMPROVING STUDENT'S WRITING ABILITY : COMPOSING ENGLISH WORDS CORRECTLY BY USING DUOLINGO APPLICATION AT SMP NEGERI 5 PAREPARE**

LOKASI PENELITIAN : **DINAS PENDIDIKAN DAN KEBUDAYAAN KOTA PAREPARE (UPTD SMP NEGERI 5 PAREPARE)**

LAMA PENELITIAN : **12 Februari 2026 s.d 12 Maret 2026**

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

Dikeluarkan di: **Parepare**
 Pada Tanggal : **20 Februari 2026**
KEPALA DINAS PENANAMAN MODAL
KOTA PAREPARE



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

Biaya : Rp. 0.00

- UU ITE No. 11 Tahun 2008 Pasal 5 Ayat 1.
- Informasi Elektronik dan/atau Dokumen Elektronik dan/atau hasil cetaknya merupakan alat bukti hukum yang sah
- Dokumen ini telah ditandatangani secara elektronik menggunakan **Sertifikat Elektronik** yang diterbitkan **BSrE**
- Dokumen ini dapat dibuktikan keasliannya dengan terdaftar di database DPMPTSP Kota Parepare (scan QRCode)



Balai
Sertifikasi
Elektronik





**PEMERINTAH KOTA PAREPARE
DINAS PENDIDIKAN DAN KEBUDAYAAN
UPTD SMP NEGERI 5 PAREPARE**

Alamat : Jl. Bau Massepe No. 24 Tlp. (0421) 26443 Fax 0412 21926 Parepare 91123
Email : pareparesmpn5@gmail.com Website : www.smp5parepare.sch.id

SURAT KETERANGAN SELESAI PENELITIAN

NOMOR : 411 / 054 / UPTD SMPN. 5 / 2026

Yang bertanda tangan dibawah ini, Kepala UPTD Sekolah Menengah Pertama Negeri 5 Parepare, menerangkan bahwa :

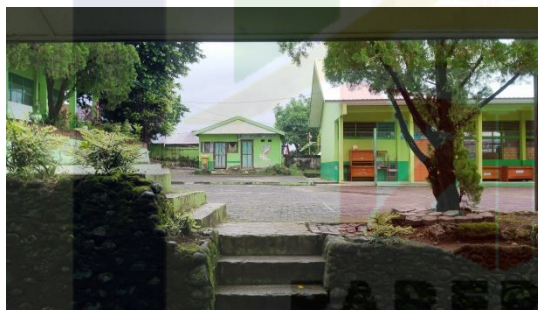
Nama	: SRI RAHAYU PUTRI RULI
NIM	: 19.1300.011
TEMPAT/TANGGAL LAHIR	: TAWAU, 08 November 1999
JENIS KELAMIN	: PEREMPUAN
WARGA NEGARA	: INDONESIA
AGAMA	: ISLAM
STATUS	: BELUM NIKAH
PEKERJAAN	: MAHASISWA
JURUSAN	: PENDIDIKAN BAHASA INGGRIS
FAKULTAS	: TARBIYAH
ALAMAT	: LAPAKAKA KEL. BOJO BARU KEC. MALLUSETASI KAB. BARRU

Yang tersebut nama diatas benar adalah mahasiswa IAIN PAREPARE telah selesai mengadakan penelitian di UPTD SMP Negeri 5 Parepare dalam rangka penyusunan Skripsi dengan judul " **IMPROVING STUDENT'S WRITING ABILITY : COMPOSING ENGLISH WORDS CORRECTLY BY USING DUOLINGO APPLICATION AT SMP NEGERI 5 PAREPARE** " Demikian surat keterangan ini dibuat untuk dipergunakan sebagaimana mestinya.

Parepare, 07 Mei 2026
Kepala UPTD SMP Negeri 5 Parepare


RAHMANSyah S.Pd., M.Hum., Gr.
Kepala UPTD SMP Negeri 5 Parepare
NIP. 19850617 201504 2 002

Appendix 03: Documentation



Appendix 04: Data Analysis from the Jamovi Application Version 2.4

[3]

Assumption Checks

Homogeneity of Variances Test (Levene's)

F	df1	df2	p
1.80	2	89	0.172

[3]

Normality Test (Shapiro-Wilk)

Statistic	p
0.985	0.365

Source: Jamovi Application Version 2.4

Post Hoc Tests

Tukey Post-Hoc Test – Ngain

		E1	E2	Control Class
E1	Mean difference	—	0.187	0.414
	p-value	—	< .001	< .001
E2	Mean difference	—	—	0.227
	p-value	—	—	< .001
Control Class	Mean difference	—	—	—
	p-value	—	—	—

Source: Jamovi Application Version 2.4



AUTHOR'S BIOGRAPHY

Sri Rahayu Putri Ruli, born on November 8, 1999 in Tawau, the second of two siblings, a couple of Amiruddin and Halwiati. The author received formal education from SD Negeri 50 Parepare (*graduated in 2013*) continued to SMP Negeri 4 Mallusetasi (*graduated in 2016*) continued to vocational school namely SMK Negeri 1 Parepare majoring in Accounting (*graduated in 2019*) continued to pursue undergraduate education at IAIN Parepare majoring English Education.

With perseverance and motivation from various parties, the author succeeded in completing the study program she was pursuing with the title *“Improving Students’s Writing Ability Composing English Words Correctly by Using Duolingo Application at SMP Negeri 5 Parepare”*

The author realizes that this thesis is still far from perfect. Therefore, constructive criticism and suggestions are highly expected. The author also wants to convey a simple message *“Daa` mii mupettama` ilmu dio tinggi, anna` daa` mii upettama` dio ate` dio sombong. Pakke` mii dio ilmu untu` napakaraja tau laing, nasaba to napakaraja dio tau iya sipakalebbi. Ilmu anna` adab dio rupa, nadadaissang dio dio rua lao dio kasa`ding”*