

**THE IMPROVEMENT OF STUDENTS' VOCABULARY ACHIEVEMENT
THROUGH USING WORDWALL MEDIA AT THE SEVENTH GRADE
SMPN 1 WAY JEPARA**

An Undergraduate Thesis

**By :
Nia Yunita Sari
2113042079**



**ENGLISH EDUCATION STUDY PROGRAM
ARTS AND LANGUAGE EDUCATION DEPARTMENT
FACULTY OF TEACHER TRAINING AND EDUCATION
LAMPUNG UNIVERSITY
2025**

ABSTRAK

PENINGKATAN KOSAKATA SISWA MELALUI PENGGUNAAN MEDIA WORDWALL PADA KELAS TUJUH SMPN 1 WAY JEPARA

Oleh

Nia Yunita Sari

Penelitian ini bertujuan untuk menentukan peningkatan kosakata melalui penggunaan media Wordwall pada kelas tujuh di SMPN 1 Way Jepara. Penelitian ini menggunakan pendekatan kuantitatif dengan desain pretest-posttest satu kelompok. Sampel penelitian berjumlah 34 siswa kelas yang dipilih secara acak yaitu dari kelas VII.1. Instrumen yang digunakan adalah tes pilihan ganda berisi 40 soal yang mencakup enam aspek kosakata: nomina, verba, adjektiva, adverbia, pronomina, dan preposisi. Hasil uji t sampel berpasangan menunjukkan peningkatan yang signifikan dalam pencapaian kosakata siswa setelah penggunaan Wordwall, dengan rata-rata skor meningkat dari 74,85 pada pretest menjadi 90,51 pada posttest, dan nilai signifikansi 0,000 ($p < 0,05$). Selain itu, penggunaan media ini terbukti meningkatkan partisipasi aktif siswa dalam pembelajaran. 90,51 pada post-test, dengan nilai signifikansi 0,000 ($p < 0,05$). Selain itu, penggunaan media ini terbukti meningkatkan keterlibatan aktif siswa dan menciptakan suasana belajar yang lebih interaktif dan menyenangkan. Kesimpulan adalah bahwa media Wordwall dapat meningkatkan kosakata siswa sebagai alat dalam pembelajaran kosakata bahasa Inggris di sekolah menengah pertama. Berdasarkan temuan, guru didorong untuk menggunakan Wordwall sebagai media pembelajaran interaktif untuk meningkatkan pencapaian kosakata siswa, dengan mempertimbangkan kondisi siswa dan ketersediaan peralatan yang memadai. Peneliti masa depan disarankan untuk mengeksplorasi penggunaannya pada tingkat siswa yang berbeda, kosakata, dan desain penelitian untuk mendapatkan hasil yang lebih luas.

Kata kunci: *Kosakata, Media Pembelajaran, Pembelajaran Interaktif, Wordwall.*

ABSTRACT

THE IMPROVEMENT OF STUDENTS' VOCABULARY ACHIEVEMENT THROUGH USING WORDWALL MEDIA AT THE SEVENTH GRADE SMPN 1 WAY JEPARA

**By
Nia Yunita Sari**

This study aims to determine the improvement in vocabulary through the use of Wordwall media in the seventh grade at SMPN 1 Way Jepara. This study used a quantitative approach with a one-group pretest-posttest design. The research sample totaled 34 students randomly selected from class VII.1. The instrument used was a multiple-choice test of 40 questions covering six aspects of vocabulary: noun, verb, adjective, adverb, pronoun, and preposition. The results of the Paired Sample t-test showed a significant improvement in the students' vocabulary achievement after treatment with Wordwall, with the average score increasing from 74.85 in the pre-test to 90.51 in the post-test, and a significance value of 0.000 ($p < 0.05$). In addition, the use of this media was shown to improve the students' active involvement and create a more interactive and fun learning atmosphere. The conclusion is that Wordwall media could improve students' vocabulary as a tool in learning English vocabulary at junior high school. Based on the findings, teachers are encouraged to use Wordwall as an interactive learning medium to improve students' vocabulary achievement, taking into account students' conditions and the availability of proper equipment. Future researchers are advised to explore its use across different student levels, vocabulary, and research designs to obtain broader results.

Keywords: *Interactive Learning, Learning Media, Vocabulary, Wordwall.*

**THE IMPROVEMENT OF STUDENTS' VOCABULARY ACHIEVEMENT
THROUGH USING WORDWALL MEDIA AT THE SEVENTH GRADE
SMPN 1 WAY JEPARA**

**By :
Nia Yunita Sari
2113042079**

Undergraduate Thesis

**Submitted to Fulfill Part of
The Requirements for a S-1 Degree**

**In
The Language and Arts Department of
Faculty of Teacher Training and Education**



**ENGLISH EDUCATION STUDY PROGRAM
ARTS AND LANGUAGE EDUCATION DEPARTEMENT
FACULTY OF TEACHER TRAINING AND EDUCATION
LAMPUNG UNIVERSITY
2025**

Research Title

**THE IMPROVEMENT OF STUDENTS'
VOCABULARY ACHIEVEMENT
THROUGH USING WORDWALL MEDIA
AT THE SEVENTH GRADE
SMPN 1 WAY JEPARA**

Student's Name

Nia Yunita Sari

Student's Number

2113042079

Study Program

English Education

Department

Language and Arts Education

Faculty

Teacher Training and Education

Advisor

Dr. Ari Nurweni, M.A.

NIP 196303021987032001

APPROVED BY
Advisory Committee

Co-Advisor

Novita Nurdiana, S.Pd., M.Pd.

NIP 197608082009121001

The Chairperson of
The Department of Language and Arts Education

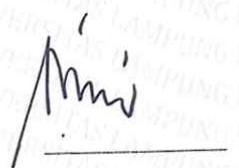
Dr. Sumarti, M.Hum.

NIP 19700318 199403 2 002

ADMITTED BY

1. Examination Committee

Chairperson : **Dr. Ari Nurweni, M.A.**



Examiner : **Prof. Ag. Bambang Setiyadi, M.A., Ph.D.**



Secretary : **Novita Nurdiana, S.Pd., M.Pd.**



Dr. Albet Maydiantoro, S.Pd., M.Pd.
NIP 19870504 201404 1 001

Graduated on: December 08th, 2025

LEMBAR PERNYATAAN

Saya yang bertandatangan di bawah ini:

Nama : Nia Yunita Sari
NPM : 2113042079
Program Studi : Pendidikan Bahasa Inggris
Jurusan : Pendidikan Bahasa dan Seni
Fakultas : Keguruan dan Ilmu Pendidikan
Judul Skripsi : THE IMPROVEMENT OF STUDENTS' VOCABULARY ACHIEVEMENT THROUGH USING WORDWALL MEDIA AT THE SEVENTH GRADE
SMPN 1 WAY JEPARA

Menyatakan bahwa skripsi ini adalah karya dari pelaksanaa penelitian saya sendiri. Sepanjang pengetahuan saya, karya ini tidak berisi materi yang ditulis orang lain, kecuali bagian bagian tertentu yang saya gunakan sebagai acuan. Apabila ternyata terbukti bahwa pernyataan ini tidak benar, sepenuhnya menjadi tanggung jawab saya.

Bandar Lampung, 08 Desember 2025

Yang membuat pernyataan,



Nia Yunita Sari
2113042079

CURRICULUM VITAE

The writer's name is Nia Yunita Sari. She was born on June 27th, 2002, in Labuhan Ratu I. She is the daughter of Paijo and Sriningsih, also the youngest of three siblings.

Her education began at TK Al-Muslimun, continued at SDN 1 Way Jepara in 2009, and then at SMPN 1 Way Jepara in 2015. After graduating from middle school, she attended SMAN 1 Way Jepara, graduating in 2021, and then enrolled in the English Education Department at the University of Lampung the same year.

While at UNILA, she was active in SEEDS 2021 (religion division). She enjoyed the Community Service (KKN) and teaching practicum (PLP) in 2024 at Desa Sukabanjar, South Lampung, where she participated in village activities. Her first teaching experience at SMPN 2 Sidomulyo allowed her to observe the Indonesian education system and apply her academic knowledge.

MOTTO

Challenges do not equate to impossibility. Persist in your efforts until you identify
and resolve any errors.

-my brother-

DEDICATION

This Final Project was particularly dedicated to:

Her esteemed parents, siblings, lecturers, and friends have provided support and encouragement throughout my studies.

ACKNOWLEDGMENTS

All praise be to Allah SWT, the God of the universe, who has given intelligence, ability, and blessings to His ummah. May peace and blessings be upon the Prophet Muhammad SAW, his family, friends, followers, and all Muslims. This thesis, entitled 'The Improvement of Students' Vocabulary through the Use of Wordwall at Seventh Grade SMPN 1 Way Jepara', is one of the requirements for an Undergraduate degree from the Department of Language and Arts Education, Faculty of Teacher Training and Education, Lampung University.

In this paper, she expresses her deepest gratitude and respect to all those who helped and supported her in completing it.

1. She would like to express gratitude to Dr. Ari Nurweni, M.A., as her first advisor, for her guidance, constructive criticism, and motivation throughout the completion of this thesis.
2. She also extends her gratitude to Novita Nurdiana, S. Pd., M. Pd., as her second advisor, for her advice, encouragement, valuable knowledge, and trust.
3. Prof. Ag. Bambang Setiadi, M.A., Ph.D., served as the examiner. She is grateful for his encouragement, insightful ideas, and valuable suggestions, which have greatly supported her.
4. Thanks are also extended to Dr. Feni Munifatullah, S.S., M.Hum., as the Head of the English Education Study Program, also to all lecturers and staff of the English Education Department for their continuous guidance and assistance.
5. She is deeply grateful to her parents, Paijo and Sriningsih, for their unwavering support, prayers, encouragement, and love, which have enabled her to pursue her education.
6. She also extended her acknowledgment to her first brother, Adi As Putra, for his continual support.

7. Her gratitude is also expressed to her second brother, Heri Kurniawan, for his trust, support, willingness to listen, and for providing the necessary resources throughout her studies.
8. She sincerely thanks Mrs. Kholifah and Mrs. Yasin, English teachers at SMPN 1 Way Jepara, for their guidance and assistance during the research process.
9. Her appreciation for the principal of SMPN 1 Way Jepara and all staff members for their permission and assistance throughout the research.
10. Her appreciation to Amanda Rmadhona, Anna Aufa Nurrohmah, Nyoman Dia Rahma Putri, and Rini Kristiani for their long-lasting friendship and encouragement, which have strengthened my belief in my abilities.
11. She gratefully acknowledges her friends, Ayang Ragil Putri, Dini Uswatun Khasanah, Tiur Paulina Manik, and all fellow students in the English Education Department 21, who generously shared information, provided assistance, and demonstrated care.
12. She appreciates Pak Untung and his family for their caring and for granting the use of their home and facilities during her course of study.
13. Appreciation is extended to Mas Yoga and his wife for their continued assistance and motivation throughout her studies, as well as to their daughters, Amelia and Aulia, for consistently providing a source of happiness and positive energy.

The researcher acknowledges that this study still has limitations. Therefore, suggestions and constructive feedback are welcomed to improve future research. It is hoped that this study can contribute to educational development, be useful for readers, and encourage further research in this field.

Bandar Lampung, 08 Desember 2025
The Writer,

Nia Yunita Sari
2113042079

TABLE OF CONTENTS

ABSTRACT	i
COVER	i
APPROVAL.....	ii
ADMISSION.....	iii
STATEMENT OF AUTHENTICITY	iv
CURRICULUM VITAE	v
MOTTO.....	vi
DEDICATION	vii
ACKNOWLEDGMENTS.....	viii
TABLE OF CONTENTS.....	x
LIST OF TABLES	xiii
LIST OF FIGURES.....	xiv
LIST OF APPENDICES	xv
I. INTRODUCTION.....	1
1.1 Background	1
1.2 Research Question.....	4
1.3 Objective of The Research.....	4
1.4 Use of The Research	4
1.5 Scope of the Research	5
1.6 Definition of Term	5

II. LITERATURE REVIEW.....	7
2.1 Concept of Vocabulary	7
2.2 Types of Vocabulary.....	8
2.3 Aspect of Vocabulary.....	10
2.4 Concept of Teaching Vocabulary.....	11
2.5 Definition of Media.....	14
2.6 Definition of Wordwall.....	16
2.7 Advantages and Disadvantages of Learning Vocabulary Using Wordwall	18
2.8 Teaching Vocabulary Using Wordwall.....	18
2.9 Theoretical Assumptions.....	20
2.10 Hypothesis.....	21
III. METHOD.....	22
3.1 Research Design.....	22
3.2 Population and Sample.....	23
3.3 Variables of The Research	23
3.4 Instrument of The Research	23
3.5 Validity and Reliability	24
3.5.1 <i>Validity of Vocabulary Test</i>	24
3.5.2 <i>Reliability</i>	26
3.5.3. <i>Level of Difficulty</i>	28
3.5.4. <i>Discrimination Power</i>	29
3.6 Research Procedures	30
3.7 Data Collecting Technique.....	32
3.8 Data Treatment.....	33
3.8.1 <i>Normality Test</i>	33
3.9 Data Analysis	34

3.10 Hypothesis Testing.....	35
IV. RESULT AND DISCUSSION	37
4.1 Teaching and Learning Activities	37
4.2 The students' Vocabulary Improvement after They Are Taught Using Wordwall Media.....	43
4.2.1 <i>The Results of Pretest</i>	43
4.2.2 <i>The Result of Posttest</i>	45
4.3 The Improvement of the Students' Vocabulary Achievement From Results of Pretest and Posttest.....	47
4.4 Discussion of Finding	51
V. CONCLUSION AND SUGGESTION	57
5.1 Conclusion.....	57
5.2 Suggestion.....	58
5.2.1 <i>Suggestion for English Teacher</i>	58
5.2.2 <i>Suggestion for Further Research</i>	59
REFERENCE.....	61
APPENDICES.....	64

LIST OF TABLES

Table 3. 1 Table of Specifications.....	25
Table 3. 2 Reliability StatisticsUsing SPSS	27
Table 3. 3 Difficulty Level of Test Item	28
Table 3. 4 Normality test.....	34
Table 4. 1 Mean, Lowest, and Highest Scores of Pretest.....	44
Table 4. 2 Frequency and Percentage Distribution of Student Pretest.....	44
Table 4. 3 Analysis Posttest	45
Table 4. 4 Frequency Distribution of The students' Posttest Scores	46
Table 4. 5 Gains of The Students' Vocabulary Improvement.....	47
Table 4. 6 The improvement of the students' Vocabulary achievement	47
Table 4. 7 The Result of Hypothesis Testing Using SPSS	49
Table 4. 8 The Improvement of the Aspect of Vocabulary.....	50

LIST OF FIGURES

Figure 4. 1 Group short of Wordwall.....	38
Figure 4. 2 Match to fill the word wall.	39
Figure 4. 3 Match word with Word Wall.....	40
Figure 4. 4 Quiz of Wordwall	40
Figure 4. 5 Spin the wheels of Wordwall.....	41
Figure 4. 6 Anagram of wordwall.....	42
Figure 4. 7 True or false of Wordwall.....	42
Figure 4. 8 Match up of Wordwall.....	43

LIST OF APPENDICES

Appendix 1 Lesson Plan.....	65
Appendix 2 Students worksheet (LKPD).....	72
Appendix 3 Tryout.....	78
Appendix 4 Pre-test.....	87
Appendix 5 Post-test	93
Appendix 6 Validation Form	99
Appendix 7 List of Words.....	107
Appendix 8 Upper Group Tryout Test Tabulation.....	112
Appendix 9 Lower Group Tryout Test Tabulation	113
Appendix 10 Reliability	114
Appendix 11 Level Of Difficulty	116
Appendix 12 Gain	119
Appendix 13 Distribution of Pre-Test and Post-Test.....	122
Appendix 14 Hypothesis Testing	124
Appendix 15 Tabulation Each Aspect Of Vocabulary.....	125
Appendix 16 Improvement Each Aspect	128
Appendix 17 Normality Test.....	130
Appendix 18 Alur Tujuan Pembelajaran (ATP)/ Syllabus	131
Appendix 19 Student' Tryout Answers	137
Appendix 20 Student's pretest answer	144
Appendix 21 Student's posttest answer.....	148
Appendix 22 Students' activity	152
Appendix 23 Reaserch Permit Letters.....	154
Appendix 24 Wordwalls and Documentations	156

I. INTRODUCTION

In this chapter, the background of the research will be explained, including the research context, the researcher's approach to the research questions and objectives, the research methods used, the scope of the study, and the definitions of the terms used.

1.1 Background

Language is the most important factor in communication, and English is one of them. English is part of the global lingua franca, a language used for oral and written communication worldwide, serving as a liaison between individuals and groups. English also serves as a means to connect science, business, technology, and the field of Education. There are four skills students must learn and master in English: listening, reading, speaking, and writing. In addition to these four skills, the students also need to master grammar, vocabulary, and pronunciation, which are essential elements of language (Allen, 1997).

Vocabulary is a crucial factor in all language teaching and learning (Allen, 1997). Without a sufficient vocabulary, learners will struggle to understand what others are saying and to express their feelings in both written and spoken communication. Conversely, possessing a large vocabulary helps learners develop their proficiency in English. Vocabulary is a crucial aspect of language skills, essential for increasing learners' listening, speaking, reading, and writing abilities (Setiawan and Zuana, 2018).

Improving students' vocabulary yields significant benefits, particularly in language achievement (Ana, 2018). A strong vocabulary enables students to convey concepts effectively, comprehend what they read, and understand spoken language. Additionally, it enables them to articulate their opinions, ideas, and desires clearly, demonstrating the critical role of vocabulary in communication (Uspa, 2020).

Vocabulary is a high priority for learners pursuing academic studies in English. After mastering the 2,000 high-frequency words, learners should focus on academic vocabulary (Nation, 2008). Achievements of these 2,000 high-frequency words, along with the Academic Word List, provide nearly 90% coverage of the words in most academic texts. When supplemented with proper nouns and technical vocabulary, learners can approach the critical 95% coverage threshold necessary for adequate reading comprehension.

Nunan (2015) found that one of the difficulties learners face in learning English is the large number of words with multiple functions. Manik and Christiani (2016) stated that for students' English skills to develop, they must possess adequate vocabulary achievements. Meanwhile, according to Alqahtani (2015), vocabulary achievements reflect an individual's ability to use words effectively in a language. One way to improve vocabulary achievement is to use interactive word walls designed to emphasize academic vocabulary and encourage students' active participation.

Over the last few decades, technology has become an integral part of everyday life, profoundly affecting various aspects, including English language teaching (ELT) (Ahmad, 2012). The integration of media technology in English Language Teaching (ELT) classes aims to improve the achievement of the four primary language skills: listening, speaking, reading, and writing. One form of media technology used is the interactive word wall, which has been proven effective as a literacy tool in vocabulary learning (Harmon, Wood, and Hedrick, 2009). The effectiveness of word walls is further enhanced when combined with strategic, appropriate teaching methods, especially at the secondary school level. This tool

not only strengthens vocabulary recall but also encourages the students' active involvement in the overall learning process.

Wordwalls are defined as collections of developmentally appropriate vocabulary prominently displayed in classrooms (Vallejo, 2006) and serve multifaceted roles for student learning. They serve as valuable resources for students grappling with unfamiliar words, helping them analyze and understand them. Additionally, word walls provide crucial support for spelling, offering visual reinforcement and reference for correctly spelling new or challenging words. Moreover, these displays serve as a reference point for defining and comprehending new vocabulary introduced during lessons. Teachers may opt to create separate word walls for specific purposes or integrate all functions into a single comprehensive display (Brabham and Villaume, 2001). Regardless of their arrangement, word walls typically share common attributes: they feature words selected for their instructional relevance, maintain a cumulative collection as new words are introduced, and foster structured conversations and activities that scaffold student engagement with and usage of the vocabulary in meaningful contexts. This interactive approach not only supports vocabulary development but also improves the students' ability to effectively integrate new words into their academic and everyday language use.

Previous research by Pradini and Adnyayanti (2022) demonstrated that using Wordwall as a creative learning method in Grade 5 at SDN 1 Mambang positively affects students' vocabulary achievement. The average posttest score of the students reached 73.33 (a good category), an improvement from the pretest score of 53.33 (a fair category), representing a total improvement in vocabulary understanding of 37.50%. In previous studies in elementary school, the researcher in this study used interactive and fun methods in junior high school. Also, the types of word walls to be used are match-up, quiz, and unjumble.

Based on the researcher's observations of children around the house who attend SMPN 1 Way Jepara, many students have difficulty learning vocabulary. The

students reported that during the teaching and learning process, they experienced difficulty understanding and spelling words, indicating low vocabulary achievements . Moreover, the students continue to struggle with speaking English every day. These challenges motivate researchers to conduct research aimed at improving students' vocabulary achievement.

In this research, I will examine the use of wordwall as a medium to improve Vocabulary at SMPN 1 Way Jepara in the seventh grade of Junior high school. The activities are engaging and fun, not just focusing on learning, which helps keep children interested. The research was conducted by administering a pretest to assess students' abilities before learning with the Word Wall media and a posttest to evaluate their performance after using the Wordwall. The results can be very influential, as in primary and middle school, or they can be different.

1.2 Research Question

Based on the explanation above, in the background of the study, the researcher formulates the problems as follows:

Is there a significant improvement in the students' vocabulary achievement through the use of Wordwall media in the seventh grade of SMPN 1 Way Jepara?

1.3 Objective of The Research

In line with the problem formulation, the purpose of this study is to examine the significant improvement in students' vocabulary achievement through the use of Wordwall media among seventh-grade students at SMPN 1 Way Jepara.

1.4 Use of The Research

The researcher hopes this study will yield practical and theoretical benefits for English teaching, particularly in vocabulary acquisition.

1. Theoretical Benefits

The results support existing theories on vocabulary, contributing to the body of knowledge on vocabulary. This research can provide valuable experience and serve as a reference for future studies seeking solutions and addressing related issues.

2. Practical Benefits

The results of this study encourage teachers to utilize Wordwall as a learning medium that supports the students' vocabulary improvement and improves teaching quality. The findings can help the students improve their English vocabulary achievement.

1.5 Scope of the Research

This study examined the improvement of students' vocabulary achievement through the use of Wordwall media among junior high school students. The method used is a pre-experiment design with one group receiving a pretest and posttest, conducted with seventh-grade students at SMPN 1 Way Jepara. The learning materials include nouns, verbs, adjectives, adverbs, pronouns, and prepositions, aligned with the Merdeka Curriculum syllabus for seventh grade. The study is conducted over three meetings to measure the improvement in students' vocabulary through Wordwall.

1.6 Definition of Term

In order for the reader to better understand the content of this study, here are some important terms that the researcher uses:

1. Media

Learning media are tools or means used by teachers to convey subject matter to students in a more engaging, interactive, and easy-to-understand manner through visual, audio, audiovisual, or digital media.

2. Wordwall

Wordwall is an interactive learning media that provides various educational games to help students learn in a more fun way. In English language learning, this media is often used to improve the understanding of vocabulary, grammar, and other materials.

3. Vocabulary

Vocabulary is a collection of words that are mastered and used by a person to communicate effectively. Vocabulary achievements encompass meaning, spelling, pronunciation, word class, and usage, which are crucial components in the language learning process, enabling clear and precise communication of ideas.

Chapter one is the introduction section, which comprises six sub-chapters: background, research question, research objectives, research methodology, scope, and definitions of terms.

II. LITERATURE REVIEW

This chapter presents several theories that complement the framework described in the previous chapter. The theories that will be discussed are as follows: definition of vocabulary, teaching vocabulary, types of vocabulary, concept of teaching vocabulary, definition of media, definition of word wall, advantages and disadvantages of teaching vocabulary using Wordwall, theoretical assumptions and hypotheses.

2.1 Concept of Vocabulary

According to Hiebert and Kamil (2005), vocabulary is "the knowledge of meanings of words." They emphasise that vocabulary is not just about recognising words, but also about understanding their meaning in various contexts. In language teaching, vocabulary achievements are a crucial foundation that enables students to comprehend texts deeply and express themselves effectively. Hiebert also states that the selection of words taught should consider their frequency of occurrence and relevance to the students' lives, so that learning is more meaningful.

Meanwhile, Nation (2001) views vocabulary as complex, encompassing aspects such as form, meaning, usage, and the relationships between words. Nation explains that vocabulary knowledge encompasses not only the meaning of a word but also its usage in sentences, including its grammatical structure and collocations. He divides vocabulary acquisition into two types: receptive vocabulary (words that are recognised when reading or listening) and productive vocabulary (words that can

be used when speaking or writing). Thus, vocabulary learning should involve both aspects to ensure the students have balanced language competence.

Based on Hiebert and Nation's perspective, it can be concluded that vocabulary is a key element in effective language acquisition and use. Hiebert emphasises the importance of understanding the meaning of words in a learning context that is relevant and meaningful to the students. Meanwhile, Nation underlines that vocabulary knowledge includes not only the meaning of words but also their use in language structure as well as their receptive and productive aspects. Thus, vocabulary teaching must be carefully designed so that the students can understand and use language actively and appropriately.

2.2 Types of Vocabulary

Experts often divide vocabulary into two main types: active and passive vocabulary. Additionally, Hiebert and Kamil (2005: 3) propose that words can be categorised into two forms:

1. Oral Vocabulary: The set of words for which we know the meanings when we speak or read aloud.
2. Print Vocabulary: The set of words for which we know the meanings when we write or read silently.

In addition, Hatch and Brown (1995, pp. 181-243) classified five types of vocabulary. They are as follows:

- a. Word Classes

Word classes, also known as parts of speech, include different types of words used in sentences. They are:

- Noun: Person, place, thing (e.g., cat, city)
- Verb: Action or state (e.g., run, is)

- Adverb: Modifies verbs, adjectives, or other adverbs (e.g., quickly, very)
- Adjective: Describes nouns (e.g., happy, blue)
- Pronoun: Replaces nouns (e.g., he, they)
- Preposition: Shows the relationship between a noun (or pronoun) and other words (e.g., in, on)
- Conjunction: Connects words, phrases, and clauses (e.g., and, but)

b. Word Families

- Word families involve understanding how words change with affixes and shifts:
- Inflected Forms: Changes in word form to express different grammatical features (e.g., play, plays, played)
- Derivatives: New words formed by adding affixes (e.g., play, replay, playful).

c. Word Formation

- Word formation refers to the creation of new words and can be observed either historically (diachronically) or at a specific point in time (synchronously):
- Compounding: Combining two words to form a new one (e.g., second-hand, word processor)
- Blending: Merging parts of words to create a new word (e.g., infotainment from information + entertainment)
- Clipping: Shortening a longer word (e.g., email from electronic mail, flu from influenza).

d. Collocation

Collocation involves words that are commonly found together, making natural-sounding phrases:

Examples: this week, once more, once again, as well

e. Homonyms

Homonyms are words that have the same form but different meanings.

Examples: "well" can mean a water source (sumur) or in good health (baik).

"left" can mean the direction (kiri) or past tense of leave (berangkat)

From the description above, we can see that each expert classifies vocabulary types differently. I can conclude that there are various types of vocabulary based on the function and content of words, as presented by Hatch and Brown. These include word classes, word families, word formation, collocations, homonyms, and other related concepts. Furthermore, the researcher chose four parts of speech: nouns, verbs, adjectives, and adverbs, which are commonly used and more useful in daily conversations and vocabulary among Junior High School students.

2.3 Aspect of Vocabulary

According to Nation (2001), in his book Learning Vocabulary in Another Language, vocabulary has three significant aspects: form, use, and meaning

1. Form

Form in vocabulary refers to how a word is recognised and produced in both oral and written forms. In oral form, learners must be able to recognise and pronounce the word correctly; in written form, they must be able to spell and read it. Additionally, the form aspect includes understanding the

morphological structure of the word, which involves recognising its components, such as prefixes, suffixes, and roots.

2. meaning

In the meaning aspect, Nation emphasises that knowing the meaning of a word involves not only its basic definition but also its use in a particular context. Learners need to understand the relationship between form and meaning, the conceptual or referential meaning of words (what they refer to in the real world), and the association of meaning with other words, such as synonyms, antonyms, and collocations. For example, the word "strong" is often used in collocations such as "strong coffee" or "strong argument," which shows that a word's meaning can be highly context-dependent and influenced by idiomatic associations.

3. Use

Finally, the use aspect relates to the learners' ability to use words in correct grammatical structures, in natural collocations, and in appropriate social or cultural contexts. For example, some words may have the same meaning but be used in different situations, such as the neutral "ask" and the more formal "inquire." The nation emphasises the importance of understanding the limitations of word choice, such as formality (register), cultural sensitivity, and social context, for effective communication.

2.4 Concept of Teaching Vocabulary

In English language teaching, vocabulary acquisition is one of the important aspects that determines the students' language skills. According to Harmer (2007), vocabulary teaching is not limited to conveying word meanings but also involves a range of techniques that help students understand, retain, and use vocabulary effectively in daily communication.

Harmer explains that vocabulary teaching should be contextualized, interesting, and varied. Therefore, he suggests several vocabulary teaching techniques that teachers can apply in the learning process, namely:

1. Use of Visual Aids

One of the techniques Harmer highly recommends is the use of visual aids in vocabulary teaching. Pictures, photos, flashcards, diagrams, and realia can help students understand vocabulary more concretely and quickly. Visual media is highly effective, especially for vocabulary related to objects, places, or activities that can be easily visualized. Seeing a visual representation of a word can form strong visual associations in memory, making it easier to remember.

2. Synonyms, Antonyms, and Translations

Harmer also suggests using a semantic approach, which involves introducing words through synonyms and antonyms. For example, to introduce the word 'happy,' the teacher can also introduce the word 'joyful' as a synonym and 'sad' as an antonym. This technique helps the students build meaningful relations between vocabulary and expand their lexical network. In addition, although direct translation into the students' mother tongue is not always recommended in communicative teaching, Harmer recognises that in some cases, translation can be an efficient way to clarify the meaning of specific vocabulary, especially abstract or complex words.

3. Contextual Teaching

According to Harmer, it is very important to teach vocabulary in a meaningful context. Words should not be taught in isolation, but rather presented in sentences, paragraphs, dialogues, or stories. Through context, students not only learn the meaning of the word but also understand how it is used in real communication situations, including sentence patterns, collocations, and nuances of meaning. For example, the word 'run' can have different meanings depending on the context: 'run a business' is different from 'run fast.'

4. Word Games

Another technique proposed by Harmer is the use of language games in vocabulary learning. Word games such as bingo, crossword puzzles, matching games, and memory games can improvement student motivation and engagement. They create a fun, interactive learning environment that reinforces the vocabulary taught. The games also provide the students with the opportunity to use words in non-formal contexts that remain meaningful and relevant.

5. Repetition and Active Use

Harmer emphasises the importance of repetition in vocabulary learning. Vocabulary taught is not enough to be introduced once; it needs to be repeated regularly across various activities so that it is stored in students' long-term memory. In addition to repetition, teachers should encourage students to actively use new vocabulary in speaking and writing activities. For example, after introducing new words, teachers can ask students to write sentences, dialogues, or paragraphs using those words. This activity will help the students transfer vocabulary from passive knowledge to active knowledge.

6. Encouraging Language Production

According to Harmer, one important technique is to create opportunities for the students to use vocabulary in language production, both orally and in writing. The students need tasks that encourage them to express ideas using the vocabulary they have learnt. This technique will help improve fluency while strengthening understanding of the meaning and use of the word.

This approach not only focuses on providing word definitions but also aims to build a thorough understanding of the form, meaning, and use of vocabulary in real-life contexts. By consistently applying these techniques, vocabulary learning can significantly improve students' language skills.

2.5 Definition of Media

The word 'media' comes from the Latin medium, meaning 'intermediary' or 'introducer'. According to Gerlach and Ely (1971), media encompasses physical objects such as pictures, graphics, films, television, and computers, as well as activities or interactions that support the learning process. They emphasise that what is important about media is its ability to positively influence learning through direct experience or representation of reality delivered to the students.

According to Arsyad (2015:4), learning media are any physical or technological tools used to convey messages or information to achieve learning objectives. Interactive learning media, in particular, refer to media that enable two-way interaction between learners and teaching materials through digital technology. The interaction is not only limited to providing feedback but also creating an adaptive and meaningful learning experience.

Munir (2012: 67) states that interactive learning media is a type of media that presents teaching materials through a combination of text, sound, images, animations, and videos that users can manipulate. In its use, learners not only passively see or listen to information, but can also explore, respond, and influence the course of learning at their own pace and according to their learning style. Therefore, this media is suitable for encouraging student-centered learning, enabling students to become active participants in the learning process.

The use of interactive learning media not only serves as a tool but also as a facilitator in creating rich, experiential learning situations. Suyanto and Jihad (2013:134) emphasise that interactive media can combine elements of education and entertainment (edutainment), which is very effective in attracting the students' attention, especially at the primary and secondary education levels. Interactive media is highly relevant to the development of digital-generation characteristics, as these individuals are increasingly interested in visual-based learning and interactive

activities. In practice, educators often use various types of interactive media, including Wordwall, Kahoot, Quizizz, Nearpod, and interactive Google Forms. These media enable teachers to create diverse learning activities, such as interactive quizzes, word matching exercises, puzzle games, and multimedia presentations, that support student engagement. Wordwall, for example, provides a wide range of content-based educational games that can be customised to learning materials and student needs, such as matching games, anagrams, spin wheels, and quizzes that combine elements of play and learning. Furthermore, interactive learning media can provide various benefits in the learning process, including:

1. Increasing students' learning motivation by presenting interesting, non-monotonous material.
2. Fostering students' active participation by directly involving them in the learning process.
3. Improve concept understanding and retention of material through fun repetition and reinforcement.
4. Facilitating independent learning so that students can access the media flexibly, both inside and outside the classroom.

Based on the explanation above, interactive learning media involve students directly in the learning process through a combination of multimedia elements presented in an attractive, dynamic manner. The use of this media is very much in line with the 21st-century learning approach, which emphasises collaboration, creativity, and the effective use of digital technology. By utilising interactive media, teachers can create a learning process that not only conveys information but also builds an active, fun, and meaningful learning experience for the students.

2.6 Definition of Wordwall

The Word Wall game is a learning media that presents vocabulary in a structured manner and is displayed in large font sizes for easy viewing by the students in the classroom. This media is placed on the wall or in other prominent locations so that the students can see and remember the words more easily during the learning process. According to Van (1997), a Wordwall is very useful because it can help develop various language skills, such as reading, writing, and active speaking. The main focus of using wordwall is to help the students develop their language skills thoroughly and continuously. In addition, some Wordwall activities are oral and can create a more fun and interactive learning atmosphere in the classroom.

According to Jannah (2022), Wordwall is a web-based educational platform designed to make the learning process more engaging and fun through a variety of interactive games. The site offers a diverse range of activities, including information and picture matching, interactive quizzes, a Wheel of Fortune game, puzzles, and more, all designed to improve students' vocabulary and comprehension skills. The features within Wordwall enable teachers to create engaging learning materials tailored to the students' needs and learning objectives. In addition to being used online, all activities created on this platform can also be printed and used offline, depending on the classroom situation. Thus, Wordwall becomes a flexible, easy-to-use learning tool across various teaching contexts. Wordwall has some interactive games for learning. These are some types of games on Wordwall, namely:

1. A quiz, which is usually used for multiple-choice questions, is suitable for tests or practice questions.
2. Match Up is used to pair words with meanings, pictures, or definitions.
3. A random wheel typically contains names or questions that are rotated.
4. Open the Box is usually where the students select a box to open a question.

5. Whack-a-Mole is used by clicking on the correct answer as quickly as possible from a random selection. Anagrams are formed by arranging letters into the correct word.
6. Fill in the missing word in the sentence.
7. Grouping involves organising words or pictures into categories.
8. Labelled Diagram by labelling parts of the picture/diagram
9. True or False is used to answer whether a statement is true or false

Wordwall was initially designed as a learning strategy to challenge and motivate high-achieving students in vocabulary learning. The strategy was created to help these students expand their vocabulary in an organised, easy-to-understand way. The vocabulary in Wordwall is systematically arranged, allowing students to recognise and understand word relationships more quickly and efficiently. Each word is displayed in large letters, making it easily visible and memorable for the students during the learning process. Therefore, a Wordwall is also considered an effective strategy for strengthening students' overall vocabulary achievement.

2.7 Advantages and Disadvantages of Learning Vocabulary Using Wordwall

The Wordwall technique has several advantages for teaching vocabulary. Wordwall helps the students by providing words that are easily accessible during the learning process. Other advantages of using Wordwall media to improve vocabulary are:

1. It helps the students remember words through a visual display.
2. It helps the students learn to read.
3. Trains the students to be more independent.
4. Improves reading and writing skills.

However, there are also some disadvantages:

1. It takes time to make.
2. Requires specific tools or materials.
3. Sometimes, it is considered a less important activity.
4. It is not easy to manage students in large classes.

To overcome these disadvantages, teachers can prepare the materials and the word wall, clearly explain how to use them, and organise the class effectively.

2.8 Teaching Vocabulary Using Wordwall

The wordwall technique can be used before, during, or after reading. Before reading, the teacher introduces new vocabulary through the wordwall. While reading, the students are asked to identify unfamiliar words and add them to the Wordwall. After reading, the teacher can invite students to review the words on the Wordwall, for example, by asking them to read and understand their meanings. Wordwall can serve as a valuable learning resource for the students as they seek new vocabulary for writing (Jannah, 2022). Steps for implementing a word wall:

1. Learning Planning

The first step is to design learning objectives, select vocabulary relevant to the material, and determine the type of wordwall activity that suits the students' characteristics and the competencies to be achieved. Teachers also need to adjust the game design to the students' ability level, for example, by choosing games such as Match Up for beginners or Anagram for more advanced students.

2. Material Introduction (Presentation)

Before playing Wordwall, the teacher introduces new vocabulary to students through pictures, sentence context, translation, or other visual media. This is so that the students have an initial idea of the meaning and use of the word.

3. Interactive Activity Using Wordwall (Practice)

After the vocabulary is introduced, the students are invited to practice and reinforce their understanding through Wordwall activities. At this stage, the teacher chooses the appropriate type of game, such as:

Match Up: matching words with pictures or definitions.

Quiz: answering multiple-choice questions related to the meaning of the word.

An anagram: arranging letters into the correct word.

Wordsearch: finding the hidden word in the letter box.

Whack-a-mole: choosing the appropriate word from several options that appear.

These activities can be done individually, in pairs, or in groups to foster collaboration.

4. Feedback and Correction

After the game, the teacher gives feedback on the students' answers. If there are mistakes, the teacher explains the meaning and use of any words that were misunderstood. Constructive feedback helps the students identify and correct mistakes, thereby strengthening their understanding of the vocabulary.

5. Reinforcement and Production

The last step was the reinforcement and application of vocabulary in real contexts. The teacher could ask the students to use the vocabulary they have learned in sentences, short stories, or oral presentations. This stage is important so that students not only recognise the words passively but also use them actively in communication.

Teaching vocabulary using Wordwall media involves a series of structured steps, from planning to active application in real contexts. Wordwall provides an interactive, fun medium that can improve students' motivation to learn, strengthen their understanding of vocabulary meanings, and encourage active use in communication. Visual support, cognitive engagement, and repetition through games make this media effective in improving the students' vocabulary acquisition.

2.9 Theoretical Assumptions

English for junior high school students in the seventh grade is a new medium in their studies. The students prefer to study in an enjoyable situation, and more interestingly. The use of Wordwall games in English language learning is a valuable way to make students more active and the class more engaging. The Wordwall game supports vocabulary teaching, and the students show improvement in vocabulary

achievement when learning English. The wordwall game can also facilitate effective English vocabulary learning.

In the Wordwall media, the students are more interested in understanding the material. The students comprehend when the teacher introduces new words through the Word Wall game. It is helpful and fun for teaching and learning vocabulary.

2.10 Hypothesis

Based on the study, the researcher stated the hypothesis as follows:

H1: There is a significant improvement in students' vocabulary achievement after they are taught using Wordwall media in a seventh-grade junior high school.

H0: There is no significant improvement in the students' vocabulary achievement after they are taught using Wordwall media at the seventh-grade junior high school.

This chapter has some subchapters, and the sub-chapter is divided into: definition of vocabulary, teaching of vocabulary, definition of vocabulary, types of vocabulary, concept teaching vocabulary, definition media, definition wordwall, advantages and disadvantages of teaching vocabulary using wordwall, teaching vocabulary using word wall, theoretical assumption, and hypothesis.

This chapter presents several theories that complement the framework described in the previous chapter. The theories that will be discussed are as follows: definition of vocabulary, teaching vocabulary, types of vocabulary, concept of teaching vocabulary, definition of media, definition of word wall, advantages and disadvantages of teaching vocabulary using Wordwall, theoretical assumptions and hypotheses.

III. METHOD

Chapter three covers various topics, including research design, population and sample, research variables, data collection techniques and procedures, research instruments, validity and reliability, data analysis, and sample size determination.

The contents of this chapter are presented as follows:

3.1 Research Design

This study aims to evaluate the students' vocabulary achievement following the use of Wordwall as a learning medium. To answer the research questions, the writer collected data using a quantitative approach and a one-group pretest-posttest design. The pretest was administered to assess students' vocabulary improvement before the intervention. At the same time, the posttest was used to measure the extent of improvement in their vocabulary achievement after the intervention. The research design is illustrated below:

T1 X T2

Where:

T1: belongs to the pretest

T2: belongs to the posttest

X belongs to the treatment (the implementation of Wordwall media to teach vocabulary achievement). (Setiyadi, 2018).

3.2 Population and Sample

The population for this research consists of the seventh-grade students at SMPN 1 Way Jepara. The seventh grade of SMPN 1 Way Jepara had 11 classes, but the researcher selected only one as a random sample: class VII. 1 as the representative sample for this research. A class consisting of 34 students was selected to participate in the study. To determine the sample, the researcher employed simple random sampling.

3.3 Variables of The Research

According to Setiyadi (2018), a group of people, behavior, or environment with various characteristics was called a variable. This research consisted of two variables: wordwall media as the independent variable (variable Y) and students' vocabulary achievement as the dependent variable (variable X). The variable in this study was students' vocabulary comprehension, used as a benchmark for whether students improved and comprehended when using Wordwall as a learning medium.

3.4 Instrument of The Research

In this research, the researcher chose an objective test instrument to assess students' vocabulary understanding and improvement. The test was administered to the students as 40 multiple-choice questions, serving as both a pretest and a posttest to assess improvement in students' vocabulary. Both tests included content words: nouns, verbs, adverbs, adjectives, pronouns, and prepositions. However, before conducting the pretest, the students in different classes were given 60 tryout multiple-choice questions to select valid and reliable items for the pretest and posttest.

3. 5 Validity and Reliability

This sub-chapter explains validity, divided into content validity and construct validity, as well as reliability, level of difficulty, and discrimination power.

3.5.1 *Validity of Vocabulary Test*

1. Content Validity

According to Hatch and Farhady (1982), content validity refers to the extent to which a sample accurately represents the subject matter being tested and accurately reflects the sample and appearance of the test. In this study, researchers assessed the validity of the vocabulary test by adjusting the school's syllabus and curriculum, specifically by implementing an independent syllabus and curriculum. To ensure content validity, researchers used data from Merdeka's curriculum syllabus to assess how well the test items aligned with the test's purpose: specifically, to improve students' vocabulary. Additionally, the researchers consulted experts, including research advisors and competent English teachers, to evaluate the strength and appropriateness of each instrument item. The vocabulary included in the test was customized for seventh-grade students, focusing on word classes based on Hatch and Brown (1995), such as verbs, Nouns, Adverbs, adjectives, pronouns, and prepositions.

The vocabulary to be tested in the pretest and posttest comes from the vocabulary tested in the tryout before the pretest. Vocabulary that has been tested in the tryout and whose validity and reliability have been calculated is then declared valid and reliable, selected, and tested in the pretest and posttest. Meanwhile, the words selected or included in the tryout were taken from three texts in the English for Nusantara book that would be given during the treatment. This was based on Richards' (1976) Need and Relevance Principle, which emphasizes that the

vocabulary selected must be relevant to learners' needs. This means that vocabulary should be drawn from the curriculum, textbooks, and themes close to students' lives.

Therefore, the researcher created a vocabulary list and categorized it into classes from three texts selected from the book, which would be given to students during the treatment. Then, words would be randomly selected from the researcher's list, with the total number of words in the text divided among the researcher's total tasks.

Table 3. 1Table of Specifications

No	Types of content vocabulary	Item Number	Total
1.	Verb	4,6,10,14,21,26,28,29,36,44,46,60	12
2.	Adjective	38,42,43	3
3.	Noun	1,3,7,8,9,15,17,20,23,24,27,30,31,32,33, 34,39,40,41,45,47,48,49,51,53,54,58,	27
4.	adverb	2,13,16,18,37,55,56,59	8
5.	preposition	5,11,12,19,35,52	6
6.	pronoun	22,25,50,57.	4
TOTAL			60

2. Construct Validity

Construct validity refers to the fit between the test's content and the theory underlying the language acquisition ability being measured (Shohamy, 1985). This study assesses construct validity, which determines whether the test items and the test's purpose accurately measure students' understanding and improvement in vocabulary concepts being tested, according to current theory. Before the vocabulary test, the researcher prepared lists of vocabulary based on three descriptive texts in the Merdeka curriculum syllabus and on Hatch and Brown's classification of vocabulary classes. After the researcher prepared a list and

classification of vocabulary, the researcher selected the vocabulary for the tryout test using the split-half method. The tryout test was administered to students, and the data were analyzed using SPSS. Some of the items were valid and will be used as pre- and post-test measures to assess students' vocabulary understanding.

3.5.2 *Reliability*

Reliability was a measure of the extent to which a data collection instrument provided consistent and stable results when used repeatedly to measure the same subject under similar conditions (Setiyadi, 2018). In this study, the instrument used to measure vocabulary achievements was an objective test consisting of multiple-choice questions. Therefore, a reliability test was conducted to determine the extent to which the test items demonstrated internal consistency.

According to Arikunto (1998), an instrument was considered reliable if the results of measurements made with it were consistent. One commonly used method to measure the reliability of multiple-choice test instruments was the split-half method, which divides the items into two equal halves, for example, based on odd and even numbers. The scores from the two parts were analyzed using the Pearson product-moment correlation, and further calculations were performed using the Spearman-Brown Formula to determine the instrument's overall reliability.

The Spearman-Brown formula is as follows:

$$r_{11} = \frac{2r_{xy}}{1 + r_{xy}}$$

Descriptions:

r_{11} : Reliability coefficient of the whole test

r_{xy} : correlation between the two parts of the instrument

Furthermore, this research will also use the standard of reliability as follows:

0.00 to 0.19: a very low reliability

- 0.20 to 0.39: a low reliability
 0.40 to 0.59: an average reliability
 0.60 to 0.79: a high reliability
 0.80 to 0.100: a very high reliability

(Arikunto, 1998:260)

Table 3. 2 Reliability Statistics Using SPSS

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.752
		N of Items	30 ^a
	Part 2	Value	.844
		N of Items	30 ^b
		Total N of Items	60
Correlation Between Forms			.841
Spearman-Brown	Equal Length		.914
Coefficient	Unequal Length		.914
Guttman Split-Half Coefficient			.903

a: the number of items from one to thirty

b: the number of items from thirty-one to sixty

Based on the reliability analysis, the vocabulary test instrument used consists of 60 questions and shows very high reliability, as indicated by the Spearman-Brown value of 0.914 and the Guttman value of 0.903. Thus, this instrument demonstrated internal consistency and was very feasible for measuring students' vocabulary in this study.

3.5.3. *Level of Difficulty*

The level of difficulty refers to how easy or difficult the test questions appear to the student. Student test scores will be arranged from highest to lowest. To see the level of difficulty, this study uses the following formula:

$$LD = \frac{U + L}{N}$$

Where :

LD: Level of difficulty

U: The number of the upper group who answer correctly

L: The number of the lower group who answer correctly

N: The total number of students in the upper and lower groups. The criteria are as follows :

< 0.03: Difficult

0.03 – 0.07: Average

> 0.07: Easy

(Shohamy, 1985)

Table 3. 3 Difficulty Level of Test Item

No	Number Item Test	Computation	Criteria
1.	1,2,7,10,11,14,15,16,20,24,25,27,30,31,32,3 5,36,39,40,41,42,44,45,47,49,50,51,53,54,59	<0.30	Easy
2.	3,4,5,6,8,9,12,13,17,18,19,21,22,23,26,28,29 ,33,34,37,38,46,48,55,56,57,58,60	0.30-0.70	Average
3.	43,52	>0.70	Difficult

The table of item difficulty levels shows the distribution of questions based on the difficulty index calculation. A total of 30 items fall into the easy category because they have a difficulty index of less than 0.30. This calculation indicates that most students can answer these questions correctly. Furthermore, 28 items fall into the moderate category, with a difficulty index ranging from 0.30 to 0.70, indicating that these questions have a balanced level of difficulty and could distinguish between high- and low-ability students. Meanwhile, only two items were classified as difficult, with difficulty index values exceeding 0.70, indicating that only a small number of students answered the questions correctly.

After calculating the level of difficulty, the process continued to calculate the discriminating power to determine the adjusted pretest and posttest questions. This reduced the number of questions from 60 to 40, or 66.7% of the questions tested in the tryout, to maintain reliability and make the test more accessible to students. A total of 22 easy questions, 1 difficult question, and 3 medium questions will be tested on the students.

3.5.4. Discrimination Power

Discrimination power refers to an item's ability to distinguish between students with high and low ability. The following formula calculates the discrimination power:

$$DP = \frac{U - L}{\frac{1}{2}n}$$

Where:

DP: Discrimination Power

U: The number of students in the upper group who answer correctly

L: The number of lower groups of students who answer correctly

n: Total number of the students

The criteria are :

0.00 – 0.19: Poor

0.20 – 0.39: Satisfactory

0.40 – 0.69: Good

0.70 – 1.00: Excellent

* (Negative): Bad items should be omitted*

(Heaton, 1975)

3.6 Research Procedures

To obtain accurate results in research, it is essential to employ some of the most effective research methods. These were some of the procedures that the researcher did:

1. Determining Problems

To determine the problem, it was necessary to approach it systematically to identify any resources related to Wordwall Media that could improve students' vocabulary understanding. The researcher would ask one of the first-grade English teachers how well the students performed in English lessons, such as whether they were able to communicate in English during lessons.

2. Determining population and sample

The study population was selected from one of the seventh-grade classes at SMPN 1 Way Jepara. The population would randomly select one class from the eleven classes at SMPN 1 Way Jepara in the seventh grade.

3. Determining Materials

After determining the population and sample, the researcher would prepare the materials for the pretest, the treatment, and the posttest based on the course objectives outlined in the seventh-grade SMPN 1 Way Jepara syllabus.

4. Pretest

The pretest consisted of a set of questions that students completed before receiving the treatment to measure their vocabulary knowledge prior to the treatment. During the pretest, the students would be given 40 multiple-choice vocabulary questions based on context (adjectives, verbs, nouns, adverbs, and prepositions). They had one hour to complete them, which was equivalent to 45 minutes.

5. Treatment

The treatment was carried out by one experimental class using Wordwall media. The treatment was carried out over two subject hours, consisting of 90-minute meetings, for a total of three meetings. During the three meetings, the students would be trained to add vocabulary words in the form of verbs, nouns, adjectives, adverbs, pronouns, and prepositions, depending on the topic. Researchers used only two Wordwall types in each meeting, for a total of six.

6. Posttest

The posttest was the final step in assessing the improvement in student vocabulary following the treatment. The posttest consisted of 40 multiple-choice questions, completed in 45 minutes (1 subject hour). The questions provided were based on vocabulary in context (nouns, verbs, adjectives, adverbs, pronouns, and prepositions) related to the topic taught using Wordwall during the treatment session.

7. Scoring

In scoring the students' test results, this research used the following formula. An ideal higher score is 100. The scores of pretests and posttests were calculated by using the formula as follows:

$$score = \frac{R}{N} \times 100$$

R: Correct answer

N: Option

(Sudjono, 2011)

3.7 Data Collecting Technique

1. Tryout

A tryout was given before the treatment, carried out outside the main group, to determine the test's difficulty based on student ability, assess validity and reliability, and eliminate questions that were not suitable for the pretest or posttest.

2. Pretest

A pretest was administered to the main group before treatment to determine the students' initial abilities and serve as a comparison for the posttest.

3. Posttest

The post-test was administered after all treatment activities had been completed to assess student learning outcomes, determine whether the students' abilities had improved, and evaluate the effectiveness of the media provided during the treatment.

3.8 Data Treatment

To determine the improvement in the students' English vocabulary after being taught using Wordwall media, the researcher conducted a paired-samples t-test in SPSS version 22. This test was used to compare two average values from the same group, namely the pre-test and post-test values, to determine whether there was a significant difference after the treatment was administered. According to Setiyadi (2018), the use of the paired sample t-test in hypothesis testing has three basic requirements that must be met, namely:

1. The data used must be in the form of intervals or ratios.
2. The data were obtained from random samples in the population (although not absolute)
3. The data must be normally distributed.

By fulfilling these three requirements, the analysis can yield statistically valid results.

3.8.1 *Normality Test*

Normality is used to determine whether the data in the experimental class follow a normal distribution. In this research, the researcher employs statistical computation using SPSS 22 (Statistical Package for the Social Sciences). After the data were computed using SPSS, the researcher analyzed the results to determine whether the test was normally distributed (Setiyadi, 2018). The results of the normality test can be seen in Table 3.4 in next page:

Table 3. 4 Normality test

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest	.084	34	.200*	.983	34	.866
posttest	.096	34	.200*	.950	34	.124

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

a. Lilliefors Significance Correction

Based on the results of the normality tests using the Kolmogorov-Smirnov and Shapiro-Wilk tests, the significance values for the pre-test data were 0.866 and 0.124 in Shapiro-Wilk, and 0.200 for both in Kolmogorov-Smirnov. Since all p-values were greater than 0.05, the data were normally distributed. Thus, the data meet one of the conditions for using the parametric paired-samples t-test to test the hypotheses in this study.

3.9 Data Analysis

The vocabulary test used in this research would be objective, consisting of multiple-choice questions with four answer options. There are 40 items on the pretest and posttest. Scoring the students' test results, this research employed the following formula.

An ideal higher score is 100. The scores of the pretest and posttest were calculated by using the formula as follows:

$$score = \frac{R}{N} \times 100$$

Where:

R: Correct answer

N: Option

(Sudjono, 2011)

In order to get the complete result, the researcher would analyze the data through the following steps:

1. Scored the pretest and posttest

2. Found the mean of the pretest and posttest using a formula. The researcher computed the formula as follows:

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

Where:

\bar{x} : Mean score

\sum : Sum of individual score

N: Number of the students

(Arikunto, 1998)

3. To see a significant improvement in the student's vocabulary achievement, the researcher would use the paired sample t-test in SPSS version 20.

3.10 Hypothesis Testing

After collecting the data, the researcher analyzed it to determine whether students' vocabulary improved after being taught through Wordwall media. The researcher used a repeated-measures t-test in the Statistical Package for the Social Sciences (SPSS) to determine whether the hypothesis was accepted or rejected. The

researcher analyzed the data at a significance level of 0.05, corresponding to approximately a 5% probability of a Type I error. The hypothesis of this research can be formulated:

$$H1 = \text{Sig.} < 0.05$$

Where:

- If the Sig. Two-tailed is lower than 0.05. Therefore, $H0$ is rejected, and $H1$ is accepted.
- If the Sig. Two-tailed is higher than 0.05. Therefore, $H0$ is accepted, and $H1$ is rejected.

$H1$: There is an improvement in the students' vocabulary achievement when using Wordwall media in a seventh-grade junior high school.

$H0$: There is no improvement in the students' vocabulary achievement when using Wordwall media at a seventh-grade junior high school.

This chapter comprises nine sub-chapters: research design, variables in the research, data sources, instrument data collection, validity and reliability, normality tests, data collection procedures, scoring systems, and hypothesis testing.

V. CONCLUSION AND SUGGESTION

5.1 Conclusion

Based on the results of research conducted in class VII.1 SMPN 1 Way Jepara, in the use of Wordwall media to improve the students' English vocabulary, concludes that the use of Wordwall media has a significant improvement in the students' vocabulary achievements. The pre-test and post-test results showed an improvement in the average score from 74.85 to 90.51 after the students participated in learning using Wordwall. The p-value of the paired sample

In addition, the use of Wordwall has positive implications for the learning process, particularly by improving students' engagement, motivation, and activity during teaching and learning. Learning becomes more interactive and enjoyable with various types of games on the Wordwall website, such as match-up, true-or-false, spin wheels, and more, making it easier for students to understand and remember the vocabulary. Therefore, Wordwall can be an effective alternative learning medium for teaching English vocabulary at the junior high school level. The results of this study also open the door to further research examining the use of Wordwall in other language skills or at different educational levels.

5.2 Suggestion

In this section, the researcher provides suggestions for readers as a source of information and a reference for those researching the same topic, as well as for teachers who wish to use Wordwall as a teaching medium.

5.2.1 Suggestion for English Teacher

Based on the results of the research that has been conducted, there are several obstacles when conducting research, so the researchers provide several suggestions that are expected to be taken into consideration by teachers in implementing learning using Wordwall, as follows:

1. At the first meeting to implement Wordwall in learning activities, the researcher gave students the freedom to choose their own group members. However, this resulted in unbalanced groups: students with high English proficiency were grouped with those of similar ability, while students with low proficiency were grouped together. As a result, groups with a majority of members with high English proficiency showed more dominance during Wordwall activities, while groups with low proficiency tended to be passive and less participatory. Therefore, teachers need to pay attention to the division of group members in Wordwall-based learning activities by applying heterogeneous grouping, which is combining students with high and low abilities in one group. This grouping was expected to encourage interaction and cooperation among students, make the learning process more equitable, and prevent domination by certain groups.
2. Using Wordwall in digital form requires supporting devices, such as smartphones or projectors, so students can follow the lesson while playing interactively. However, at the school where the research was conducted, students were not allowed to bring smartphones, and projectors were also

very limited in availability. In addition, Wordwall's digital use requires a subscription service, which is an additional obstacle to its implementation. Therefore, given these technological limitations, teachers can adapt the digital Wordwall game to an offline format by modifying the game type using media and materials available in the surrounding environment. This adaptation allows learning activities to continue effectively and enjoyably despite the school's technological limitations.

3. Using Wordwall in game form can increase students' enthusiasm to actively participate in learning, especially through the points system that encourages them to compete to answer questions. However, excessive activity has the potential to make the classroom atmosphere less conducive. Therefore, before conducting learning activities using Wordwall, teachers need to establish and clearly communicate the rules of the game to students. In addition, teachers must supervise all learning groups so that Wordwall-based play and learning activities continue to run in an orderly, focused, and conducive manner, enabling learning objectives to be achieved optimally.

5.2.2 Suggestion for Further Research

Based on the limitations found in this study, the researchers offer several suggestions for consideration by future researchers, as follows:

1. This study was conducted in only one class and for a relatively short period, so the results cannot be widely generalized. Therefore, future researchers are advised to expand the scope of the study by increasing the sample size, the range of educational levels, and the treatment duration.

2. Future research is encouraged to employ a stronger research design, such as a quasi-experimental design with a control group, to provide more accurate results.
3. Future researchers may also combine quantitative findings with qualitative methods, such as in-depth interviews with students and teachers, to provide a more holistic understanding of the effectiveness and perceptions of Wordwall use in the learning process.

The researcher hopes that the results of this study can make a positive contribution to the world of education, especially in the development of technology-based learning media. By optimally leveraging media such as Wordwall, the vocabulary learning process can be more effective and enjoyable, better suited to today's learners. This study is expected to serve as a reference for teachers, researchers, and education policymakers in improving the quality of English language teaching at the junior high school level.

REFERENCE

- Ahmad, J. (2012). English language teaching (ELT) and integration of media technology. *Procedia-Social and Behavioral Sciences*, 47, 924-929.
- Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. *International Journal of Teaching and Education*, 3(3), 21–34.
- Allen, E. D., & Valette, R. M. (1977). *Classroom Techniques: Foreign Languages and English as a Second Language*. Oxford University Press.
- Ana, I. K. T. A. (2018). Teaching English vocabulary for young learners through electronic guessing game. *Journal of Psychology and Instruction*, 2(1), 22–30.
- Arikunto, S. (1998). *Prosedur penelitian: Suatu pendekatan praktik*. Rineka Cipta.
- Arsyad, A. (2015). *Media Pembelajaran*. Jakarta: RajaGrafindo Persada.
- Brabham, E. G., & Villaume, S. K. (2001). Building walls of words. *The Reading Teacher*, 54(7), 700–702.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. Basic Books.
- Gerlach, V.S., & Ely, D.P. (1971). *Teaching and Media: A Systematic Approach*. New Jersey: Prentice-Hall.
- Gronlund, N. E. (1998). *Assessment of student achievement*. Allyn & Bacon Publishing, Longwood Division, 160 Gould Street, Needham Heights, MA 02194-2310; tele.
- Harmer, J. (2007). *The practice of English language teaching* (4th ed.). Pearson Longman.

- Harmon, J. M., Wood, K. D., & Hedrick, W. B. (2009). Interactive word walls: More than just reading the writing on the walls. *Journal of Adolescent & Adult Literacy*, 52(5), 398–408.
- Hatch, E., & Brown, C. (1995). *Vocabulary, semantics, and language education*. Cambridge University Press.
- Hatch, E., & Farhady, H. (1982). *Research design and statistics for applied linguistics*. Newbury House.
- Heaton, J. B. (1975). *Writing English language tests*. Longman.
- Hiebert, E. H., & Kamil, M. L. (Eds.). (2005). *Teaching and learning vocabulary: Bringing research to practice*. Routledge.
- Jannah, M. (2022). *Improving the students' vocabulary achievements using Wordwall media at SMPN 2 Karanganyar*. Universitas Muhammadiyah Mataram
- Manik, S., & Christiani, M. (2016). Teaching vocabulary using word wall strategy. *International Journal of English Language Teaching*, 4(10), 52–63.
- Munir. (2012). *Multimedia: Konsep & Aplikasi dalam Pendidikan*. Bandung: Alfabeta.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press.
- Nation, I. S. P. (2008). *Teaching ESL/EFL reading and writing*. Routledge.
- Nunan, D. (2015). *Teaching English to speakers of other languages: An introduction*. Routledge.
- Nurhayati, S., et al. (2024). *Buku Ajar Teori Belajar dan Pembelajaran*. PT. Sonpedia Publishing Indonesia.
- Pradini, P. C., & Adnyayanti, N. L. P. E. (2022). Teaching English vocabulary to young learners with Wordwall application: An experimental study. *Journal of Educational Study*, 2(2), 187-196.
- Rahmawati, D., & Supriyadi, B. (2020). Mengukur Efektivitas Pembelajaran Dengan Metode Analisis N-Gain. *Jurnal Pendidikan Fisika Indonesia*, 16(2), 120-129.

- Setiawan, I., & Zuana, M. M. M. (2018). Teaching vocabulary using modified snakes and ladders game. *Alsuna: Journal of Arabic and English Language*, 1(2), 87-95.
- Setiyadi, A. B. (2018). *Metode penelitian untuk pengajaran bahasa asing: Pendekatan kuantitatif dan kualitatif*. Graha Ilmu.
- Shohamy, E. (1985). *A Practical Handbook in Language Testing for the Second Language Teacher*. Oxford University Press.
- Sudjono, A. (2011). *Pengantar statistik pendidikan*. RajaGrafindo Persada.
- Suyanto, M., & Jihad, A. (2013). Menjadi Guru Profesional: Strategi Meningkatkan Kualifikasi dan Kualitas Guru di Era Global. Yogyakarta: Pustaka Pelajar.
- Uspa, P. (2020). *The use of Word Walls media to improve the the students' vocabulary in reading skill at MTs Negeri Bantaeng*. Universitas Muhammadiyah Makassar.
- Vallejo, E. (2006). Word walls that improve teaching and learning. *Journal of Instructional Psychology*, 33(3), 206–210.
- Van, H. (1997). *Epistolary narratives in ancient Greek literature*. Brill Academic Publishers.