



**THE EFFECTS OF DIGITAL GAME “SNAKE AND LADDER” ON
STUDENTS’ VOCABULARY ACHIEVEMENT**

(An Experimental Research at the Eight Graders of SMP Negeri 1 Talang in
Academic Year 2023/2024)

RESEARCH PROJECT

**Submitted as Partial Fulfilment of the Requirements for the Degree of
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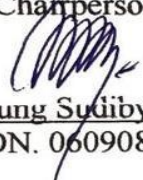
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STATEMENT OF ORIGINALITY

I state that my research project entitled “The Effects of Digital Game “Snake and Ladder” on Students’ Vocabulary Achievement (An Experimental Research at the Eight Graders of SMP Negeri 1 Talang in Academic Year 2023/2024” is definitely my own work.

In writing Research Project, I do not make plagiarism or citation which in inconsistent with scientific ethic prevailed in the scientific community.

I am completely responsible for the originality of the content of this Research Project. Others’ opinion or findings included in this Research Project are quoted or cited adjusted to the ethical standard.

Tegal, 12 August 2024

The writer



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MOTTO AND DEDICATION

Motto:

“If you never try, you never know”

Dedication:

I would like to present this thesis to the following people who have been blessings in my life and have helped me on my academic journey:

- 1) Allah SWT, I express immense gratitude for providing me with the strength and blessings to successfully conduct this research.
- 2) My beloved parents, who have always encouraged me to pursue my education to the fullest.
- 3) All lecturers who have provided me with extremely beneficial knowledge for my future.
- 4) I, myself, who have worked hard to complete this research project.

PREFACE

Let me thank Allah Almighty for his blessings and the opportunity to complete this research titled “The Effects of Digital Game “Snake and Ladder” on Students’ Vocabulary Achievement”.

The researcher is fully aware that this research may possess inherent flaws and errors, necessitating constructive criticism and guidance. Consequently, heartfelt gratitude is extended to those individuals whose invaluable contributions have greatly influenced the progress of this study:

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13. Myself, who invested all the dedication, perseverance, and countless hours of hard work in this research. This thesis represents my growth, determination, and commitment to academic excellence. May it serve as a reminder of my capabilities and the journey has been tackled.

ABSTRACT

AFIFAH, LIZA ISNANI. 2024. 1620600009: *“The Effect of Digital Game Snake and Ladder on Students Vocabulary Achievemnt (An Experimental Research at the Eight Graders of SMP Negeri 1 Talang in Academic Year 2023/2024)”*. Research Project.Strata 1 Program, Faculty of Teacher Training and Education, Pancasakti University Tegal. The first advisor is Dr. Taufiqulloh,M.Hum, and the second advisor is Ihda Rosdiana, S.Pd, M.Hum.

Key Words: *Digital Game Snake and Ladder, Vocabulary Achievement*

The aims of this research are to find out the effects of the digital game Snake and Ladder on students’ vocabulary achievement and the significant difference between the students are taught by the digital game Snake and Ladder and those are not taught by the digital game Snake and Ladder in vocabulary achievement.

This study used a quantitative approach (quasi-experiment) with a two-group design. The population of this study amounted to 283, then the sample of this study amounted to 64 students. This research was conducted for approximately one month, starting from 6th May until 6th June 2024 at SMP Negeri 1 Talang. The method of data collection is done through tests (Pre-test and Post-test) and the data analysis was carried out through SPSS 25.

The results showed that there is a positive effect between variable X on variable Y, as evidenced by t-statistics $>$ t-table, and the result of the paired and independent t-test, the Sig. (2-tailed) is $0.000 < 0.05$. Therefore, this research was effective in increasing students’ vocabulary.

Based on the results obtained, the researcher would like to provide some recommendations for students, this research is expected to motivate them to increase their English vocabulary easily. This research can be used by the teacher as a source of information about the effectiveness of using the digital game snake and Ladder in supporting teaching English vocabulary. Then, this research can be a reference for the further researcher to conduct further research on the same topic.

ABSTRAK

AFIFAH, LIZA ISNANI. 2024. 1620600009: "Pengaruh Permainan Digital “Ular Tangga” terhadap Kemampuan Kosakata Siswa (Penelitian Eksperimen pada Siswa Kelas VIII SMP Negeri 1 Talang Tahun Pelajaran 2023/2024)". Proyek Penelitian Program Strata 1, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Pancasakti Tegal. Pembimbing I adalah Dr. Taufiqulloh, M.Hum, dan pembimbing II adalah Ihda Rosdiana, S.Pd, M.Hum.

Kata Kunci: Permainan Digital Ular Tangga, Kemampuan Kosakata

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh permainan digital Ular Tangga terhadap pencapaian kosakata siswa dan perbedaan yang signifikan antara siswa yang diajar dengan permainan digital Ular Tangga dan siswa yang tidak diajar dengan permainan digital Ular Tangga dalam pencapaian kosakata.

Penelitian ini menggunakan pendekatan kuantitatif (quasi experiment) dengan desain dua kelompok. Populasi dari penelitian ini berjumlah 283, kemudian sampel dari penelitian ini berjumlah 64 siswa. Penelitian ini dilaksanakan selama kurang lebih satu bulan, dimulai dari tanggal 6 Mei sampai dengan 6 Juni 2024 di SMP Negeri 1 Talang. Metode pengumpulan data dilakukan melalui tes (Pre-test dan Post-test) dan analisis data dilakukan melalui SPSS 25.

Hasil penelitian menunjukkan bahwa terdapat pengaruh positif antara variabel X terhadap variabel Y, yang dibuktikan dengan t hitung $(-11,225) > t$ tabel (-1695) , dan nilai Sig. (2-tailed) sebesar $0,000 < 0,05$. Oleh karena itu, penelitian ini memiliki pengaruh pada peningkatan kosakata siswa.

Berdasarkan hasil yang diperoleh, peneliti ingin memberikan beberapa rekomendasi untuk siswa; Penelitian ini diharapkan dapat memotivasi mereka untuk meningkatkan kosakata bahasa Inggris dengan mudah. Dan juga bagi guru, penelitian ini dapat digunakan sebagai sumber informasi mengenai metode pembelajaran yang efektif. Kemudian, penelitian ini dapat menjadi referensi untuk peneliti lain yang akan melakukan penelitian lebih lanjut dengan topik yang sama.

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CHAPTER I

INTRODUCTION

This chapter has several explain regarding the background of the problem, identification of the problem, limitation of the problem, statement of the problems, objectives of the research, and significance of the research.

1.1 Background of the Problem

Some people can switch between languages easily, demonstrating their bilingual or multilingual skills. Therefore, good language skills are essential so that we can adapt to the times and communicate more effectively and accurately. Language holds significant importance as a tool of communication in daily interaction. Through language, individuals can express ideas, emotions, and facts to other. According to Tita Anggun (2022) Language has three classifications in daily life, namely: first language, second language, and foreign language. The first language also known as native language or mother tongue, is the initial language or dialect a person is exposed to form birth or within a critical period. Second language is a language that a person learns and uses in addition to their first language. And the last is foreign language, foreign language is a language learned as a second or additional language. As in Indonesia, the mother tongue or first language used by every Indonesia citizen is their regional respective regional language, so that Indonesia citizens can convey and understood by everyone, Indonesia citizens are required to be able to speak using Indonesian. In

addition, there are other language that we can learn as a means of communication, namely English language. This is something important because the English is an international language. So having English language skills can make to communicate effectively with people from different countries and cultures, making it easier to understand and connect with them. In addition English is a subject exists in school, where this subject learn about grammar, pronunciation, and also various texts that use English. Therefore, it is necessary for students to learn a substantial amount of vocabulary.

Vocabulary is a crucial aspect of learning English. However, students often struggle with reading and comprehension due to a lack of vocabulary mastery. As stated Kamali in thesis (Hana, 2023) vocabulary is an important component in improving four skills: Speaking, listening, reading and writing in the language. Based on this theory, stuts need to master language vocabulary because it is the pillar of a language. In addition, vocabulary is central to language for students according to language teachers in general. So a lack of vocabulary mastery can reduce the meaning of a sentence.

The students with limited vocabulary can be a problem for the teacher when learning English in the school. (Irfan G, 2019) said whenever the teacher speaks or writes in English, students do not understand what the teacher means so this will make it difficult for the teaching. Some problems in mastering vocabulary in students are very diverse ranging from errors in spelling, pronunciation, and choosing the right words in writing and speaking (Hartaningsih, 2022). The other problems that occur when learning

vocabulary are students not being able to understand the context, where students have difficulty mentioning the correct word in a particular context, students who are not confident in their ability to pronounce English words can find it difficult to learn vocabulary, plus students have no motivate in learning vocabulary because of boring learning activities and limited time to study, and also the lack of interesting learning media that can increase students' enthusiasm for learning.

Therefore, the teacher must create a comfortable or new classroom environment for students. By feeling comfortable when studying, students will be effective in the learning process. To make an effective process, the students must have the intention to learn and also be in effective state in order to acquire vocabulary mastery. Further, Thornbury quote in (Hana, 2023) thesis said in the condition aims to help students acquire a sufficient amount of vocabulary to comprehend and generated language, also teachers plan appropriate learning methodologies and tactics to students can understand context and learn vocabulary easily and enjoyable. Moreover, using this technique will help students retain new vocabulary in their memory for an extended period, making it easier for them to remember in the development of methods to deal with missing words, such as dealing with unfamiliar words or unfamiliar meanings of known words.

Teachers can use game as a media to teach students, which can help them remember more words and feel fun while learning. Game according to Hadfield as a quoted in Mafaza (2019) journal is an activity that involves

rules, outcomes and materials of fun. The use of games by teachers creates a learning environment that fosters students' motivation to learn the language (Hetti et al., 2021) Games provide an opportunity for students to practice and overcome their fear of making mistakes, leading to better understanding of the languages. Furthermore, as students feel a sense of progress and the using games to teach English can improve students' vocabulary and overall English learning ability. The researcher uses digital game for learning, where the online games environments comprising competitive activities with challenges aimed at achieving objectives. It has a particular set of rules, constraints, and specific context (Ruth Colvin Clark, 2016). Educational games with the digital game can be seen as a kind of competitive rule-based activity, where the objectives often at a higher level (winning), whether measured by individual performance within the game or in comparison to other players. One of the educational games that can be used as a learning tool is QuizWhizzer. This tool is engaging and interactive, emphasize cooperation and communication, and can generated positive interaction between students through games in learning activities (Susanto & Ismaya, 2022). In this research, the researcher uses the digital game QuizWhizzer "Snake and Ladder" mode to teach vocabulary, as it is a fun game that can be played by students of any level. The game can be involves 2 or more players, and this game can be made in groups so that students can learn to work together in a team to solve the problem. The game contains a board divided into small squares, with Snake as a template and Ladder to define a level. The objective

of the game is to reach the finish line quickly. This game is expected to provide an interesting and engaging way for students to learn. Not only at school, but this game can be played at home by each students, so they can do not feel short of time to study.

1.2 Identification of the Problem

The identification of the problem in this research begins with the following :

1. Students lack vocabulary mastery during English learning activities.
2. Students find it difficult to memorize vocabulary.
3. Students are not being able to understand the context, and have difficulty mentioning the correct word in a particular context.
4. Lack of motivation in students learning.
5. Students lack of confidence to pronounce English vocabulary.
6. Lack of learning media that can help students learn vocabulary
7. Limited time to study.

1.3 Limitation of the Problem

Based on the identification of the problem that have been written above, the writer provide limitations on this research that have been adjusted to the identification oh the problem, so that the achievement in this research can be well directed. So, in this case, the researcher limits the problem to “The Effects of Digital Game ‘Snake and Ladder’ on Students’ Vocabulary Achievement” at SMP Negeri 1 Talang, and focusses on eight-grade students in the second semester of the academic year 2023/2024.

1.4 Statement of the Problem

Since the writer has been limited to the particular topic and addressed to specific students and school, it can be formulated that the statements of the problem is :

1. Does the digital game “Snake and Ladder” give an effect on students’ vocabulary achievement?
2. Is there any significant differences in students’ vocabulary achievement between the students taught by digital game “Snake and Ladder” and those are not taught by digital game “Snake and Ladder”?

1.5 Objectives of the Research

Based on the statement of the problem above, the objectives of this research were started as follows :

1. To find out the effects of digital game “Snake and Ladder” on students’ vocabulary achievement.
2. To find out the significant differences between the students are taught by digital game “Snake and Ladder” and those are not taught by digital game “Snake and Ladder”.

1.6 Significances of the Research

The significance of the research refers to contribution and impact on research field, as well as the beneficiaries and their benefits from the research findings. This research makes a significant contribution both theoretically and practically. Researchers hope that this research can provide benefits for readers and further researchers who will examine the same topic.

Theoretically, this research offers practical example and real experiences for both the writer and reader. This research may contribute to the field of education by enhancing knowledge and providing information on appropriate teaching media for vocabulary. Also to provide additional theory on how digital game “Snake and Ladder” can be used to teaching and improving English vocabulary acquisition.

The second contribution to this research was significant in terms of practicality. Many practical significances of this research can benefit to teachers, students, and future researchers. First, for teachers, this research can be used as a source of information about the effectiveness of using digital game snake and ladder in supporting teaching English vocabulary, hoping to improve learning outcomes by fostering creativity and happiness in students through active participation. Second, for students, This research is expected to motivate them to increase English vocabulary easily. This research also help the students to reduce stress, increase social engagement, and have fun while learning English. Third, for other researchers, This research can be a reference to conduct further research on the same topic.

CHAPTER II

REVIEW OF THE LITERATURE THEORIES, FRAME OF THINKING AND HYPOTHESIS

This chapter presents review of previous studies, related of literature, theoretical framework, and hypothesis. Review of related literature consist of digital game based learning, snake and ladder, and vocabulary.

2.1 Previous Studies

The researcher refers to some previous research related to this research project when compiling this research project. Some examples are as follows; first is research entitled “The Effectiveness of Snake and Ladder Game in Mastering Vocabulary at The Grade Students of SMA Negeri 11 Muaro Jambi” by Hana Safitri (2023). This study aimed to assess the effectiveness of the Snake and Ladder game in improving vocabulary mastery among 11th-grade students at SMA Negeri Muaro Jambi. The research employed a true experimental design with 58 students from two classes, XI IPS 1 (control class) and XI IPS 2 (experimental class). Data collection included pre-test and post-test assesments, analyzed using non-parametric statistics, particularly the Wilcoxon test. The results showed no significant improvement in vocabulary acquisition with the use of the Snake and Ladder game, indicating its ineffectiveness in enhancing vocabulary mastery among 11th-grade students at SMA Negeri Muaro Jambi.

The second research is entitled “The Use of Snake and Ladders Games in Teaching Vocabulary” by Titi Rohayati, Andini Sufi Rizkyanti (2019). The purpose of this research is to determine how students respond to the use snakes and ladders games for teaching vocabulary. Learning English vocabulary can be either fun or boring for students, and the aims of using games in teaching is to motivate the students to learn and improve their vocabulary. The population observed in this research was the sixth-grade students of SMP Negeri 2 Ngamparah Padalarang, and the researcher used descriptive qualitative methods. By using snakes and ladders games, students can be motivated to learn or repeat materials that they have studied before through a fun game. This can help improve their vocabulary and make learning more enjoyable for them.

The third research is entitled “Improving Students’ Vocabulary Mastery Through Snakes and Ladders Board Game at Eighth Grade of SMPN 1 Jenggawah in Academic Year 2022/2023” by Hanim Alfu Laila (2023). This research focus on enhance students’ vocabulary proficiency through the implementation of the Snake and Ladders board game., while also examining its efficacy in the classroom setting. It followed the four-step Classroom Action Research (CAR) method outlined by Kemmis and McTaggart, encompassing planning, execution, observation, and reflection. The research comprised a single cycle involving a pre-test, three sessions of media implementation, and a post-test. Data collection involved students’ vocabulary proficiency test results (pre-test and post-test), along with field

notes, interviews, and questionnaires. Following the intervention, students demonstrated reduced errors in pronunciation, spelling, and translation compared to their initial assessments. Most students also expressed positive feedback regarding the effectiveness of the Snake and Ladders board game. Thus, it is recommended that English educators incorporate this game into their teaching practices, particularly for enhancing students' vocabulary proficiency.

The next research is entitled "Development of a Digital Snake and Ladder Game as a Strategic Intervention Material for Basic Education" by Jasten Keneth D. Trecene, Michael B. Batan, Aljon L. Abines (2022). This research was to create a digital game named E-Snake and Ladder Game, intended for educational purposes across different subject. This research create the game of digital game Snake and Ladder is the same technique with the traditional game Snake and Ladder, integrates quizzes and subjects. 20 teachers and 80 students is the assessment involved. This game can be satisfactory according to the MEEGA+ model. It was noted for effective in learning, enjoyable gameplay, and many educational benefits.

The last research is entitled "The Effectiveness of "Snakes and Ladders" Board Game on Students' Speaking Ability" by Novita Resti Utami (2020). This research aimed to empirically assess the efficacy of the "Snake and Ladders" board game in enhancing the oral proficiency of second-grade students at SMAN 6 Kota Tangerang Selatan. Employing a quasi-experimental design, the research involved two distinct groups : an

experimental class and a control class, comprising a total of 60 participants. The research spanned five sessions: one for pre-testing, three for interventions, and the final sessions for post-testing. Throughout the intervention sessions, both groups covered identical English content: however, only the experimental class utilized the “Snake and Ladder” board game medium, while the control class received traditional instruction through teacher-led explanations and written exercises. Oral tests were administered, and speaking rubrics were employed to evaluate students’ speaking abilities during both pre-test and post-test phases. Analysis revealed a post-test mean score of 75.60 for the experimental class and 74.46 for the control class. Consequently, it can be inferred that the utilization of the “Snake and Ladders” board game contributes to an enhancement in students’ speaking ability.

By using the previous studies above this research has similarities, namely using snake and ladder media as a teaching tool. The reason the researchers used snake and ladder media was to create engaging and innovative learning, and also build the motivation of students to learn English. The other similarity is snake and ladder in the previous studies can be used as a medium to improve students’ vocabulary achievement as well as this research.

Thus, the differences between this research with the previous studies is previous researchers used snake and ladder media with the manual technique, meanwhile this research uses the snake and ladder with the digital game technique through the QuizWhizzer web where the game is used

through a smartphone or computer. The next difference is that there is a journal that uses snake and ladder media to improve students' speaking ability, while the purpose of this research is to increase students' vocabulary in learning English.

2.2 Review of Related Literature

2.2.1 Digital Game Based Learning

A. Definition of Digital Game Based Learning

Digital game based learning refers to those that are played with the help of a computer or any other electronic device, whether online or offline. They can be easily purchased and downloaded without the need for physical media, offering great convenience, safety, and a vast variety of game titles to choose from. In addition, digital game based learning can be used for educational purposes (Prensky, 2001).

Digital game-based learning (DGBL) is an effective tool that enhances the learning process by promoting learning through practical experiences and collaboration. It also helps to increase students' motivation, which is crucial for learning. Traditional teaching has its own advantages for students learning, but DGBL teaching will also be more effective during learning to help students understand the lesson. In Science Technology Engineering and Mathematics (STEM) education, DGBL is particularly beneficial. Furthermore, the use of digital games in

teaching has been linked to higher levels of teacher engagement and motivation. However, there is still a need for more research studies and training programs to support the effective use of DGBL in education. While some teachers may have concerns about using digital games in the classroom, the evidence suggests that DGBL can be an effective and engaging tool for promoting deep learning and improving students outcomes.

B. Advantages and Disadvantages of Digital Game Based Learning

Nowadays, digital game-based learning is used in the classroom is a common thing that teachers use to help the students motivate in learning. Whether the game is done individually, in pairs, small groups, or even used by all students in the class. In addition, digital games have the advantages of allowing teachers and students to keep track of errors made, which help students identify areas of weakness in their knowledge and content that need more practice and gaming time to learn, especially in vocabulary mastery. Another benefit of digital game for students learning is increased motivation engagement, and an interactive learning that makes the students feel happy and enjoy to learn English.

While the disadvantages of digital game-based learning are the first lack of internet access network that can hinder online

digital game, games can be interesting students also be distracting if not used appropriately, adult educators and adult learners may need to have technical knowledge to use digital game based learning effectively, and some students may not respond well to learning through games, and may prefer more traditional methods.

2.2.2 Snake and Ladder

A. Definition of Snake and Ladder

The board game Snake and Ladder is already well-known to students from their early gaming experiences. Milton Bradley was the one who invented this game in 1943. This game can be used as a tool that educates, motivates, and builds up interactive communication among the players or the students. The Snake and Ladder game has two forms for play, namely manual games and digital games. Manual snake and ladder game is a board game that requires two or more people to play with numbered squares 1-100, and use dice to determine the course of the game. Meanwhile the digital game snake and ladder is a game made electronically into a game, so that in digital game the players use a smartphone or computer as a game tool. This research will use the digital game snake and ladder to help students learn, the reason for researcher taking this media is not only the game is fun, but it also helps boost students' enthusiasm and motivation to learn.

Widiastuti & Endahati, (2020) stated the integrating games into educational activities fosters social interaction and communication among students in an enjoyable setting. The students are encouraged to engage in healthful activities that challenge their wits and develop social skills through the use of the digital game snake and ladder. Furthermore, it will assist pupils in learning vocabulary in English, which will facilitate their understanding of the language's four components (writing, reading, speaking, and listening) (Nurriatul Latifah, Ahmad Saifuddin, 2023). Therefore, Students will be inspired to expand their vocabulary in English by this and the students' vocabulary can be strengthened and expanded via the usage of this game, which can also help them learn how to play games and work together as a team or group.

B. How to use Snake and Ladder game

The digital game Snake and Ladder developed is a digital game Snake and Ladder using the QuizWhizzer website, the steps of using the digital game Snake and Ladder are below :

1. Initial view of the Snakes and Ladders Game.



Figure 1. Initial view of Snake and Ladder game package

Students will be directed to the link provided by the teacher and will get an access code to play this game, then the students are required to write their name on the quiz before starting, so that the teacher can assess their work. If the students cannot writing their names, the stuents cannot check-in and take the quiz.

2. The students must be completed the question.

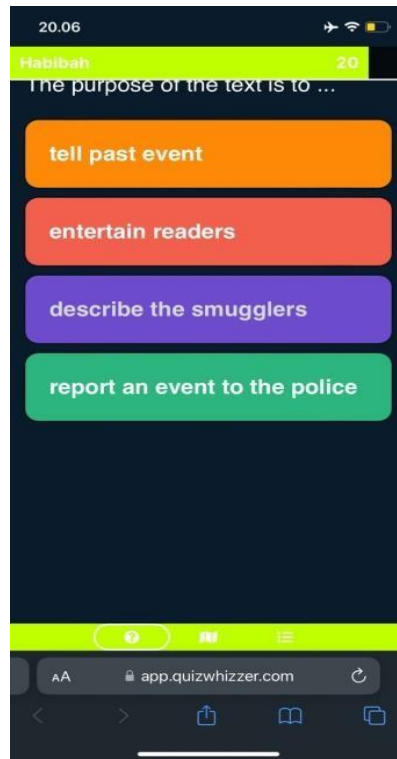


Figure 2. Display of the question

The game consist of ten, twenty or even more steps, in order for students to cross the finish line, they must pass the quiz in each phase. The more incorrect answer, the longer it takes for the students to cross the finish line. If the answer correct, the students advances one step and receives 10 points, and if the answer is incorrect, the students moves back one step and receives 0 points. The students who finishes the game with the most points in the fastest times is win.

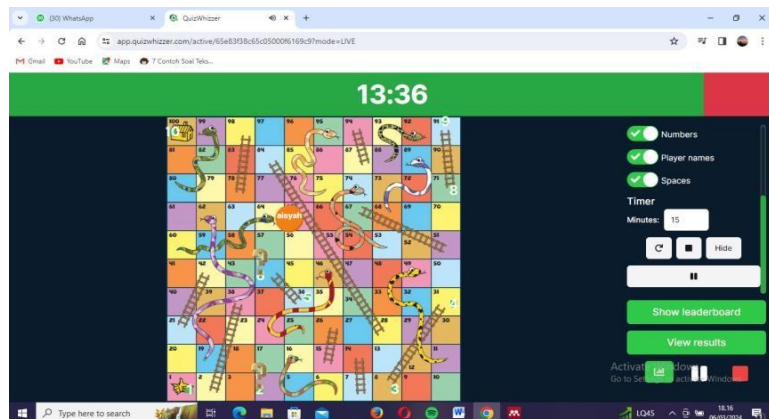


Figure 3. Display for monitoring students playing game

In this display the teacher can monitor the Snake and Ladder game that the students are playing. It also allows the teacher to select the playing time, remove people they don't want to participate, show who won, view the score directly in the form of a spreadsheet, and analyse the game's outcomes.

3. Scoring

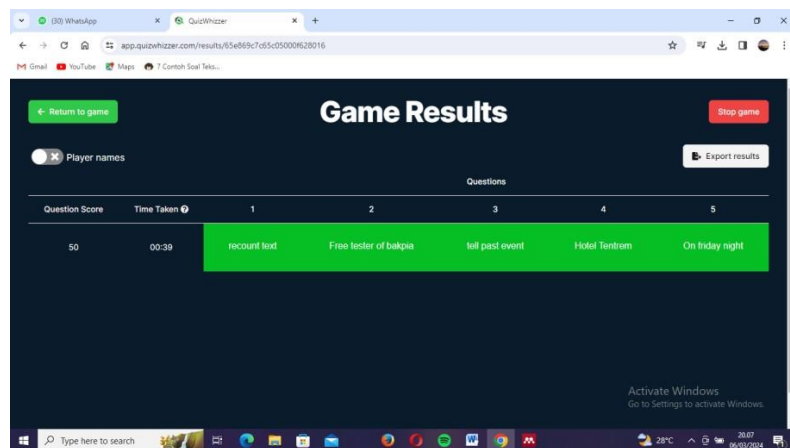


Figure 4. Display the game results for teacher

In this section, all results will be explained. Such as processing time, correct answer score and wrong answer score as well as the total overall results.

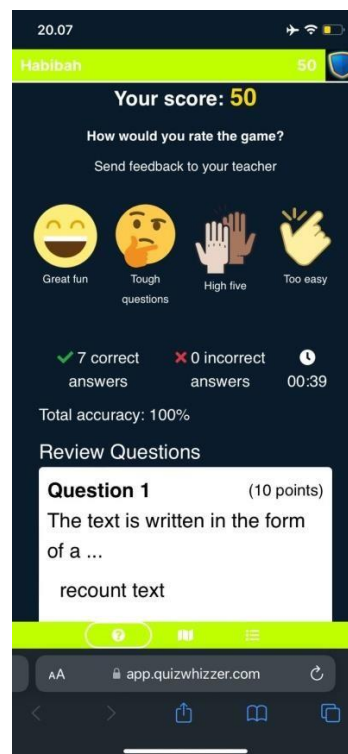


Figure 5. Display the game results for students

Not only teacher, students can also see the results of their work, and they can also see the correct answers and wrong answer. So that this correction section can be used by students as a reference for their learning.

2.2.3 QuizWhizzer as Tool Media

A. Definition of QuizWhizzer

QuizWhizzer is an online platform designed to enhance the classroom experience through gamification without compromising learning. It is the best used as a formative

assessment tool, allowing each students to progress at their own pace, enabling teachers to monitor students performance and provide assistance where needed. The platform was initially created to digitize the games a physics teacher made in PowerPoint, where students would race their avatars on a game board by answering question. QuizWhizzer offers various question types, supports up to 100 players, and provides unique power-ups to make the quiz races engaging. Students can join the game by entering an access code, and teachers can view each student's performance and game results. The platform is designed to make learning fun and effective, and it is continuously being improved to positively impact the classroom experience.

Teachers can track student progress on QuizWhizzer by directly monitoring students' activities during to quiz. At the end of the quiz, students can find out their ranking among all the students who worked on the question. Teachers also receive a game result spreadsheet with player names and results from each question, allowing them assess individual and overall performance. Additionally, the platform is designed as a formative assessment tool, enabling each students to progress as their own pace, making it easy for teachers to see how their students are doing and assist those who might be struggling.

B. Features of QuizWhizzer

Some key features of QuizWhizzer include:

1. **Quiz Creation:** The teachers can create quizzes by selecting options within the platform.
2. **Gamification:** Quizzes can be designed in the style of traditional boards game, with students racing on a track.
3. **Customization:** The platform is completely customizable, allowing users to create quizzes that fit their specific needs and preferences.
4. **Self-Paced:** Quizzes can be designed to be self-paced, allowing students to move at their own need.
5. **Timer:** A new feature in QuizWhizzer Pro allows users to add a timer to their game, automatically stopping all students from answering when time runs out.

C. How to create of QuizWhizzer

According to (Fahmi Wahyuningsih, 2021), to create a fun gamified quiz race using QuizWhizzer , as follows :

1. **Visit the QuizWhizzer website:** Go to the quizwhizzer.com to access the platform.
2. **Create an account:** If the user don't have an account, they can create one by clicking on the "Create Account" botton.
3. **Make a game:** Click on the "Make a Game" menu item on the sidebar to start creating the game.

4. Assign a title to the game: Provide a title for the game easy identification.
5. Include a brief overview: If the user plan to share the game publicly, offering a description helps other grasp its purpose.
6. Select a category: Choose a suitable category to categorize the game effectively.
7. Upload a background image: Option for an image to personalize the game theme.
8. Insert spaces: Utilize the “Add a Space” feature to place spaces on the game board as desired. Customize each space’s properties, like background color, size, and shape.
9. Generate questions: Pick from various question type like multiple choice, short answer. Or numerical. Tailor the questions to the requirements.
10. Adjust gameplay settings: Determine the number of spaces player advance upon answering correctly. Decide between a fixed, random, or roll-based number.
11. Initiate the game: Once the teacher completed creating the game, commence the quiz by sharing the unique code with the students. And the students can access the quiz at quizwhizzer.co/play and enter the code to participate.

D. Advantages and Disadvantages of QuizWhizzer

QuizWhizzer has several advantages that make it an ideal tool for teachers. Firstly, it provides instant feedback to students, ensuring that they can progress at their own pace. Secondly, it creates a fun and engaging learning environment in the classroom. Moreover, teachers can use the same game across multiple classes and do not have to do any marking, since the online-based quiz assessment is marked automatically. QuizWhizzer also allows for personalization of learning, where teachers can customize quizzes according to students' needs and level of understanding. Lastly, QuizWhizzer allows for collaboration between students, promoting interaction and enhancing interest in learning.

However, QuizWhizzer has some drawbacks. Firstly, there are limited customization options, and there may be potential issues with loading or operating the platform. Moreover, QuizWhizzer entails development costs, which should be taken into account. Another disadvantage is that when a player finishes, any remaining questions are discarded, which may not be desirable for important revision sessions. Overall, QuizWhizzer is an innovative tool that can help enhance students' learning experience in an educational context. It's important to consider both the pros and cons before deciding to use it in the classroom.

2.2.4 Vocabulary

A. Definition of Vocabulary

Vocabulary is knowledge of the meaning of words (McKeown, 2014) which refers to the words that a person knows and uses, or that exist in a language. It's a crucial aspects of communication and language, helping to express thoughts, idea, emotions, and information. In education, vocabulary includes the words that a students learns, including their meanings and usage. A sufficient vocabulary is necessary for language acquisition and literacy developement, as it directly influences reading comprehension, language skills, and academic success. Vocabulary can be oral, written, or signed, and can be categorized as passive (words recognized or understood) or active (words used regularly in speech and writing).

B. Types of Vocabulary

Harmer (1991) state some authors have classified vocabulary in various ways. The first active vocabulary also known as productive vocabulary refers to words and phrases that students can use correctly when writing and speaking. The second is passive vocabulary, which refers to words that others can recognize and understand when they read or listen.

There are two types of vocabulary, namely :

1. Active Vocabulary

Active vocabulary consist of words that can be used and understood easily by someone both in speaking and writing. Active vocabulary is defined as vocabulary that has been learned or has been taught to students and is expected to be used by students.

2. Passive Vocabulary

Passive vocabulary refers to words that learners know but haven't used yet. This is comparable to active vocabulary, which is made up words that students are familiar with and employed when they write or talk. Words that pupils will likely be able to recognise but likely not generate are referred to as passive vocabulary.

C. Teaching Media in Learning Vocabulary

According to (Twaddell, 1980) Teaching vocabulary is a crucial aspect of English language instruction. However, it is considered one of the least effective methods for developing students' vocabulary effeciently, an instructor must use appropriate techniques that enable students to learn new words effectively. According to (Harmer, 2012), there are various techniques that can be used for teaching vocabulary. Some of these technique include :

1. Using Realia

Realia is the use of tangible objects that teachers bring into the classroom to aid in explaining a concept.

2. Showing The Pictures

Pictures are essential media for language teaching and can be used in various ways. They can be wall pictures, drawings, charts, flashcards, tables, or statistics.

3. Mime, Action, and Gesture

Frequently, it may be difficult or even impossible to convey the meaning of words using reality or pictures. In such cases, a teacher may use mime action or gestures.

4. Enumeration

When a teacher has difficulty explaining a word, they can provide examples to help illustrate the meaning.

5. Word Association

In teaching new vocabulary, the teachers explain the things that are related or connected to the words.

6. Explanation or Definition

In this technique, the teacher gives example or definition of a word to describe in detail about explained words.

7. Translation

When a word is difficult to explain, teachers may translate it into the students' language.

8. Game

Playing games is useful technique that helps many learners to sustain their interest and effort. Additionally, games enable teachers to discern which language is useful and meaningful.

Based on the explanation provided above, it is clear that teaching English vocabulary effectively requires the right techniques. The teacher must carefully select the techniques that can help students better understand the material and enjoy the learning process.

Media can be used to enhance teaching and learning. Media not only engages students but also helps in retaining knowledge, motivating interest, and demonstrating the relevance of many concepts. Teachers can create media to convey knowledge more effectively. Teachers can assist students in developing skills to evaluate content from various media sources. Approaches to teaching media literacy include focusing on ethics, critical thinking, and the implications of media consumption. Teaching media literacy helps students become informed and active participants in media

consumption and production. Media can be used in almost any discipline to enhance learning in the classroom and beyond. Teaching media can be movie clips, English songs, podcasts or lectures, or newspaper articles. Students can also create their media. Hence, the researcher use the digital platform as teaching media in vocabulary named QuizWhizzer website which includes Snake and Ladder to increase students' vocabulary mastery.

D. Teaching Vocabulary at Eighth Graders

There are some definitions of teaching. Newton said that “teaching is skill for demands the ability attained from relevant theories and practice to assist the students expertly in learning so that they are able to gain linguistic and communicative competence in the target language”. From the definition above, the point, teaching is the process of giving knowledge to someone or students in learning so that they are able to know or to do something in the target language. In the past, vocabulary teaching and learning were often given little priority in second language programs, but recently there has been a renewed interest in the nature of vocabulary and its role in learning and teaching. Thus, although the course curriculum was often quite specific about aspects of teaching such as grammar, reading, or speaking, little

specification was given to the role of vocabulary. (Richards J. C., 2002).

1. Curriculum

Kurikulum Merdeka is a curriculum with diverse intra curricular learning where content will be optimized, so that learners have enough time to explore concepts and strengthen competencies. Teachers have the flexibility to choose various teaching tools so that learning can be tailored to the learning needs and interests of students.

Therefore, the use of this media is very suitable for learning in the independent curriculum because learning activities are centered on student activities so that students can play an active and independent role in every lesson.

2. Materials

a. Chapter 1 - Celebrating Independence Day

In chapter 1, students will be asked to recount experiences while celebrating Indonesia's Independence Day. When recounting experiences, students use the Past Tense sentences.

1) Regular/Irregular verbs

Recounting an experience requires a Past Simple

Verb which is usually formed by adding d, ed, or ied

behind the verb. These verbs are called regular verbs.

For example:

- Jump + ed = Jumped
- Try + ied = Tried
- Celebrate + d = Celebrated

Example sentences:

- I tried to balance the marble in the spoon.

b. Chapter 2 - Kindness Begins with Me

In chapter 2, students will recognize, identify, and retell the popular fairy tale The Ugly Duckling. They also learn past tense verbs, vocabulary of feelings, and recognize adjectives.

1) Past Tense Verbs (V2)

The function of past tense in text is to retell a story or event we need to use past tense.

- Make an action (shake - shook).
- Show a thought process (think - thought).
- Identify something with our senses (see - saw).
- Express something (say - said).
- Connecting information (is/am/are - was/were).

2) Adjectives

Adjectives are adjectives and can be used to describe the feelings felt by characters in a story.

- Sad → Sad
- Happy → Delighted
- Heartbroken → Heartbroken
- Scared → Afraid

c. Chapter 3 - Love our World

In chapter 3, students learn about how to love the earth by saving water. They will also learn how to make presentations, be social media wise, and make posters.

1) Presentation

There are several expressions used when presenting something. When presenting, there are 4 stages that must be passed such as starting of the presentation, stating the goal of the presentation, showing steps, and ending/closing the presentation.

2) How to Make Appropriate Comments

There are several things that students should consider before giving comments, such as:

- a) Read and understand the content carefully.
- b) Think about whether you have something necessary to offer about the content.

c) If you have, comment politely.

d) Don't use words that can offend others.

3) How to Make Posters

Posters are made to engage the audience with the information conveyed. In this meeting, students learn to make interesting posters according to their creativity.

d. Chapter 4 - No Littering

In chapter 4, students will learn to ask for details of an incident that happened in the past. For this, students need to understand interrogative questions and Wh- questions in the past tense.

1) Past Tense (Interrogative Questions)

One way to ask interrogative questions is by using the auxiliary verb 'Did'. This auxiliary is followed by the subject and the base form of the main verb. Another way to ask interrogative questions is by using the past tense of be: 'was' and 'were', when there is no main verb in the question. 'was' is used for 'He, She, It, and I', while 'were' is used for 'They, We, and You'.

2) Past Tense (Wh- Questions)

Another way to ask for details of past events is by using Wh- Questions. In this section, we will focus on five questions, namely:

- a) What (to ask for details about something)
- b) When (to ask for details about the time)
- c) Where (to ask for details about the place)
- d) Why (to ask for reasons)
- e) How (to ask for details about how something happened).

3) Sequencing Past Incidents

The past event you want to write about consists of two or more events. To organize these events logically, students can use the word 'when'. Students can choose two events that happened at or around the same time and sequence them with 'when'.

e. Chapter 5 - Embrace Yourself

In chapter 5 students learn about loving and caring for themselves. They also learn expressing opinions and adverbs of manners.

1) Expressing opinions

Expressing opinions is important in a discussion. It is a skill that we can use to argue our position on issues. There are many useful phrases to express opinions, some of the most common expressions are:

- a) I think (that) ... I think (that) ...
- b) I believe (that) ... I believe (that)

c) In my view... In my view

2) Adverb of Manners

When doing an activity, sometimes people describe how they do it. A person uses a word to show the quality of the way they do the activity. The word is called an adverb of manners. To recognize the adverb, one can use the question how. Another way is to look at the '-ly' ending on many of these adverbs.

Example of adverb of manner:

- a) Clumsily: Clumsily
- b) Quickly: Quickly
- c) Loudly: Loudly
- d) Slowly: Slowly

Example sentences:

- a) The child ran happily towards his mother.
- b) He waited patiently for his mother to arrive.

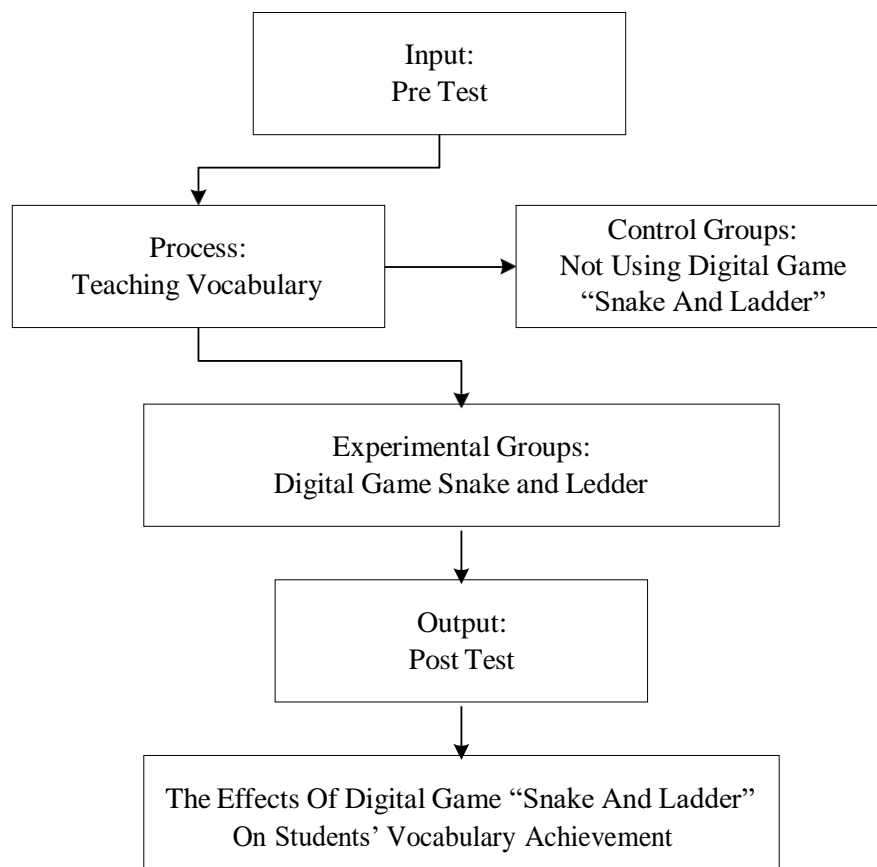
Of the many materials in grade eight, researchers chose adverb of manner because it adjusts the school schedule; where in the syllabus of grade eight semester 2 material before the final semester exam is chapter 5 material discussing adverb of manner.

2.3 Theoretical Framework

A theoretical framework is a model that provides the foundational assumptions for a study, serving as a lens through which the study is

conducted within a larger context. In the input there is a pre-test that given to students to determine the ability of students before being given treatment, then researchers will carry out treatment to both groups, namely experimental class and control class in different ways. The experimental class taught using the media digital game “Snake and Ladder” while the control class taught without digital game Snake and Ladder. And the last is the output, students given a post-test to measure students’ abilities after the treatment. The pre-test and post-test results compared to determine which one is higher.

Table 2. 1 Theoretical framework



2.4 Hypothesis

A hypothesis is a tentative explanation or prediction based on a research question. According to (Sudrajat, 2020) definition H_1 and H_0 as follows :

H_1 : there is positive effect before and after treatment.

H_0 : there is no positive effect before and after treatment.

It means that H_1 = the use of digital game Snake and Ladder gives a positive effect towards the improvement of vocabulary to the eight-grade students of SMP Negeri 1 Talang. H_0 = the use of digital game Snake and Ladder does not give any positive effect on students the improvement of vocabulary to the eight-grade students of SMP Negeri 1 Talang.

CHAPTER III

RESEARCH METHODOLOGY

This chapter present approach, research type, research design, research variable, population and sample, technique of collecting data, research instrument, and technique of analyzing data.

3.1 Approach, Type and Design of the Research

3.1.1 Approach of The Research

This research uses a quantitative research methodology that is based on the positivist concept. According to (Sugiyono D. , 2013) quantitative research methods are research techniques grounded in positivst principles, used to examine specific populations or samples. Typically, these methods involve analyzing quantitative data to test hypotheses, employing random sample methods, and using research tools to collect data. Therefore, quantitative research involves collecting, processing analyzing, and interpreting, data to investigate specific populations or samples based on a hypothesis testing.

(Richard A. Swanson, 2005) states, the process of quantitative research can be viewed as a five step process, which is outlined below:

1. Determine the basic questions that need to be answered by the research.
2. Determine the participants in the research (population and sample)

3. Select the methods required answer the question, including variables, measures of the variables, and overall design.
4. Select appropriate analysis tools.
5. Understand and interpret the results.

With the explanation above, the quantitative research is a potent instrument for examining extensive groups of individuals and extrapolating findings from the research sample to broader populations.

3.1.2 Type of The Research

The type of the research is one of the most important aspects of the research, influencing the way of the research is conducted and the results. This research uses experimental research, as Goddard and Melville (2007) view experimental research aims to establish cause and effect relationships by identifying variables of interest and analyzing if changes in one variable, known as the dependent variable or effect. In this research, the researcher uses an experimental approach with two groups, namely the control group and the experimental group. This research will be conduct in eight-grade SMP Negeri 1 Talang second semester 2023/2024 of the year. This research focuses on how the effects of digital game “Snake and Ladder” on students’ vocabulary mastery.

3.1.3 Design of The Research

The design of this research was quasi-experimental research. Quoted from sugiyono (2010) suggest quasi-experimental research is a modified from of experimental design that includes a control group, but is unable to fully control external variables that may impact the implementation of the experiment. In addition, this research also using the experimental class for comparison.

A pre-test already conducted for both experimental and control class. The treatment given to the experimental class and control class in different ways. The experimental class taught using the media digital game "Snake and Ladder" while the control class taught using the conventional methods. The researcher used two groups unrandomly chosen for this investigation. The main goal of this research will be to evaluate the impact of the digital game "Snake and Ladder" on students' English vocabulary improvement and determine the effectiveness of this game for that purpose.

The research involved an experimental group that received specific instruction, including the use of the digital game "Snake and Ladder". Meanwhile a control group did not receive any specific instruction. After both groups received the respective treatments, a post-test was conducted to evaluate the learning outcomes of the students. The post-test was administered to both sample groups using

evaluation question that had been tested in a trial class and analyzed for validity, realibility, difficulty level, and distinguishing power.

Here is an overview of the pre-test and post-test experimetal and control groups design based on the previously described study :

Table 3. 1 Pre-test and Post-test Experimental and Control Groups

Group	Treatment	Pre-test	Post-test
Experimental	X	R1	O1
Control	-	R2	O2

Description :

R1 : Pre-test in the experimental group.

R2 : Pre-test in the control group.

O1 : Post-test in the experimental group.

O2 : Post-test in the control group.

X : The treatment in the experimental group is using digital game “Snake and Ladder”.

- : The treatment in the control group in the form improving vocabulary does not using the digital game “Snake and Ladder”

3.2 Population, Sample and Technique of Sampling

3.2.1 Population

Every research requires a specific subject, and it is impossible to analyze all subjects at once. To simplify the process, The researcher selects a small portion of the subject that prosses similar

characteristics. According to (Sugiyono, 2019) A population is a group of objects that share certain characteristics and qualities that are systematically studied to draw conclusions. The term population does not only include for people but also objects and natural phenomena. The population of this research is eight-grade students of SMP Negeri 1 Talang in the academic year 2023/2024.

Table 3. 2 Population of the Research

Class	Number of Students
VIII A	32
VIII B	32
VIII C	32
VIII D	32
VIII E	32
VIII F	31
VIII G	32
VIII H	30
VIII I	30
Total	283

3.2.2 Sample

The sample selected for a research the true representation of the entire population under investigation, possessing similar properties and characteristics. The sample in this research was class VIII students at SMP Negeri 1 Talang. The researcher took two groups for the sample, the experimental group conducted in class VIII

D and control group conducted in class VIII E. The total number of samples taken in this research was 64 students.

3.2.3 Technique for sampling

The researcher selected two classes from population through purposive technique sampling to become the experimental and control groups. Purposive technique sampling involves specific considerations (Sugiyono, 2016). It means, the researcher can choose the classes which have the same average basic knowledge and vocabulary mastery level. This research choose for purposive sampling because it was better suited for quantitative research that does not aim for generalization, and also purposive was a research sampling technique where the sample can be determined by the researcher due to the needs during the research.

3.3 Research Variables

Sugiyono (2019) said, variables are characteristics of individuals, events, or things that are measured by a researcher to draw inferences. Independent variables are variables that affect other variables (Muhyi et al., 2018). It is called an independent variable because this variable is free to influence other variables. For this research, the independent variable is using digital game “Snake and Ladder”. While the dependent variable is the variable that is the affected by or results from the independent variable, and this research dependent of variable was students’ vocabulary achievement.

Based on the description above, the researcher stated the variables in this research as follows :



3.4 Data Collecting Technique

The primary goal of research is to obtain data, and collecting it is the most crucial stage of the process (Sugiyono, 2019). The techniques used to collect data are called data collection techniques, and their purpose was to gather the necessary knowledge to achieve the aim of the research. In this particular research, multiple choice exams were used as data collection techniques for pre-test and post-test stages.

3.5 Research Procedure

The research procedure applied in this research consisted of several stages designed to collect accurate and valid data. These stages include preparation, execution, and data analysis, all of which are designed to answer the research questions in a systematic and structured way. The following are the stages undertaken:

Table 3. 3 Research Procedure

Time	Activity
5 th until 6 th February 2024	Permission to observation the school
1 st April 2024	Asking permission and dealing with school
2 nd until 3 rd April 2024	Observation with the teacher
2 nd May 2024	Validity test
6 th May 2024	Pre-test in the experimental and control class
7 th May until 5 th June 2024	Treatment, teaching vocabulary using digital game Snake and Ladder in experimental class, and without digital game Snake and Ladder in control class
6 th June 2024	Post-test in the experimental and control class
7 th until 10 th June 2024	Data processing of pre-test and post-test result from experimental and control class

3.6 Research Instrument

Research instrument refers to the tools or facilities utilized by researcher to collect data during a research study. These instruments are designed to simplify the reasearch process and provide more accurate and systematic data, which in turn makes it easier to analyze. Another data collection tool commonly used by researcher was known as a test. Test are sets of questions or activities used to assess the intellect, knowledge, skills, tallents, or capacities of individuals or groups. (Sudrajat, 2020).

3.6.1 Pretest

Before giving treatment to the sample, the researcher was conducted a pre-test. Pre-test is an assessment designed to measure

students' knowledge before learning new material, the researcher provide 30 multiple choice questions as a pre-test, the aim of pre-test to determine students' vocabulary achievement before the implementation of learning using digital game "Snake and Ladder".

3.6.2 Post-test

After conducting treatment in both classes, the researcher gave a post-test. The post-test measured how much students had mastered certain competencies as formulated by the researcher. The post-test in this research was in the form of multiple choice questions to the experimental class and control class. The results of the data were compared between experimental class and control class, then the results can be prove whether the implementation of the digital game "Snake and Ladder" is effective or not to increase students' vocabulary mastery.

For evaluating research instruments, the researcher consider their validity and reliability. As follows was an explanation of how to determine whether each instrument is valid and reliable :

A. Validity

In quantitative research, validity should be prioritized as it measure the accuracy of a concept in a study. It means precisely determining the extent to which the research idea can be measured. According to (Sugiyono, 2012) obtaining valid and reliable results in research requires the use of valid and reliable

instruments. The validity of the content means that the tests are developed using materials given to the students in eight-grade at SMP Negeri 1 Talang. The testing technique uses the correlation of the Master Judgment Assesment, also known as expert judgment assesment, refers to a method of gathering insights and evaluations from individuals who process significant knowledge, expertise, or experience in a particular field or domain. . This research was conducted using SPSS (Statistical Package for Social Sciences) for data calculation. Testing technique used Pearson's bivariate correlation (Pearson's product moment). If the test with a significance level of 0.05, then there is a significant correlation between the test or question items and the final result, which is considered valid.

In order to verify the validity of the instrument, the researcher used SPSS 25 software and the Pearson Bivariate correlation (Person Product Moment) technique. The results of the validity test can be found in the appendix. With a 5% significance level, the critical value (r table) is 0.349, which means a data is considered valid if the correlation coefficient (r count) is greater than 0.349. Based on the validity analysis a total of 40 test questions, 31 questions were found to be valid, while 9 questions were found to be invalid.

Table 3. 4 Percentage of Calculation Results of Validity
of Test Items

Criteria	r count	Question Number	Amount
Valid	0.349	1,2,3,4,5,6,7,9,12,13,15 ,16,17,18,19,20,21,22,2 3,26,27,28,29,30,31,32, 33,34,35,38,39	31
Non valid		8,10,11,14,24,25,36,37, 40	9

The table above outlines the validity of a multiple-choice questions that were tested in various classes. There was a total of 40 questions, out of which 31 were considered valid because the r table value was less than the r count. However, researcher only included 30 valid questions to simplify the process of determining the test scores.

B. Reliability

The reliability or accuracy of an instrument is the second measure of quality for quantitative research. According to (Creswell, 2012) stated reliability refers to the consistency and stability of the score obtained from an instrument. In addition, a reliable instrument is one that consistently produces the same data when used multiple times to measure the same object (Sugiyono, 2012).

In order to determine the consistency of the instruments responses, a reliability test was conducted. To test the reliability of the instrument in this research, the Cronbach Alpha formula was used with SPSS 25 software. The criteria for the reliable test are :

1. If $\text{Alpha} > 0.90$, then the reliability is considered perfect.
2. If the Alpha falls between $0.70 - 0.90$, then the reliability is considered high.
3. If $\text{Alpha} < 0.50$, then the reliability is considered low.
4. If Alpha is low, then there is a possibility that one or more items are not reliable.

The following is a table of reliability test results based on an instrument trial involving 32 respondents.

Table 3. 5 Reliability Test Result

Reliability Statistics	
Cronbach's Alpha	N of Items
0.730	40

According to the results of the reliability test shown in table 3.4, the Cronbach's Alpha value is 0.730, indicating ideal reliability (considering on Alpha of 0.90 and above). As a result, the instruments can conclude that the variable used to measure the concept in this research was reliable.

3.7 Technique of Analyzing Data

Data analysis technique refer to the methods of studying and processing data in order to identify patterns, relationships, and significant information that it contains. To analyze in this research data, the researcher was conducted three statistical tests, namely the normality test, homogeneity test, and the two-average similarity test.

A. Normality test

A normality test is a statistical assesment whether sample data originates from a population with a normal distribution. To determine if the data follows a normal distribution, a normality test will conduct using SPSS 25 software.

The Kolmogorov-Smirnov test (Chakravarti, Laha, and Roy, 1967) is utilized to ascertain if a sample is drawn from a population with a specific distribution. The K-S test that the distribution of the test statistic is independent of the underlying cumulative distribution function being stated, making it an exact test it is advantages. The concept of testing normality of data is integral to classical testing. Assessing the residual values for normal distribution is crucial in determining the goodness of fit for a regression model. This, evaluating the normality of residual values aids in assessing the accuracy of the regression model.

B. Homogeneity Test

A homogeneity test is a statistical method employed to ensure if the variances among two or more groups are the same or homogenous.

The main objective of this test is to ascertain whether the variability within each group is comparable or if there are significant differences in variability between groups.

Two of the most commonly used homogeneity test are Levene's test and Bartlett's test. These test are frequently used in analysis are met. It crucial because many statistical techniques assume that the variances across groups are homogeneous or similar. If the variances are significantly different, it can affect the validity of the statistical analysis.

C. T-test

The t-test in this research conducted to determine whether there exists a disparity between the averages of two unpaired sets of data. It is frequently employed when a study involves both an independent and dependent group, and aims to evaluate if their averages display significant differences. The t-test calculates the t-statistic using the sample information provided and compares it with the critical value derived from the t-distribution.