

**THE APPLICATION OF DIGITAL GAMES AND ITS EFFECT ON
VOCABULARY IMPROVEMENT OF THE SECOND GRADE
STUDENTS AT SMP NEGERI 1 TELLU SIATTINGE**

***PENERAPAN PERMAINAN DIGITAL DAN PENGARUHNYA
TERHADAP PENINGKATAN KOSAKATA SISWA KELAS
DUA DI SMP NEGERI 1 TELLU SIATTINGE***

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**THE APPLICATION OF DIGITAL GAMES AND ITS EFFECT ON
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STUDENTS AT SMP NEGERI 1 TELLU SIATTINGE**

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Arranged and Proposed By

Yulia Udin Safitri

To

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THESIS

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States truthfully that this thesis was the result of my own work, and it is not the work of others. If it is proven later that either some or entire part of this thesis is the work of others, I am willing to accept any sanctions for my dishonesty.

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Yulia Udin Safitri

ABSTRACT

YULIA UDIN SAFITRI. *The Application of Digital Games and Its Effect on Vocabulary Improvement of the Second-Grade Students at SMP Negeri 1 Tellu Siattinge* (Supervised by Abidin Pammu and Nasmilah).

The research aims (1) to investigate the extent to which digital games (Jeopardy! and Kahoot!) are effective in improving the vocabulary of the second-grade students at SMP Negeri 1 Tellu Siattinge, and (2) to address digital games (Jeopardy! and Kahoot!) improve the vocabulary of the second-grade students at SMP Negeri 1 Tellu Siattinge. The experimental group and control group were selected randomly referring to the quantitative approach designed as the quasi-experimental method used in the research. The participants were the second-grade students at SMP Negeri 1 Tellu Siattinge who were selected using the purposive sampling technique. The research independent variable was the digital games, while the dependent variable was the vocabulary improvement. The research result indicates that the experimental group exceeds the control group in the test given to the students. However, prior to this the experimental group was treated using the digital games and the control group was treated using the lecturing method in their English classes. This is indicated by the different scores between the two groups, in which the experimental group obtains the mean score of 49.65, on the other hand, the control group obtains the mean score of 27.01. This is proven by the t-test score of 5.617 and the t-test score of 2.007. This result means that H_0 is rejected and H_1 is accepted. The data analysis is supported by SPSS 16.0 programme. It can be concluded that the digital games effectively improve the students' vocabulary with the significant value of $p < 0.05$.

Keywords: Digital Games, Effect, Vocabulary Improvement



ABSTRAK

YULIA UDIN SAFITRI. *Penerapan Permainan Digital dan Pengaruhnya terhadap Peningkatan Kosakata Siswa Kelas Dua di SMP Negeri 1 Tellu Siattinge (Dibimbing oleh Abidin Pammu dan Nasmilah).*

Penelitian ini bertujuan (1) untuk mengetahui sejauh mana permainan digital (Jeopardy! dan Kahoot!) efektif dalam meningkatkan kosakata siswa kelas dua di SMP Negeri 1 Tellu Siattinge, dan (2) untuk menunjukkan bahwa permainan digital (Jeopardy! dan Kahoot!) dalam meningkatkan kosakata siswa kelas dua di SMP Negeri 1 Tellu Siattinge. Kelompok eksperimen dan kelompok kontrol dipilih secara tidak acak mengacu pada pendekatan kuantitatif yang dirancang sebagai metode kuasi-eksperimental yang digunakan dalam penelitian ini. Partisipan adalah siswa kelas dua di SMP Negeri 1 Tellu Siattinge yang dipilih menggunakan teknik purposive sampling. Variabel bebas dalam penelitian ini adalah permainan digital. Adapun variabel terikatnya adalah peningkatan kosakata. Kelompok eksperimen melampaui kelompok kontrol dalam tes yang diberikan kepada siswa. Namun, sebelum ini kelompok eksperimen diberi perlakuan dengan menggunakan permainan digital dan kelompok kontrol diberi perlakuan menggunakan metode ceramah di kelas bahasa Inggris mereka. Hal ini ditunjukkan dengan perbedaan skor antara kedua kelompok, dimana kelompok eksperimen memperoleh nilai rata-rata 49.65, sedangkan kelompok kontrol memperoleh nilai rata-rata 27.01. Hal tersebut dibuktikan melalui nilai uji t sebesar 5.617 dan nilai t-tabel sebesar 2.007. Ini berarti H_0 ditolak dan H_1 diterima. Analisis data diinterpretasikan dengan dukungan program SPSS 16.0. Dapat disimpulkan bahwa permainan digital efektif meningkatkan kosakata siswa dengan nilai signifikan $p < 0.05$.

Kata kunci: Permainan Digital, Efek, Peningkatan Kosakata



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CHAPTER I

INTRODUCTION

A. Background

Educational teaching and learning application can be able to help the students' learning process, especially in vocabulary study. It is essential for improving students' language learning and acquisition, particularly an English as the second language. In actual situation, lack of instructional and learning is still found in certain cases, mainly for English language. On the other hand, the lack of books prevents students from picking up books for homework. The lack of class materials constitutes a negative cycle, without materials, the work cannot be completed, there is little incentive to attend school, and no school supplies can be purchased. These are the attempts of several researchers to improve the situation. Several factors impede the learning and teaching of English, and one of them is the responsibility of students to learn, participate in class, communicate with others, and ask questions. In this instance, teachers are crucial in assisting students with motivation and educational aspirations. Strong relationships between students and their teachers will assist them in overcoming these challenges by creating a more diverse environment. Consequently, students can demonstrate their abilities to the fullest extent.

When talking about digital games, in which the game is utilised as a medium for acquiring vocabulary in English learning, it requires participants

to compete. According to Prensky (2007), a planned competition can be participated by one or more players, goals, boundaries, rules, interactions, challenges, rewards, and consequences. In addition, the competition related elements (by yourself or other players). The researcher considers games to be digital games played on a computer, console, or mobile device. The rules, player representation, and atmosphere of “traditional” gaming systems are controlled electronically. Instead, a digital game is an interactive software designed to amuse one or more players and possibly more. Thus, all games involve different strategies.

There are several advantages to playing digital games. Felicia (2009) states that digital game can inspire and engage players in the certain condition. She adds that it contains some varieties of auditory, tactile, visual, and intellectual stimuli to make them enjoyable. Therefore, it is believed that digital games can assist in memorisation and rote learning; consequently, they can assist in developing ICT skills. In addition, this medium contains a variety of topics that can assist students and teachers in learning vocabulary.

Vocabulary is an essential aspect of learning English. However, as a foreign language, in learning vocabulary seems difficult and a little bit complicated for Indonesian students, especially to remember new words and expand their vocabulary. According to Ko & Goranson (2014), vocabulary is a challenging subject for two reasons: There are numerous words to learn, and secondly, little attention has been paid to students’

problems in this regard. In addition, vocabulary is a significant factor in language and multiple people who want to learn English, particularly Junior High School students, frequently struggle with vocabulary. Harmer (2001) assumed vocabulary is one of the most visible aspects of language and one of the first things linguists focus on. This suggests that the crucial aspect of language affects English learning.

Language cannot exist without vocabulary; this is a crucial part of language. According to Nation (2001), when people understand that learning vocabulary is complex, they disregard its significance. Language cannot be used to maintain all information. Moreover, according to Snow et al., (1998), conceptual understanding of words extends beyond a simple dictionary, as students build connections between words, acquire examples and non-examples of the term and related words, and appropriately apply the phrase in context. It can be stated that vocabulary is the smallest phonetic unit for processing individual meanings to communicate with one another.

In the context of teaching a foreign language, vocabulary is a collection of words in a certain language. When they encounter new words, they will seek their definitions in a dictionary and record them in their notebooks. Understanding a text requires an extensive vocabulary, and it is not enough to remember and comprehend the topic; spelling and writing skills are also required. Learning vocabulary assists students in acquiring, gaining, and building knowledge. Students must consciously learn to master

four English language skills one of which through vocabulary. It indicates that vocabulary must be taught through classroom activities, thus students can correctly receive or produce the target language.

The vocabulary of students can be expanded through a variety of media. One of those is the utilisation of games. Games have numerous benefits for teachers and students, particularly in language learning. When students participate in the game, they undoubtedly support their English ability and will have enjoyment while learning English vocabulary. In addition, the teacher is thrilled to demonstrate the target language in a pleasant environment. The advantage of using games in a foreign language environment is to reduce the time required to relieve stress, particularly for those aged 13 to 14 who learn differently than older and adult students. They tire quickly and lose interest in roughly ten minutes. Therefore, teaching English to teenager should be enjoyable, entertaining, and easily understood. According to Mei and Yu-jing (2000), games are always enjoyable for students and maintain their attention, unlike traditional lessons. The games assist students in learning the language while having a good time in class, although the students look shy and hesitant, they respond positively.

Teaching English for students in Junior High School is different from teaching English for college students, since their characteristics and motivation to study are distinct. Some physical characteristics, such as ways of thinking, unstable social and emotion, moral, and personality

development distinguish adolescents from adults in Junior High School. Therefore, teaching language to adult should vary so as not to be monotonous, joyful, and enjoyable. Consequently, it can be simpler to comprehend the new word. Boredom is one of the differences Junior High School students' experiences, when learning vocabulary through games. Thus, there are necessities or enhancements in new vocabulary.

The purpose of the study is to select SMP Negeri 1 Tellu Siattinge as one of the schools with state school status in the area. As a public institution, this school must automatically reflect the quality of its students. This school accepts numerous students each year, and students' motivation to study English is extremely high, thus the researcher is interested in conducting research in this school. Subsequently, after conducting observations, the researcher discovers that students also have vocabulary issues. Although they enjoy English, they struggle to improve it. Therefore, the researcher selected a game as a strategy for improving their vocabulary. The researcher chose second-grade as a sample since they demonstrated greater interest in the game. Additionally, this school has adequate facilities for sub-district in Tellu Siattinge, Bone.

Nowadays, various digital vocabulary game instruments include Flippity, Kahoot!, Plickers, Quizlet, Quizizz, Social, Jeopardy!, etc. The researcher selected digital games, since they could increase students' interest in learning vocabulary. Therefore, in this study, digital games were

selected as the appropriate strategy used in vocabulary learning to improve vocabulary for the second-grade students at SMP Negeri 1 Tellu Siattinge.

According to the research entitled *“The Application of Digital Games and Its Effect on Vocabulary Improvement of the Second Grade Students at SMP Negeri 1 Tellu Siattinge”*. The researcher is interested to conduct experimental research to investigate whether the implementation of digital games can help to improve vocabulary and is effective in improving vocabulary or not.

B. Research Questions

Based on the background above that has been stated previously, the researcher presents the research questions as follows:

1. To what extent are digital games (Jeopardy! and Kahoot!) effective in improving the students' vocabulary of the second-grade students at SMP Negeri 1 Tellu Siattinge?
2. How do digital games (Jeopardy! and Kahoot!) improve the vocabulary of the second-grade students at SMP Negeri 1 Tellu Siattinge?

C. Objectives of the Research

According to the mentioned research questions above, the objectives of the research are to identify the application of digital games and its effect on vocabulary improvement.

1. To investigate the extent to which digital games (Jeopardy! and Kahoot!) are effective in improving vocabulary of the second-grade students at SMP Negeri 1 Tellu Siattinge.
2. To address digital games (Jeopardy! and Kahoot!) improve the vocabulary of the second-grade students at SMP Negeri 1 Tellu Siattinge.

D. Significance of the Research

This study confers theoretical and practical significance.

1. Theoretical Significance

The study expects that the findings of this study will help to improve English language teaching and learning. The research is intended to provide useful information and assist in teaching and learning English that can assist teachers to improve their understanding. Meanwhile, this study can provide the readers with an ideal strategy for teaching vocabulary material, particularly for the next researchers/students who are interested in digital games. Its strategy has been demonstrated to improve students' English Vocabulary at SMP Negeri 1 Tellu Siattinge.

2. Practical Significance

The findings of this study are expected to give benefit teachers, students, and principals of Junior High Schools who deal with teaching and learning English vocabulary in the following ways:

a. Significance for the students

The findings of this study are supposed to stimulate students to enhance their vocabulary using digital games.

b. Significance for teachers

The researcher assumes that this study will assist teachers in improving their vocabulary teaching strategy to the students. In addition, teachers can employ digital games in the classroom to create teaching and learning more exciting and inspiring.

c. Significance for the further researcher

This study will most likely benefit the next researchers as a reference for further research on a related topic.

E. Scope of the Research

This examination aims to investigate the application of digital games and its effect on vocabulary improvement for second-grade students at SMP Negeri 1 Tellu Siattinge. Subsequently, teaching vocabulary is restricted to Adjective, Noun, and Verb.

F. Definition of Terms

The definition of the term aims to find out the meanings of several technical and operational terms. It will be helpful for a better understanding of the research on the application of digital games. The following list is the technical terms used by the proponents:

1. Digital Games

A digital game is an interactive program involving one or more people to participate. At least, it can be an entertaining thing and can be more. Digital game technology is frequently used to teach many learners including surgeons, soldiers, and firefighters (Felicia, 2009).

In the previous definition, the researcher infers that a digital game can be played during the learning process. Furthermore, it is interactive on digital devices such as console games and computers. The digital game is a system that allows a human and a technology to interact in an electronically powered realm through a set of implicit and explicit guidelines.

2. Vocabulary

According to Heidari et al., (2012), vocabulary is the foundation of language learning. Learning vocabulary is a slow process of acquiring new words or phrases in a certain language. As defined by these requirements, vocabulary refers to the number of words available for verbal communication. The term “vocabulary” refers to the learning terminology employed by Junior High School students in this study.

Thornbury (2002) defines vocabulary as an extensive array of objects. He continues with stating that vocabulary knowledge is crucial since it facilitates the expansion of implied words. A student’s success in learning a language is determined not only by the amount of their vocabulary but also by previously, vocabulary knowledge is a collection of words in a language that includes information about their meaning, form, and

communication use. Before starting to learn English, students need to have these essential skills. Vocabulary development is crucial for English language learning, since it provides the fundamental building blocks for constructing English sentences.

CHAPTER II

REVIEW OF RELATED LITERATURE

A. Literature Review

1. Previous Research Findings

Numerous researchers, educators, and instructional designers are interested in employing educational, online, or digital games to improve students' understanding. This learning technology is described as an e-learning new model by Squire (2005), which has piqued the interest of many researchers interested in using it in the teaching and learning process (Prensky, 2001; Squire, 2005; Zarina & Hanafizan, 2005; Zarina, 2008; Roslina & Azizah, 2008; Noor Azli et al., 2008; Nor Azan & Wong, 2009; Whitton, 2010). This learning model is quite promising in boosting student learning, so many researchers are flocking to utilise it as a relaxed and fun learning. However, it provides a high enough value in the students learning process in the classroom.

There have been numerous studies on using digital games to teach vocabulary. These provide a good contribution to language teaching. In this study, the researcher draws on existing research on the subject. These previous investigations are consistent with this research. Students apply their English vocabulary abilities through digital games and can improve their skills in preparing and teaching language through discussion or performing.

The following past studies are relevant to this study:

Gros (2007) the subsequent research was conducted. Her study, entitled *Digital Games in Education: The Design of Game-Based Learning Environments*, was carried out. According to one study, using this game in teaching and learning has significant benefits for connecting impressions, relationships, and learning to students. This article's topic begins with defining the many terms used in game-based learning. The researcher outlines the study's key findings on using digital games in the learning process to assist better learning, which further evaluates the usage of game-based learning for a better subsequent process. Furthermore, it is assumed that the use of digital games will increase from year to year to support the teaching and learning process because it has been proven to provide satisfactory results in learning, so teachers will also receive tools and guidelines to develop game-based teaching and learning activities with students of varying skills, levels, and competencies.

The subsequent research was conducted by Rasti (2021), *Why Digital Games Can Be Advantageous in Vocabulary Learning is An Integral Language Learning*. This learning process is relatively challenging although numerous learning techniques have been proposed, thus researchers continuously seek an alternative, more effective methods to generate easy-to-understand learning with maximum results. Digital games have recently been demonstrated and can boost students' vocabulary mastery in learning English language. Most digital game-based, particularly in vocabulary

mastery (DGBVL) research has been focused on the task's effectiveness. In other words, because there are enough answers in the DGBVL literature question, they rarely answer the questions in the DGBVL task structure, and we will comprehend and know the structure of the DGBVL task and its impact on vocabulary learning. To reach this purpose, the available literature on digital games and vocabulary development was comprehensively reviewed from 1996 to 2020. Seven themes emerged from the research: motivation, authenticity, repetitiveness, instantiation, double coding, interactivity, and feedback. According to existing research, these topics can assist students in improving their vocabulary mastery.

Teng (2016) did significant research entitled, *The Effects of Word Exposure Frequency on Incidental Learning of the Depth of Vocabulary Knowledge*. The study observation illustrates the depth of vocabulary learning performed by Chinese students in foreign language learning (EFL) who are willing to participate in sudden learning programmes, as measured by prior research observations. Depth of language knowledge as measured by 36 test items across 6 frequency bands (perform more than 20 times to only one success). The target words are substituted with words that have nothing to do with the original. The test was given twice to assess the amount of receptive and productive vocabulary knowledge.

The examiner was divided into three seasons. First, students read the book and completed the tests. The second test was conducted seven days later, and the tests were completed, and the final retention tests were

conducted three months later. According to research, sudden learning has a highly limited amount of learning and understanding, thus learning with a high-frequency level will also result in good learning. Chinese EFL students require 14 times to gain solid vocabulary understanding and at least 18 times to produce productive vocabulary results.

Wu, Zhang, & Wang (2020) conducted the research about *The Effect of English Vocabulary Learning with Digital Games and its Affecting Factors* stated that digital games have obtained greater attention from academia, notably in English vocabulary learning, a scientific and thorough conclusion has yet to be established. Digital games have become increasingly popular; however, research on the impact of English vocabulary development has yet to yield a scientific and thorough result. This study is based on a report that collected data on the Effect of English Vocabulary Learning Through Digital Games from English Databases such as WOS and ERIC during 2008 to 2018. According to research, number games are essential in enhancing English vocabulary development.

The effect size standard is used to summarise the factors affecting learning processes. The learning level, game-assisted, teaching method, native language backdrop, game platform, and game scene are all examples. On the other hand, it was discovered that the mother tongue background had the most important effect, whereas negative transfer of the mother tongue hampered Asian students' vocabulary development. Finally, promoting high-quality digital games in teaching and learning necessitates

excellent internal conditions for creating and producing situational and intelligent digital games.

Aghlara and Tamjid (2011) carried out the study about *The Effect of Digital Games on Iranian Children's Vocabulary Retention in Foreign Language Acquisition* revealed that learning vocabulary through computers significantly impacted vocabulary learning in Iranian students. The SHAIEX game was used to teach the experimental group, whereas the standard technique was used to teach the control group. The results acquired by students were compared at the end of the class. The findings indicated that the experimental group's scores were higher than students in the control group. Using number games has a good impact on teaching English vocabulary to children. Digital games, according to observations, have a favourable impact on classroom learning. They perceive motivation and facilities, resulting in good learning results and a more enjoyable learning process.

The researcher employed games in this study to identify and assess in depth the learning procedures of students in the classroom, with the kind of dependent variable, and the style of digital games used in the research distinguishing it from earlier research. The application's name and the gaming application form distinguish this study. Previous research had discovered game applications utilised, not yet in Junior High Schools that leverage the web or games based on Microsoft PowerPoint with language.

2. Some Pertinent Ideas

a. Vocabulary

Nunan (2005) described vocabulary as a person's collection of words. A vocabulary is a set of terms known to a person or other entity or that component of a specific language used to communicate with other people that contains a part of the language system connected to grammar. Furthermore, proficiency is defined as the student's capacity to retain the essence of the instruction across time. In other words, vocabulary mastery refers to the ability to communicate with people using several words.

Vocabulary knowledge can also assist students' comprehension of language. It means that knowing a language is proportional to the number of words known in the language. Students must have a strong vocabulary to comprehend what they are reading. Students can only understand the author's point if they know what most of the terms in the book mean. Nonetheless, Nation (2001) stated that readers must know at least 97% of the terms in the text to comprehend the words entirely. Learners may struggle to understand the content if they do not understand the keywords in the text. Word knowledge, particularly vocabulary knowledge, is critical for reading comprehension and impacts how pupils perceive the meaning of the texts they read.

The researcher concludes that vocabulary is a collection of words that a person is unfamiliar with. It signifies that a vocabulary is a group of recognisable words within a person's language or several of a specific

language they use to communicate with others. Vocabulary knowledge can also assist students' comprehension of language, and understanding a language is thus predicated on the number of words in that language.

1) Importance of Vocabulary

According to Green (2009), vocabulary has considerable significance. They are as follows:

- a) Vocabulary has become a powerful insight to improve achievement.
- b) Known words assist organise learning.
- c) Creating tags (words) is an instrument to increase learning.
- d) Vocabulary teaching should be the centre of learning, particularly for students from low-income families.
- e) Vocabulary teaching is an excellent senior organiser, it must also be done in context.

2) Teaching Vocabulary

Vocabulary instruction is the most crucial aspect of the teacher's role in preparing students. According to Nation (2008), the following are the guiding concepts for this teaching vocabulary:

- a) High-frequency vocabulary and learning procedures must be taught systematically, and the teacher need to know where students are with these words.
- b) The mental processing quality determines the volume and intensity of learning.

- c) There are numerous methods to express the meaning of words, and the best approach is to be straightforward, concise, and brief.
- d) The words meaning presented must describe the essential meaning, including most of the word's use and feel.
- e) Terms and other words from the same vocabulary set, synonyms, or opposing words should not be taught.
- f) Repetition should be possible to increase the space search for each word.
- g) Direct teaching is only one of four principles a word should meet, and it is only a method of paying intentional attention.
- h) Students must have responsibility to their vocabulary acquisition.

Cameron (2001) mentions, vocabulary instruction focuses on helping students gain knowledge through vocabulary, which will also enable students to utilise language efficiently and successfully. This means that language instruction must be performed conscientiously, thus students can enjoy learning process while producing the best results. They were also drawn to English subjects, and if they are drawn to this lesson, they will get animated as they gain terminology.

Based on the description provided above, the researcher determined that vocabulary instruction might be offered in various ways. As previously stated, teachers can confer four things, when teaching and learning vocabulary which were planning, strategy training, testing, and teaching. If teachers knew and applied teachers' essential work to master teaching

English to their students, they could rewrite students' ideas about vocabulary. However, they should explain that there was a better approach to developing words in English.

3) Vocabulary Assessment

Learning English vocabulary is essential for students and anybody who wishes to utilise and enhance the language as effectively and confidently as possible. During the learning process, the teacher should understand how to test the student's vocabulary in order for the student to be more understood and effective. Many strategies, according to Pavlu (2009), should be included in testing vocabulary, including:

a) Multiple Choice

Multiple choice questions are fundamental survey questions that provide students with multiple choices. This approach appears simple to mark but it is rather challenging to create. We can create queries for single word, words in a sentence, or text.

b) Cloze Test

Cloze test is an activity, exam, or evaluation that consists of a part of the language with certain elements, words, and signs removed from which students must replace the missing language items. This technique tests active vocabulary since students must respond based on the portion of the material presented.

c) Word Formation

Word construction is organising words. According to linguistic norms; sentences in a language, mainly English, may be readily understood. In this strategy, students must adapt the shape of a word to fit a certain sentence. They must demonstrate that they grasp the context and are familiar with multiple word variants.

d) Matching

Matching questions are tests designed to assess an individual student's ability to recognise differences and match information based on a number or letter. The teacher can create a test in which words and pictures are paired so students can select the correct answer depending on the information provided.

e) Odd One Out

Odd one out is a test to see which figure is the most unusual from the others, and it does not follow a logical pattern like the other figure. This type of activity is simple to put together. The teacher should know which words the students know to locate the unusual ones. This test looks at word meanings and can include helpful and fun questions.

f) Writing Sentences

Writing a sentence is a test to see which form of erroneous sentence structure can be correctly constructed into a correct sentence, including both a subject and a verb. Students should consider the part of speech in every subject or verb.

g) Dictation

Dictation is a test in which students, especially those studying a foreign language, are dictated a piece of writing to measure their ability to hear and write the language accurately.

h) Sentence Completion

Writing completion is a popular test item with one or two blanks to fill in using the options. This test assesses students' vocabulary knowledge by having them find their own words to provide good answers to each phrase of questions.

i) Definitions

Definition is a declaration that expresses the meaning of words, phrases, sentences, paragraphs, or other symbols. This examination is used to determine the meaning or definition of terms that have been appropriated. To choose the correct answer, students should comprehend the definitions of the words tested.

j) Reading

Reading test is a test to assess, measure, and evaluate the text. It measures the ability of understanding the words of text which the students read. After comprehending and comprehending the context of the material, students are required to answer questions based on the text they have already read.

k) Writing

Writing is a sample and measures writing skill test in which students must appropriately incorporate the motor act of writing, spelling, grammar, and content. The teacher will determine whether or not it is correct writing based on the factor of high writing skill. Thus, the learner should be able to arrange the words according to sentence structure correctly.

l) Placing

Students highlight terms related to movement, such as “walk, keep, jump, and run”.

m) Synonym and Antonym

Synonym and antonym test allows people to identify the same or nearly the same meaning for a synonym and then find the opposite meaning for an antonym. It has the potential to sharpen and broaden the student’s sense of language and vocabulary.

b. Digital Games

According to Mitra (2010), the digital world book collection could attempt to investigate a wide range of applications, demonstrating how digital applications work to assist readers in relating to one another while adhering to the guidelines offered. The following titles are among the digital system applications:

- 1) Digital Communications
- 2) Digital Games
- 3) Digital Music

4) Digital Research

5) Digital Security

6) Digital Video

According to Mitra (2010), the digital games with the most players are:

1) Single Player

A single-player game is usually played and created with only one player or one person. Sudoku is a famous example of this type of game.

2) Multiple Player

Multiple-player game is one in which more than one person participates. Indicating that multiple people can participate in the same game environment simultaneously. In multiple-player games, players compete against one another using a network and a private computer. To play together long distances, the participants in this game must share resources and information utilising a single gaming system or network technology.

Understanding the genre of digital games is required before applying the game. Mitra (2010) categorises games into three types:

1) Action Game

One of the most well-known games is the action game. This category focuses on physical obstacles such as hand-eye coordination and reaction time. Tetris, Super Mario Bros, Guitar Hero, and other games are instances of this type.

2) Simulation Game

Simulation games allow users to interact using digital representations of real-world items. Players are provided with the means to construct various structures and things with no limit on the number of resources available in certain games. Popular examples include Business Games, War Games, and Role-Playing Simulations.

3) Education Game

According to Duke D. Richard (1974), a professor at the University of Michigan and a pioneer computer game proposed that educational games become a mainstream teaching instrument. These games include Bamboozle, Educandy, and Wordwall.

According to Gee (2005), a good digital game represents good learning. It makes students feel like active speakers rather than passive recipients and allows players to study using a variety of private learning approaches. Furthermore, students can gain new abilities and techniques, integrate ideas and concepts at optimal times, and understand how to adapt to their surroundings. The advancement of digital technology has allowed digital learning activities to infiltrate our classrooms. Gradually, Prensky (2009). Then, digital games are described as games that use virtual and digital technologies to play with various physical objects and activities (Connolly et al., 2012).

In light of the preceding, the researcher found that an excellent digital instrument could be helpful in learning. Learners accepted them through

various learning styles, acquiring new skills and tactics, and incorporating the greatest ideas and concepts available at the time.

1) The Use of Digital Games

The Manesis (2020) stated that digital game is built on predetermined rules and constraints. These rules and constraints will direct participants toward specific goals, which unique challenges will specify. This sort of game's function is to constantly engage with players while offering feedback through evaluations so that players can constantly monitor their progress and perfect their abilities by conquering many challenges in the game. A student's perspective has numerous benefits to adopt digital games in the classroom. As technology advances, student response systems that allow teachers to pose questions, problems, or solutions to students are developed. Teachers can use digital games like Jeopardy! and Kahoot! to develop questions that can be used during teaching and learning. According to Prieto et al., (2019), teachers can insert text, graphics, or videos and change the number of times on each question which can be asked. Teaching in games such as text, graphics, music, and video are integrated with interactive apps or presentations to transmit a message or information to students in the teaching and learning process.

Based on the preceding explanation, it could be inferred that digital games refer to predetermined rules and bound that direct player to clear goals. Unique difficulties defined and trained their abilities through barriers during gameplay. Learning digital games was focused on construction,

essentially own knowledge, to combine new information with prior experiences.

2) Types of Digital Games to Teach Vocabulary

a) Jeopardy! Game

Based on Friedman's notions, the television game show Jeopardy! was adapted to be used as an instructional instrument in a language game. This game consists of a host and multiple players. The game requires participants to answer questions from five distinct topics. The questions are broken into five categories. Each category also has five values, and the value goes from 100 points to 500 points. The first step in playing the game is that the host must read the clues aloud; the selected participant chooses the question. Once the host presents the clue, the participant must press the portable signal device.

This game was selected since Jeopardy! can motivate students to attain good scores. According to Friedman (2011), Jeopardy! could delight students and made players happy and more enjoyable when studying vocabulary and playing this game.

In addition, students had the potential to learn in their studies in class. Jeopardy! features two types of implementations of a high-tech and a low-tech version. The high-tech version involved computers, Power Point, and a TV or projector in the classroom. In addition, a Jeopardy! board containing categories, points, and links was developed by internet instructions. The value of each point was clicked to display a question. It required paper,

cards, blackboards, and magnets in its low-tech form. There was a point value on one side of the paper and a challenge on the opposite side.

According to Taylor's (2008), online website, the Jeopardy! game's rules are as follows:

- (1) Play individually or in groups.
- (2) Select a category and a point value.
- (3) To open the question, click on the chosen box.
- (4) Before clicking again, students are required to answer a question. The instructor may wish to impose a time limit for responding to the question.
- (5) To determine whether a student or group's answer is accurate, click the answer again.
- (6) To return to the mainboard menu, click the Back to Board button on the slide.
- (7) The question's point value is granted to students if a student obtains correct answer.
- (8) Continue until every question has been addressed. The winning team has the most points.
- (9) Bring bells or other noisemakers to class for students to response, Taylor (2008).

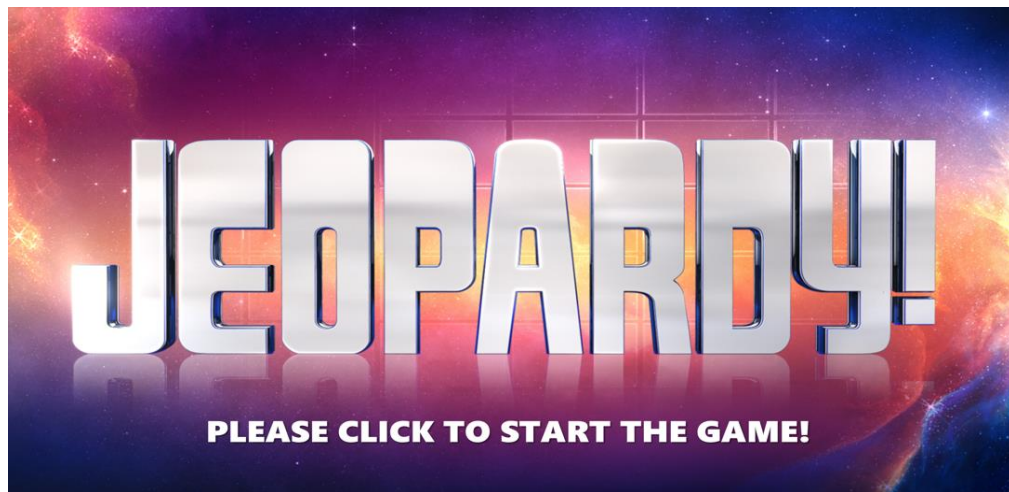


Figure 1. Jeopardy!

b) Kahoot! Game

Kahoot! is a free online application and website media for designing and working on learning games. It can be employed to make multiple-choice questions with stuck photographs and pictures. The teacher will either build their Kahoot! or hunt for publicity accessible games. There is a lot of Kahoot! out there from specific texts.

According to Kahoot! Team (2016), these are the easy methods involved in producing and using Kahoot! the following is appropriate in the classroom:

- (1) Open the Kahoot website! "kahoot.com" and click sign up to create an account.
- (2) After successfully clicking the "Sign Up" button, a question will arise concerning the sort of account to be established; for teachers, then select "Teacher", which is red. For students, then select "Student",

which is blue. For personals, select “Personal”, which is yellow. For professionals, select “Professional”, which is green.

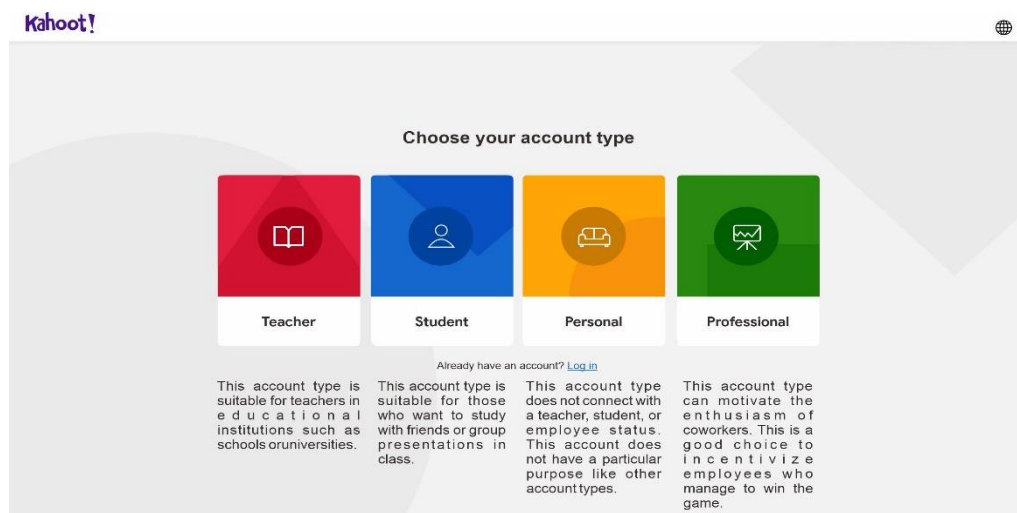


Figure 2. Kahoot!

(3) Log in to create a Kahoot! account

When the login is successful, find and choose Quiz, Jumble, Discussion, or Survey to design a multiple-choice question-based learning game. Quiz is the most widely utilised format since it includes the time and scoring systems generating a competitive setting. Because the survey follows the same format as the Quiz, no points are awarded. The discussion and debate during the start or middle of the learning season. Subsequently, participants are challenged to arrange the responses in the correct sequence instead of selecting a single correct solution.

(4) Add an overview, tags, and a cover image

A thorough description helps in identifying the game’s learning purpose and keeping it focused.

(5) Create the educational game by including questions, answers, and images. Follow the on-screen directions to upload questions, answers, photos, and videos. It is also incredibly versatile for teachers to administer Kahoot! use several timers and point systems or multiple correct answers.

(6) Launch the game, thus people can participate

When the game is finished, press the play button, change the game mode to liking, choose Classic to play with one tool per person or Team Mode with one tool per team. At the top of the screen, a game specific and a play PIN will be revealed. Participants enter the game PIN into the working screen. Participants go to Kahoot.it and enter the game's PIN. In addition, enter their nickname.

(7) Play the Kahoot game!

When all the participants' nicknames are on the working screen, then click "Start."

B. Conceptual Framework

The researcher presented the conceptual framework as follows:

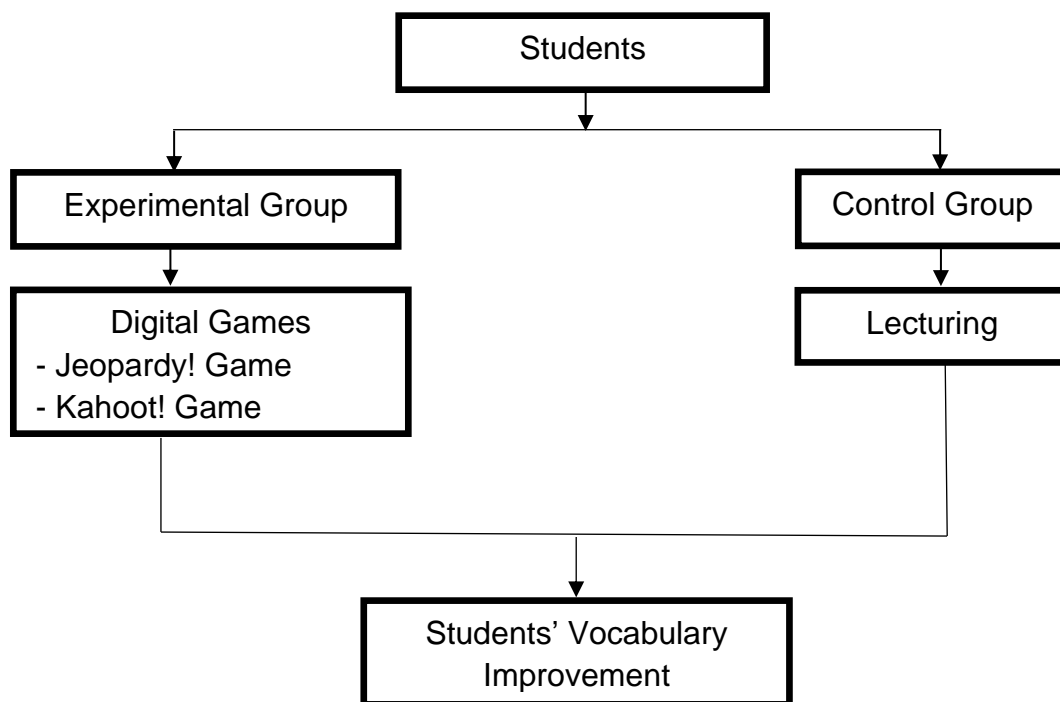


Figure 3. Conceptual Framework

In carrying out the current investigation, which is entitled *“The Application of Digital Games and Its Effect on Vocabulary Improvement”*, the conceptual framework was started by the students. It was divided into two groups, experimental and control groups. Digital games were applied by the researcher in the experimental group to the students in teaching vocabulary. In this study, the researcher focused on digital games named Jeopardy! and Kahoot! games (see pages 37-39). The researcher selected these games because they were uncomplicated for the students. Besides, they were simple to use in the classroom depending on the subject and the

student's abilities, particularly those in the second-grade of Junior High School.

Inside the control group, the researcher applied the lecturing method to teach the students. The researcher conducted this method to encourage students' participation in active studying and give a review about learning vocabulary. The test was carried out using digital games with students' vocabulary improvement to determine the significant differences between the experimental and control groups. On the other hand, the percentage of students' improvement presented in digital games application and vocabulary were delivered through the lecturing method. This method was how the researcher gave some materials orally to a group of participants such as information from theories and enquiries.

C. Hypothesis

There were two hypotheses in the present study, the alternative hypothesis (H_1) and the null hypothesis (H_0).

1. H_1 : Using digital games (Jeopardy! and Kahoot!) was effective in improving vocabulary of the second-grade students at SMP Negeri 1 Tellu Siattinge.
2. H_0 : Using digital games (Jeopardy! and Kahoot!) was not effective in improving vocabulary of the second-grade students at SMP Negeri 1 Tellu Siatitnge.