# The Effectiveness of Hangman Game to Improve Vocabulary Skill in SMP PGRI Pakis Magelang

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## ABSTRACT

*Vocabulary is an important thing when we are studying English. Many students get difficulties when studying English because they don't have much vocabulary. The purpose of this research was to investigate whether the hangman game were able to improve the vocabularies of the students of SMP PGRI Pakis, Magelang, or not. This research used an experimental design conducted in two class. One class had been studying English using a hangman game and one class without a hangman game. The result of this study the sig. 2 tailed got 0,00, it meant that there were differences on learning vocabulary by hangman game and without hangman game because the significant less than 0,05. The number of t count was 14,195 and t table was 0,361 The result of computation was 14,195 > 0,361 while the significance value < 0.05 (0.00 < 0.05), therefore Ho was rejected and Ha was accepted. Therefore, hangman game was effective to improve vocabulary.*

## ABSTRAK

Kosakata adalah hal yang penting ketika kita sedang belajar bahasa Inggris. Banyak peserta didik mengalami kesulitan ketika belajar bahasa Inggris karena mereka tidak memiliki banyak kosakata. Tujuan penelitian ini adalah untuk mengetahui apakah permainan hangman dapat meningkatkan kosakata peserta didik SMP PGRI Pakis, Magelang, atau tidak. Penelitian ini menggunakan desain eksperimen yang dilakukan dalam dua kelas. Satu kelas belajar bahasa Inggris menggunakan permainan hangman dan satu kelas tanpa permainan hangman. Hasil penelitian ini sig. 2 tailed mendapat 0,00, artinya terdapat perbedaan pembelajaran kosakata dengan permainan hangman dan tanpa permainan hangman. Karena signifikan kurang dari 0,05. Jumlah thitung adalah 14,195 dan ttabel adalah 0,361 Hasil perhitungan adalah 14,195 > 0,361 sedangkan nilai signifikansi < 0,05 (0,00 < 0,05), sehingga Ho ditolak dan Ha diterima. Jadi hangman game efektif untuk mengembangkan kosa kata.

## A. Introduction

Most students get difficulties when they learn English such as reading, speaking, and writing because they are poor in vocabulary. Most students are lazy to memorize, feel bored when learning English because they study by monotonous method, teacher give a vocabulary and the students will memorize the vocabulary. Because of bored situation, the students don't have much vocabulary and don't get English material well as in SMP PGRI, Pakis, Magelang. The students of SMP PGRI didn't have many vocabularies because they were thought that English

was difficult, therefore they were lazy to studied English. They haven't memorized yet in enrichment of mastering the simple vocabularies.

To make the students interested in learning English, teachers need fun methods. Therefore, the students be happy when studied English. A game is something to make fun activity because games are able to be done by playing. Students like to play. Therefore, the game is a good method of learning English. By using games, the students are able to enjoy the material. The teacher must understand the appropriate game method. Therefore, the students are able to accept new vocabulary.

In this research, the researcher used a hangman game. Hangman game is a game to guess the word. By mentioning a character from the word, the game is able to be done by a group, one of the people have the secret word, say how many characters, another one will say one character from the word. The students have some chance to make mistakes until the man is hanging.

## B. Method

According to harmer (2001 in Munikasari et al., 2021) Vocabulary is a key element for language learners. It is the main resource for all language courses. Vocabulary plays a greater role in supporting all language skills. Learners write, speak, listen, and read well if they have the sufficient vocabulary.

According to According to Richard (2001:4) in Yuliawati (2013:20) Vocabulary is one of the most obvious parts of language and one of the first things applied linguists paid attention to. With a good vocabulary, you will be able to speak, listen, read and write. Various methods of lexical manipulation are employed with the aim of producing an emotional effect on the author or speaker and improving their ability to build smooth, coherent discourse. (Anwar & Efransyah, 2018).

According to Polanyi (1966) Two types of knowledge classification are soft skills and hard skills (Wibowo et al., 2020)

The term 21st-century "skills" mean a comprehensive set of knowledge, skills, work habits and personality traits that are essential for a successful life in today's world, especially in academics and future careers. (Rahman, 2019)

Game is one media that teachers can use in the learning process, apply play in learning process, especially in improving students' vocabulary in a text. Student will have no difficulty understanding or memorizing vocabulary(Lailatul & Rahmawati, 2020).

A game is "a physical or mental competition with specific rules designed to entertain or reward the players" (Ariffin et al., 2014).

According to Ward (cited in Bunga, 2013: 2), a hangman is a great way for children to practice spelling, and pronunciation, improve their vocabulary and have fun at the same time. Hangman is a game represented by a row of lines. Played between two or more people, one person chooses a password and the others try to guess the word letter by letter. The games provide clues such as whether a word is an adjective or a noun, an antonym or a synonym, the number of a letter, the alphabet of a word, etc (Evi et al., 2017).

According to Lila Stacy (2010) Hangman game is for two or more players one of them thinks of a certain game and the rest try to guess the word by suggesting some letters. This is a great way to review vocabulary (nenden sr, 2021).

1. Identify Subsections

In this research, the researcher used quantitative research. Quantitative research was also utilized to determine. According to Merriam & Tisdell, (2016 in Abdullah Kamal,2019) Quantitative research is cause and effect, predicting, or describing the distribution of some attribute among a population.

This research conducted by a researcher at SMP PGRI PAKIS, a junior high school located at Pakis, Magelang. The participant of this research was the students of first-grade PGRI Pakis, class A for control class and class C for experimental class.

Before the instrument was used to pre-test and post-test, the data questions the data must tested by validity, reliability, difficulty level, and different power. The step of the tests:

Validity

Following Arikunto (2012 in Pangestuti et al., 2021) Validity is a metric that indicates the extent of validity possessed by an instrument. An instrument that is considered valid exhibits a high level of validity. Conversely, an instrument with lower validity signifies a lower level of validity.

Reliability

According to Arikunto (2006 in Pangestuti et al., 2021) The outcomes of the reliability test indicate the extent to which something can be relied upon and can be considered trustworthy.

Difficulty index

According to Asrul (2014 in Pangestuti et al., 2021) A well-crafted question is one that strikes a balance in terms of its level of difficulty. It is neither excessively simple nor excessively intricate, ensuring that it is challenging enough without being overly tricky.

Discriminate power

Arikunto (2012 in Pangestuti et al., 2021)According to the statement, discriminating power refers to the capacity of items to differentiate between students' abilities. The indicator of this differentiation is the correlation between the score obtained on a specific question and the score on the overall set of questions. Therefore, the level of compatibility between a question and the rest of the question set can be observed through this measure of differentiation.

Data Analysis Procedure

Normality

According to Kobayashi et al., (2008) To assess the normality of data obtained from toxicity studies, it is more suitable to employ the Kolmogorov-Smirnov test and the Shapiro-Wilk test. These tests are particularly appropriate for examining the normal distribution, as indicated by visual examination of the normality curve.

Homogeneity

According to Ichihara (1994 in Kobayashi et al., 2008) Hence, when analyzing data from toxicity studies, the first step is to verify the homogeneity of variance. Subsequently, the data are examined for normal distribution. If the data exhibit a normal distribution, parametric tests are employed for the analysis. On the other hand, if the data do not demonstrate a normal distribution, the Kruskal-Wallis H test is utilized when there are three or more groups, while Welch's t-test or Mann-Whitney U test is employed for comparisons when there are two groups.

Independent sample T Test

According to Gerald (2018) An independent sample t-test tells the researcher whether there is a statistically significant difference in the mean scores for the two groups or not. In statistical terms it means that the researcher is testing the probability that the two sets of data came from the same population.

2.  Participant (Subject) Characteristics

According to Fraenkel and Wallen (2009 in Oktaviani & Fauzan,2017) The population is the group of interest to the researcher and the group to which the researcher wishes to generalize the results of his research

According to Sugiyono (2010:80 in Oktaviani & Fauzan, 2017) population is the generalization area that conduct of object or subject which has certain quality and characteristic to be learned and concluded by the researcher.

The researcher took the population in this research was the students of SMP PGRI Pakis, Magelang.

According to Fraenkel and Wallen (2009:96 in Oktaviani & Fauzan,2017) random selection of clusters is the selection of groups on subjects rather than individuals from existing classes. While simple random sampling works best with large numbers of people, cluster random sampling works well with large numbers of clusters. The researcher took the sample in this research was first grade from class a and class c of SMP PGRI Pakis, Magelang.

3. Research Design

In this research, the researcher used quantitative research. Quantitative research was also utilized to determine. According to Merriam & Tisdell, (2016 in Abdullah Kamal, 2019)

According to Brown & Melamed(2012)In experimental designcarefully consider several features. Including power, generalizability, effectiveness of different forms, practicality and cost. these concepts. It will be explained and discussed in detail in the next chapter.

According to Kirk (1995:1 in Webber & Prouse,2019) An experimental design is a plan for allocating experimental units to treatment levels and the statistical analysis associated with that design.

Quantitative research is cause and effect, predicting, or describing the distribution of some attribute among a population.

The researcher used experimental design because the researcher wanted to know how much the effectiveness of using a hangman game than the conventional method. The result of quantitative research is real result that can't be denied. and methods should make readers be able to reproduce the experiment. Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described. Do not repeat the details of established methods.

1. Identify Subsections

It is both conventional and expedient to divide the Method section into labeled subsections. These usually include a section with descriptions of the participants or subjects and a section describing the procedures used in the study. The latter section often includes description of (a) any experimental manipulations or inter-ventions used and how they were delivered-for example, any mechanical apparatus used to deliver them; (b) sampling procedures and sample size and precision; (c) measurement approaches (including the psychometric properties of the instruments used); and (d) the research design. If the design of the study is complex or the stimuli require detailed description, additional subsections or subheadings to divide the subsections may be warranted to help readers find specific information.

Include in these subsections the information essential to comprehend and replicate the study. Insufficient detail leaves the reader with questions; too much detail burdens the reader with irrelevant information. Consider using appendices and/or a supplemental website for more detailed information.

2.  Participant (Subject) Characteristics

Appropriate identification of research participants is critical to the science and practice of psychology, particularly for generalizing the findings, making comparisons across replications, and using the evidence in research syntheses and secondary data analyses. If humans participated in the study, report the eligibility and exclusion criteria, including any restrictions based on demographic characteristics.

3.  Research Design

Specify the research design in the Method section. Were subjects placed into conditions that were manipulated, or were they observed naturalistically? If multiple conditions were created, how were participants assigned to conditions, through random assignment or some other selection mechanism? Was the study conducted as a between-subjects or a within-subject design?

## C. Result and Discussion

### Validity Test

| No | tcount | Ttable 0,468 | criteria |
|----|--------|--------------|----------|
| 1  | 0,655  | 0,468 | valid |
| 2  | 0,489  | 0,468 | valid |
| 3  | 0,706  | 0,468 | valid |
| 4  | 0,664  | 0,468 | valid |
| 5  | 0,509  | 0,468 | valid |
| 6  | 0,604  | 0,468 | valid |
| 7  | 0,489  | 0,468 | valid |
| 8  | 0,472  | 0,468 | valid |
| 9  | 0,639  | 0,468 | valid |
| 10 | 0,554  | 0,468 | valid |
| 11 | 0,480  | 0,468 | valid |
| 12 | 0,512  | 0,468 | valid |
| 13 | 0,507  | 0,468 | valid |
| 14 | 0,456  | 0,468 | valid |
| 15 | 0,594  | 0,468 | valid |
| 16 | 0,511  | 0,468 | valid |

| 17 | 0,521 | 0,468 | valid |
|----|-------|-------|-------|
| 18 | 0,696 | 0,468 | valid |
| 19 | 0,465 | 0,468 | valid |
| 20 | 0,502 | 0,468 | valid |
| 21 | 0,561 | 0,468 | valid |
| 22 | 0,527 | 0,468 | valid |
| 23 | 0,485 | 0,468 | valid |
| 24 | 0,534 | 0,468 | valid |
| 25 | 0,510 | 0,468 | valid |

The question was able to be said to be valid if tcount was higher than ttable. From the data ttable = 0,468. From the table was known that all of the question was valid. Therefore, the question was worthy to be used as research instrument.

Reliability test

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0,901 | 25 |

From the table was known that the alpha was 0,901. The reliable data when score of alpha was higher than ttable. Tttable was 0,460, therefore alpha was higher than ttable. From the calculation was able to be stated that the questions are reliable.

Difficulty level

**Test Item Difficulty Level**

| no | difficulty level | criteria |
|----|------------------|----------|
| 1 | 0,7 | easy |
| 2 | 0,65 | medium |
| 3 | 0,7 | easy |
| 4 | 0,65 | medium |
| 5 | 0,55 | medium |
| 6 | 0,5 | medium |
| 7 | 0,65 | medium |

| 8 | 0,65 | medium |
|---|------|--------|
| 9 | 0,7 | easy |
| 10 | 0,7 | easy |
| 11 | 0,6 | medium |
| 12 | 0,6 | medium |
| 13 | 0,8 | easy |
| 14 | 0,65 | medium |
| 15 | 0,4 | medium |
| 16 | 0,5 | medium |
| 17 | 0,65 | easy |
| 18 | 0,35 | medium |
| 19 | 0,5 | medium |
| 20 | 0,35 | medium |
| 21 | 0,3 | medium |
| 22 | 0,3 | medium |
| 23 | 0,35 | medium |
| 24 | 0,35 | medium |
| 25 | 0,25 | hard |

From the table showed that the questions were accepted because the questions not too easy and not too hard. Therefore, the questions were able to research.

Differential Power Test

**Differential Power Test**

| question number | range x | criteria | Total |
|-----------------|---------|----------|-------|
| 0 | $0,70 \leq X < 1,00$ | better | 0 |
| 1,2,3,4,5,6,7,8,9,10, 11,12,1,3,15,16,17,18, 19,20,21,22,23,24,25 | $0,40 \leq X < 0,70$ | good | 24 |
| 14 | $0,20 \leq X < 0,40$ | medium | 1 |
| 0 | $0,00 \leq X < 0,20$ | bad | 0 |

From the table above, it was able to be seen in the discriminating power test of each questions. From the 25 questions, 24 questions had good criteria and 1 question had medium criteria. Therefore, all of questions was able to be accepted for research.

Hypothesis testing

Normality Test

The data is able to said normally distributed if sig > 0,05. From the data analysis, it can be described as follows:

a. Pre-test experimental class. Kolmogorov smirnov = 0,200 > 0,05 then H0 was accepted. Shapiro-wilk = 0,285 > 0,05 then H0 was accepted.

b. Post-test experimental class. Kolmogorov smirnov = 0,200 > 0,05 then H0 was accepted. Shapiro-wilk = 0,260 > 0,05 then H0 was accepted.

c. Pre-test control class. Kolmogorov smirnov = 0,200 > 0,05 then H0 was accepted. Shapiro-wilk = 0,316 > 0,05 then H0 was accepted.

d. Post-test control class. Kolmogorov smirnov = 0,200 > 0,05 then H0 was accepted. Shapiro-wilk = 0,316 > 0,05 then H0 was accepted.

From the explanation above was able to conclude that all of the data was normally distributed. Therefore, the data was able to be as a research.

Homogeneity Test

**Homogeneity Test Results**

### Test of Homogeneity of Variance

| | | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| hasil belajar | Based on Mean | 2.491 | 1 | 30 | .125 |
| | Based on Median | 1.574 | 1 | 30 | .219 |
| | Based on Median and with adjusted df | 1.574 | 1 | 28.659 | .220 |
| | Based on trimmed mean | 2.362 | 1 | 30 | .135 |

In testing data said homogeneous if the value of significance higher than 0,05 or sig > 0,05. From the table showed that:

a. Mean = 0,125 > 0,05.

b. Median = 0,219 > 0,05.

c. Median and with adjusted df = 0,220 > 0,05.

d. Trimmed mean = 0,135 > 0,05.

From the result showed that all of the data was homogeneous. Therefore, the researcher was able to continue for next part.

Independent Sample T Test

**The result of Analyzing Independent Sample T Test**

| | | | | Independent Samples Test | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | t-test for Equality of Means | | | | | | | |
| | | | | | | | | | 95% Confidence Interval of the Difference | | |
| | | | | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper | |
| hasil belajar | Equal variances assumed | 2,491 | 0,125 | 14,195 | 30 | 0,000 | 30,500 | 2,149 | 26,112 | 34,888 | |
| | Equal variances not assumed | | | 14,195 | 27,951 | 0,000 | 30,500 | 2,149 | 26,098 | 34,902 | |

The number of tcount was 14,195 and ttable was 0,361 The result of computation was 14,195 > 0,361 while the significance value < 0.05 (0.00 < 0.05), so Ho was rejected and Ha was accepted.

After giving treatment, the researcher gave post-test for experimental class and control class. This test was given to know the students' score after got treatment. For experimental got 88,50 for mean score, the lowest score was 76 and the highest score was 96. For control class got 58,00 in mean score, the lowest score was 48 and the highest score 68. From the result experimental class got higher score than control class for post-test. It meant that using hangman game to improve students' vocabulary skill was effective.

## D. Conclusion

The implementation of hangman game is able to improve students' vocabulary skill of SMP PGRI Pakis Magelang. As the result, the students are happy when study English by hangman game. The students' do not feel bored, the students more excited when study because the students is able to play together by hangman game. Hangman game made the students more interested in learning vocabulary and they are able to discuss with their groups and which makes them cooperative in the teaching and learning. This interpretation is supported by the scores of the students which are analyzed by using observation sheets students. .

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