# The Correlation Between Students’ Vocabulary Mastery and Reading Comprehension at the Eighth-Grade Students of SMPN 2 Sojol 

Andi Naniwarsih ${ }^{1 *}$, Ratna Ningtyas ${ }^{1}$

${ }^{1}$ Language and Arts Education Department. Teacher Training and Education Faculty Muhammadiyah University of Palu, Indonesia

## Articles Info

## Articles history:

Received May 29, 2023
Revised june 10, 2023
Accepted July 01, 2023

## Keywords:

Correlation;
Vocabulary Mastery;
Reading Comprehension


#### Abstract

The research aims to determine whether there was a correlation between vocabulary mastery and reading comprehension. The study used a simple random sampling technique, namely, taken 30 students in class VIII B. However, the correlation criterion between 0.60 and 0.80 was considered very high. The researchers concluded that rxy $=0.797$ and N 30 at a $5 \%$ correlation significance is 0,361 . Therefore, based on the Pearson Product Moment formula, compared to the $r_{\text {table }}$, the study found that $\mathrm{r}_{\text {count }}$ higher than $\mathrm{r}_{\text {table }}(0.361)$, the average Ho was rejected, and Ha was accepted. To sum up, the final results exhibited a correlation between students' vocabulary mastery and reading comprehension.


This is an open access article under the CC BY-SA license.


## Corresponding Author:

Andi Naniwarsih
Language and Arts Education Department. Teacher Training and Education Faculty Muhammadiyah
University of Palu
E-mail: andi.naniwarsih18@gmail.com

## 1. INTRODUCTION

English is an international language and lingua franca used to communicate worldwide. Even English used in some countries is the official second language. Then, English also has an essential role in schools, lectures, and general education.

English education makes it easier for someone to continue their higher education, get a job, and be a translator for tourists (1). State that the presence of English becomes a challenge for the young generation of Indonesia in the world of education to compete to master it so that it becomes an investment in communicating at seminars, workshops, and regional, national, and even global conferences. So, the students should master the English language, which has four skills to make learning English easier: speaking, writing, listening, and reading.

The four crucial basic language skills that foreign language students need to learn. One of them is reading. It is essential to help students enhance their knowledge by learning through reading. It can entertain the students as well because it can energize minds. In other words, reading is a critical skill for learners. Reading is an activity to understand the content of the reading text. Reading also has the benefit of being able to add
knowledge and insight. The purpose of reading itself is to improve vocabulary
Vocabulary is an integral part of the language, especially for low levels, because vocabulary mastery is the primary enlightenment in learning English. As long as they have mastered the vocabulary, it will be easy to understand the written material. At the same time, if their vocabulary is limited, they may have difficulty understanding the manuscript. Especially if students have low vocabulary mastery, it is not effortless for them to understand the purpose of the passage. Vocabulary consists of information in words, then formed into sentences so the readers can learn clues from reading the text. It means the readers understand each vocabulary in reading. As a result, there is no mistake in understanding written or spoken text. However, mastering English vocabulary is often a problem for some schools, students, and the public.

According to the preliminary observation of SMPN 2 Sojol, the researchers found several phenomena; some students lack vocabulary mastery but have good reading comprehension, while others have a substandard understanding of the text and good vocabulary mastery. From the phenomenon, the researchers need to determine whether there is a positive correlation between students' vocabulary mastery and reading comprehension or not.

Comprehension of the text is the level of comprehension of a passage or text when reading. Comprehension occurs when the reader can conceive, memorize, fit, and deliberate what they are reading. Reading comprehension entails a motivated mental composition of many techniques to realize what they recite. To obtain archival data on the material, researchers will compile test results to find a correlation between vocabulary mastery and reading comprehension for eighth-grade students at SMPN 2 Sojol.

The researchers formulate the following research questions based on the background: is there a correlation between students' vocabulary mastery and reading comprehension at the eighth-grade students of SMPN 2 Sojol?

The research objective is to determine a significant and positive correlation between students' vocabulary mastery and reading comprehension at the eighth-grade students of SMPN 2 Sojol.

The significance of the research is expected to contribute to students' vocabulary mastery and reading comprehension. Teachers are better at encouraging students to increase their vocabulary mastery and reading comprehension. The research is hoped to aid readers in contributing to search references related to the topic. The study aims to provide researchers with information concerning with a correlation between vocabulary mastery and students' reading comprehension.

To state the research hypothesis, the researchers formulate the hypothesis as follows:
Ha: There is a correlation between students' vocabulary mastery and reading comprehension at the eighthgrade students of SMPN 2 Sojol.

Ho: There is no correlation between students' vocabulary mastery and reading comprehension at the eighth-grade students of SMPN 2 Sojol.

The key terms are also in this part of the background of the research. Firstly, a significant understanding of research is the level of confidence in a hypothesis that will determine whether the hypothesis will be accepted or not. Secondly, correlation is the relationship between two or more variables. Next, vocabulary mastery is to dominate words in obtaining and understanding language. Lastly, comprehension of reading is to complete reading ability.

## 2. REVIEW OF RELATED LITERATURE

### 2.1 Previous Study

To strengthen in the research problem, researchers conducted a literature review by searching and finding pre-existing theories. Conducted his research in 2015, titled the relationship between vocabulary mastery and students' reading comprehension (2). He completed his study to find out if there is a correlation between students' vocabulary mastery and reading comprehension. The population is SMAN 1 Sidomulyo of the secondgrade students of MIA 3. The sample numbered 30 students. The instrument used was a vocabulary test and a reading test. The results of the SPSS calculation show an average percentage of reading ability of $63.4 \%$, an average vocabulary mastery rate of $60 \%$, and a correlation development rate of 0.989 . The correlation coefficient is above the critical value of the table (.989>.32). Statistical analysis showed a significant correlation ( $\mathrm{p}<.01 ; \mathrm{p}=.000$ ). Therefore, the null hypothesis (Ho) is rejected, and the alternative hypothesis (H1) is accepted.

The second study was conducted using The Correlation Between Indonesian Students' Vocabulary Mastery and Their Reading Comprehension (3). The correlational research involved 70 students who were taken through random cluster sampling. Vocabulary and reading tests determined the relationship between students' vocabulary mastery and reading comprehension. Through Product Moment correlation, the correlation coefficient between the two variables is 0.61 , using the correlation index on the r-table is 0.1617 for $\alpha=0.05$, indicating that the correlation coefficient between the two variables (rxy) t-count is more significant than t - table. It means H 1 is accepted, and Ho is rejected. In conclusion, a positive relationship exists between students' vocabulary dominance and reading comprehension in fourth-semester STKIP Dharma Bakti

The previous research is similar to the current study, which research about the correlation between vocabulary mastery of the students and reading comprehension. Conversely, the difference is the sampling techniques and object of the study.

### 2.2 Definition of Reading

According that reading represents language comprehension and word-level processes (4). Also adds that reading can be challenging, particularly when the material is unfamiliar, technical, or complex acquisition (5). Reading is not a spectator sport. Reading is like playing football or basketball, making a cake, or engaging in a deep conversation with a friend.

What the experts mention about reading means that reading is an exercise to understand all aspects around readers that pour out into text. The reader must realize what they read, not only the meaning of the word, phrases, sentences, and even paragraphs but also paragraphs connect. Then, the reader absorbs the text; they seem to like doing everyday activities and hobbies.

### 2.2.1 Definition of Reading Comprehension

States that reading comprehension is essential for readers to understand the text and broader learning, success in education, and employment (4). They also add that reading comprehension is necessarily dependent on at least adequate word reading: readers cannot understand a whole text if they cannot identify (decode) the words in that text.

Authors' definition of text comprehension means that readers can get information explicitly or implicitly on the passage if they understand what they read deeply and widely. Also, they can be smart people and get a job quickly through reading as a habit. Moreover, in the 4.0 industrial, reading behavior as an embodied human-technology interaction has become the subject of much research focusing on different aspects of digital books and digital reading (6). In addition, text comprehension is grasping what they have read (7).

### 2.2.2. Component of Reading Comprehension

Based on, the reading comprehension component means: 1) Inference: Enablement to integrate information into the mental model; essential for filling in missing details; supports vocabulary and absorbs knowledge or experience of something, such as by being taught. 2) Vocabulary and background knowledge: to support comprehension in common and inference in specific, are learned from the text; prior knowledge can provide a framework for the mental model. 3) Grammar and cohesive ties: Enables integrating meaning between clauses and sentences; core words signal text structure and inference. 4) Text structure: Provides a framework for the mental model; can support inference-making and learning experience from the passage. 5) Comprehension monitor: Enables the reader to diagnose when comprehension has failed, for example, unfamiliar vocabulary, an unresolved pronoun, or the need for inference (4).

### 2.3. Definition of Vocabulary

### 2.3.1. Vocabulary Mastery

According, vocabulary definition addresses the network knowledge, the knowledge of the paradigmatic, syntagmatic, and formal links between words (henceforth relational word knowledge) (8). Also, explain that vocabulary is part of linguistic comprehension. Linguistic comprehension would imply that individual words are retrieved in lexical memory to determine meaning and syntax and construct the significance of utterances. It means that vocabulary is not merely learnt in one aspect such as one sub-skill, but some aspects, such as integrated skills, are required. So intended listeners or readers do not misunderstand what the writer or the speaker conveys (9).

Argue that in order for learners to go about deepening their receptive or productive mastery of vocabulary items, they must first remember the words well enough to recognize them (10). In addition to added, he states that the importance of vocabulary is demonstrated daily in and out the school (11).

The aforementioned statements denote that vocabulary must be activated in busy days and free days so students can use it in all activities, formal and informal situations. They can be easy to keep in mind vocabulary items then they are able to apply in speaking, writing, listening and reading activities.

### 2.3.2. Types of Vocabulary

Show that two types of vocabulary are divided into productive and receptive: 1) Productive vocabulary is a familiar or easily recognizable term commonly used by people, especially when they write or speak. 2) Receptive vocabulary is unfamiliar to students and is considered less layman. Alternatively, students may be unable to apply it willingly because they can recognize the term's meaning using reading and listening (12).

In addition, look at other types of vocabulary for productive and receptive vocabulary. In this case, expression vocabulary is a natural term when spoken or read by mouth, and printed vocabulary is considered a common term when written or read on the heart.

### 2.3.3. The Aspect of Vocabulary

States some aspects which about the learner should master them and the teacher should teach them in order to help the learners in mastering vocabulary in written or spoken form. They are namely; 1) Form (pronunciation and spelling), 2) Grammar, 3) Collocation, 4) Aspect of meaning (a. Denotation, connotation, appropriateness and $b$. Meaning relationship), 5) Word formation. From all of the categories, the proper aspects for teaching to young learners in Elementary School are form (its spelling and pronunciation) and the meaning (its denotation meaning). The point is that guides the students at very early basic so they can't be rigid to use English (13).

### 2.4. The Correlation between Students' Vocabulary Mastery and Reading Comprehension

Vocabulary plays a crucial role in learning to read. As novice readers, children use the words they hear to understand what they see in print. Adds that the most important criterion for the selection of which vocabulary items to teach has to be its usefulness for our students' own needs (13). For example, consider what happens when an inexperienced reader encounters the term "blending" in a book. When he begins to find the sounds represented by the letters $b, e$, and $g$. The reader detects that they are very familiar words he has heard and said many times. Novice readers have more difficulty reading words that have not been part of the origin of the spoken vocabulary. Vocabulary and reading are related and inseparable. Vocabulary is very important for reading comprehension.

## 3. RESEARCH METHODS

### 3.1. Design of the Research

This research is correlation research using quantitative analysis. The primary purpose of the research is to find out whether or not there is a correlation between vocabulary mastery and reading comprehension. The second purpose is to obtain collection data about the formulated problem.

The population of this study is the eighth-grade students of SMPN 2 Sojol for the 2022/2023 school year. The researchers chose the eighth-grade students of SMPN 2 Sojol. The population is 61 students consisting of two classes; the eighth-grade A and B have 25 and 30 students, respectively. Researchers used a simple technique of random sampling. It is a sampling of members of the origin of the population, which is carried out randomly without regard to the strata in the population. Therefore, the researcher took 30 students from eighth grade B as the sample.

### 3.2. The Variable of the Research

The variable of this research consists of variable (X) vocabulary mastery and variable (Y) reading comprehension. The two variables are independent because they are symmetrical research designs.

### 3.3. The Technique of Data Collection and Research Instrument

The research used reading and vocabulary tests as techniques of data collection. The method for collecting data aims to support the success of the research. The research is a test item of reading and a test item of vocabulary. They make it the researcher easier to obtain data and information about the correlation between students' vocabulary mastery and reading comprehension at the Eighth-grade students of SMPN 2 Sojol.

The tests applied in this study are vocabulary and reading tests. The vocabulary test was used to accumulate data from the students' vocabulary mastery with 20 multiple-choice questions involving four options; a, b, c, and d.

The reading test was utilized to collect data from the students' reading comprehension with 20 multiplechoice questions consisting of four alternative options; $\mathrm{a}, \mathrm{b}, \mathrm{c}$, and d .

The Technique of Data Analysis. The researcher verified the validity and reliability to ensure whether the instrument is valid or not to use before the researcher provided the test for the sample.

Validity of Instrument. Validity is important to ensure that the instrument the researcher used is valid. Valid means that the instrument could be used to measure something that is wanted to measure. The researcher used Person's Product Moment formula with the SPSS 23.00 program and Excel 2010 to test the validity. The formula is as follows:

$$
\mathrm{r}_{\mathrm{xy}}=\frac{N \sum x y-\left(\sum \mathrm{x} \sum \mathrm{y}\right)}{\sqrt{\left\{N \sum x^{2}-\left(\sum x\right)^{2}\right\}\left\{N \sum y^{2}-\left(\sum y\right)^{2}\right\}}}
$$

rxy = correlation coefficient of data $x$ to data $y$.
$x \quad=$ score of a specific item for each student.
y $\quad=$ total question score for each student.
n $\quad=$ number of trial samples.

### 3.4 The Result of Validity of Reading Comprehension.

The validity result denoted that 19 questions were accepted or valid out of 20. Question that rejected or invalid was number 19 because it was $r_{\text {count }}$ less than the $r_{\text {table }}$. The result was pointed in Table 1 as follows:

Table 1. The Validity Result of Reading Comprehension

| Question Items | Test Results |  | Criteria |
| :---: | :---: | :---: | :---: |
|  | $\boldsymbol{r}_{\text {count }}$ | $\boldsymbol{r}_{\text {table }}$ |  |
| 1 | 0,68484 | 0.36727 | Valid |
| 2 | 0,67384 | 0.36727 | Valid |
| 3 | 0,81284 | 0.36727 | Valid |
| 4 | 0.72584 | 0.36727 | Valid |
| 5 | 0.64628 | 0.36727 | Valid |
| 6 | 0.69743 | 0.36727 | Valid |
| 7 | 0.68178 | 0.36727 | Valid |
| 8 | 0.74749 | 0.36727 | Valid |
| 9 | 0.66638 | 0.36727 | Valid |
| 10 | 0.70224 | 0.36727 | Valid |
| 11 | 0.47881 | 0.36727 | Valid |
| 12 | 0.5474 | 0.36727 | Valid |
| 13 | 0.65166 | 0.36727 | Valid |
| 14 | 0.43407 | 0.36727 | Valid |
| 15 | 0.83903 | 0.36727 | Valid |
| 16 | 0.74443 | 0.36727 | Valid |
| 17 | 0.86063 | 0.36727 | Valid |
| 18 | 0.78222 | 0.36727 | Invalid |
| $\mathbf{1 9}$ | $\mathbf{0 . 0 5 3 3 8}$ | $\mathbf{0 . 3 6 7 2 7}$ | Valid |
| 20 | 0.53256 | 0.36727 |  |

### 3.5. The Result of Validity of Vocabulary Mastery

The result of the validity exhibited the 20 questions were accepted or valid because $r_{\text {count }}>r_{\text {table }}$. The result was exposed in Tabel 2 as follows:

Table 2. The Validity Result of Vocabulary Mastery

| Question Items | Test Results |  | Criteria |
| :---: | :---: | :---: | :--- |
|  | $\boldsymbol{r}_{\text {count }}$ | $\boldsymbol{r}_{\text {table }}$ | Valid |
| 1 | 0.73784 | 0.36727 | Valid |
| 2 | 0.43638 | 0.36727 | Valid |
| 3 | 0.69969 | 0.36727 | Valid |
| 4 | 0.74641 | 0.36727 | Valid |
| 5 | 0.5676 | 0.36727 | Valid |
| 6 | 0.68843 | 0.36727 | Valid |
| 7 | 0.48833 | 0.36727 | Valid |
| 8 | 0.50979 | 0.36727 | Valid |
| 10 | 0.89242 | 0.36727 | Valid |
| 11 | 0.61753 | 0.36727 | Valid |
| 12 | 0.87462 | 0.36727 | Valid |
| 13 | 0.67418 | 0.36727 | Valid |
| 14 |  | 0.36727 |  |


| IJHESS |  | ISSN: 2685-6689 | $\square$ |
| :--- | :--- | :--- | :--- | :--- |
| 15 | 0.56112 | 0.36727 | Valid |
| 16 | 0.70941 | 0.36727 | Valid |
| 17 | 0.52892 | 0.36727 | Valid |
| 18 | 0.43549 | 0.36727 | Valid |
| 19 | 0.53117 | 0.36727 | Valid |
| 20 | 0.57624 | 0.36727 | Valid |

To find out the reliability of the test, the researchers used the formula of Cronbach's Alpha in the SPSS 23.00 program to test the reliability.

Table 3.

| Crobach's Alpha | Internal Consistency |
| :---: | :---: |
| $\alpha \geq 0,9$ | Excellent |
| $0,8 \leq \alpha<0,9$ | Good |
| $0,7 \leq \alpha<0,8$ | Acceptable |
| $0,6 \leq \alpha<0,7$ | Questionable |
| $0,5 \leq \alpha<0,6$ | Poor |
| $\alpha<0,5$ | Unacceptable |

Source: Cronbanch (1951)

### 3.6. The Reliability Result of Reading Comprehension

Table 4.
Reliability Statistics

| Cronbach's <br> Alpha | N of Items |
| ---: | ---: |
| .928 | 20 |

Based on the table 3.4, the Cronbach's Alpha value is 0.928 . The score is higher than the minimum Cronbach's Alpha specifically 0,60 . Consequently, the researchers determined that the test was reliable and the reliability value was very high.

### 3.7. The Result of Reliability of Vocabulary Mastery

Table 5.
Reliability Statistics

| Cronbach's <br> Alpha | N of Items |
| ---: | ---: |
| .913 | 20 |

Based on the table 3.5, the value of Cronbach's Alpha is 0.913 . The value is higher than the minimum Cronbach's Alpha namely 0,60 . Therefore, to sum up, the test is reliable and the reliability level of the redult of vocabulary mastery is very high.

The researcher applied a written test to determine the students' vocabulary mastery and reading comprehension by providing some questions concerning vocabulary mastery and reading comprehension. The test used in the research was multiple-choice questions. The computing obtained score was divided by the maximum score and multiplied by 100 . So, the student's score was reached.

$$
\text { Individual score }=\frac{\text { obtained score }}{\text { maximum score }} \times 100
$$

The two test results were compared and analyzed to determine the correlation. To find out the students' average scores, the researcher used the following formula from.

To determine the correlation between students' vocabulary and reading, the researcher used the correlation formula with the Pearson product-moment correlation formula to test the significant correlation between the two. The formula used is as follows:

[^0]$$
r_{X Y}=\frac{N \sum X Y-\left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left\{N \sum X^{2}-\left(\sum X\right)^{2}\right\}\left\{N \sum Y^{2}-\left(\sum Y\right)^{2}\right\}}}
$$

Where:
rxy $\quad=$ Correlation coefficient of variables X and Y
$\Sigma \mathrm{X}=$ The sum of X scores
$\Sigma \mathrm{Y}=$ The sum of Y scores
$\Sigma \mathrm{X}^{2}=$ The sum of the square of students' mastery in vocabulary score
$\Sigma Y^{2}=$ The sum of the court of student's ability in reading comprehension score
$\Sigma x y=$ The sum of the products of X and Y scores for each students
$\mathrm{N}=$ The total of respondents
To interpret the results of the correlation analysis, the researcher used criteria for evaluating the coefficient (r) as follows:

Table 6. Correlation Coefficient

| Coefficient (r) |  | Correlation |
| :--- | :--- | :--- |
| 00 to 20 | ligible |  |
| 20 to 40 | $l$ |  |
| 40 to 60 | lerate |  |
| 60 to 80 | h |  |
| 80 to 100 | h to Very high |  |

### 3.8. Testing Hypothesis

The hypothesis testing criteria is that if the $r_{\text {count }}$ is higher than $r_{\text {table }}$, the hypothesis in the research is accepted. In other words, there is a correlation between student vocabulary and reading comprehension. However, if $r_{\text {count }}$ is less than $r_{\text {table }}$, the hypothesis is rejected. This means there is no correlation between student vocabulary and reading comprehension.

## 4. RESULTS

### 4.1 The School's Profile Description

The research took place at SMPN 2 Sojol. It is at Jl. Datu Rante No. 1 Balukang, Kecamatan Sojol, Kabupaten Donggala, has accredited B. There are six grades in this school. Grade 7 consisted of two grades, grade eight consisted of two, and grade nine also consisted of two. Full-time lecturers include eight, one civil servant, and seven honorary instructors. There are two educational personnel, one civil servant and one honorary. All eight teachers have bachelor's stages, while the honorary education workforce has excessive college schooling. In carrying out the coaching getting to know proses, this college is using the curriculum of K13.

### 4.2. The Result of the Students' Reading Comprehension Test

This comprehending reading was held on November 2, 2022. The data determines the reading comprehension score of students in grade VIII B of SMPN 2 Sojol. The test was multiple choice with consist of 19 questions. To peer the average score of reading comprehension competence of students, researchers attempted to reveal it.

Table 7. The Mean Score of Reading Comprehension Test

| Variable | Mean Score |
| :---: | :---: |
| Reading Comprehension | 71 |

In conclusion, the mean score of reading comprehension was "Good" criteria. This datum indicated that students' reading comprehension is at a high rate.

### 4.3 The Result of Students' Vocabulary Mastery Test

This vocabulary mastery test also was hung on November 2, 2022. This data determines the students' vocabulary mastery score in grade 8 B , SMPN 2 Sojol. The test was multiple choice with consist of 20 questions. To peer the average score of vocabulary mastery competence of students, researchers attempted to reveal within the table below:

Table 8. The Mean Score of Vocabulary Mastery Test

| Table 8. The Mean Score of Vocabulary Mastery Test |  |
| :---: | :---: |
| Variable | Mean Score |
| Vocabulary Mastery | 80 |

In conclusion, the mean score of the vocabulary mastery test was "Very Good" criteria. This data indicated that students' reading comprehension was considered in a high rate.

### 4.4. Data Analysis

### 4.4.1 Analysis of The Correlation Between Students' Vocabulary Mastery and Reading Comprehension

The main objective of the research is to find out the correlation between students' vocabulary mastery and reading comprehension of the Eight B grade students of SMPN 2 Sojol. After collecting data from tests of vocabulary mastery and reading comprehension, the researcher analyzed the data using the Pearson Product Moment calculation coefficients in SPSS 23.00 and Microsoft Excel 2010 program to determine the correlation between students' vocabulary mastery and reading comprehension. The table 4.4 indicates the results from correlation analysis:

Table 9. The Result of the Correlation Analysis in SPSS 23.00

| Correlations |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  | VOCABULARY <br> MASTERY | READING COMPREHENSION |
| VOCABULARY MASTERY | Pearson Correlation | 1 | . $797{ }^{* *}$ |
|  | Sig. (2-tailed) |  | . 000 |
|  | N | 30 | 30 |
| READING COMPREHENSION | Pearson Correlation | .797** | 1 |
|  | Sig. (2-tailed) | . 000 |  |
|  | N | 30 | 30 |
| **. Correlation is significant at the 0.01 level (2-tailed). |  |  |  |

Table 10. The Result of the Correlation Analysis in Microsoft Excel 2010

| NO. | INISIAL | X | Y | XY | $\mathrm{X}^{2}$ | $\mathrm{Y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | A | 100 | 100 | 10000 | 10000 | 10000 |
| 2 | A | 100 | 100 | 10000 | 10000 | 10000 |
| 3 | AZ | 100 | 89 | 8900 | 10000 | 7921 |
| 4 | A | 90 | 100 | 9000 | 8100 | 10000 |
| 5 | H | 100 | 100 | 10000 | 10000 | 10000 |
| 6 | M | 100 | 100 | 10000 | 10000 | 10000 |
| 7 | S | 100 | 100 | 10000 | 10000 | 10000 |
| 8 | PB | 100 | 84 | 8400 | 10000 | 7056 |
| 9 | M | 100 | 100 | 10000 | 10000 | 10000 |
| 10 | FR | 100 | 37 | 3700 | 10000 | 1369 |
| 11 | IS | 40 | 37 | 1480 | 1600 | 1369 |
| 12 | UK | 40 | 37 | 1480 | 1600 | 1369 |
| 13 | IS | 40 | 37 | 1480 | 1600 | 1369 |
| 14 | HA | 40 | 37 | 1480 | 1600 | 1369 |
| 15 | RH | 100 | 100 | 10000 | 10000 | 10000 |
| 16 | NF | 100 | 100 | 10000 | 10000 | 10000 |
| 17 | S | 40 | 37 | 1480 | 1600 | 1369 |
| 18 | M | 40 | 37 | 1480 | 1600 | 1369 |
| 19 | L | 40 | 37 | 1480 | 1600 | 1369 |
| 20 | SI | 45 | 37 | 1665 | 2025 | 1369 |
| 21 | LM | 40 | 37 | 1480 | 1600 | 1369 |
| 22 | F | 100 | 37 | 3700 | 10000 | 1369 |

The Correlation Between Students' Vocabulary Mastery and Reading Comprehension at the Eighth-Grade Students of SMPN 2 Sojol (Andi Naniwarsih)

| 224 | $\square$ |  | ISSN: 2685-6689 |  |  |  |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: |
| 23 | R | 100 | 95 | 9500 | 10000 | 9025 |
| 24 | D | 100 | 100 | 10000 | 10000 | 10000 |
| 25 | FY | 100 | 100 | 10000 | 10000 | 10000 |
| 26 | MA | 100 | 100 | 10000 | 10000 | 10000 |
| 27 | M | 100 | 100 | 10000 | 10000 | 10000 |
| 28 | YD | 100 | 95 | 9500 | 10000 | 9025 |
| 29 | NA | 40 | 37 | 3700 | 10000 | 1369 |
| 30 | $Z$ | $\Sigma X=2395$ | $\Sigma Y=2144$ | $\Sigma X Y=$ | $\Sigma X^{2}=$ | $\sum Y^{2=}$ |
|  | N = 30 |  |  | 191385 | 214525 | 180824 |

Where:
$\mathrm{N}=30$
$\Sigma \mathrm{Y}=2144$
$\Sigma \mathrm{Y}^{2=} 180824$
$\Sigma \mathrm{XY}=191385$
$\Sigma \mathrm{X}=2395$
$\Sigma \mathrm{X}^{2}=214525$
$\mathrm{r}_{\mathrm{xy}}=\ldots . .$. ?
$r_{X Y}=\frac{N \sum X Y-\left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left\{N \sum X^{2}-\left(\sum X\right)^{2}\right\}\left\{N \sum Y^{2}-\left(\sum Y\right)^{2}\right\}}}$
$r_{X Y}=\frac{30.19138-(2359)(2144)}{\sqrt{\left\{30.214525-(2395)^{2}\right\}\left\{30.180824-(2144)^{2}\right\}}}$
$r_{X Y}=\frac{5.744 .550-5.134 .880}{\sqrt{\{6.435 .750-5.736 .025\}\{5.424 .720-4.596 .736\}}}$
$r_{X Y}=\frac{606.670}{\sqrt{\{699.725\}\{827.984\}}}$
$r_{X Y}=\frac{606.670}{\sqrt{579.361 .104 .400}}$
$r_{X Y}=\frac{606.670}{761.157,739}$
$r_{X Y}=0,797$
Inferential quantitative data analysis from the result $r_{\text {count }}=0,797$ and $r_{\text {table }}=0,361$ combines two tests: test vocabulary mastery and reading comprehension.

### 4.4.2 Testing Hypothesis

Based on the result above, it can be concluded that:
H 0 : is rejected; in other words, there is no correlation between studens' vocabulary mastery and reading comprehension. Because $r_{\text {table }}=0,361<r_{\text {count }}=0,797$.
Ha : is accepted or in other words, there is a correlation between studens' vocabulary mastery and reading comprehension. Because $r_{\text {count }}=0,797>r_{\text {table }}=0,361$.

## 5. DISCUSSION

Based on the above consequences obtained $r_{\text {count }}=0.797$ and $r_{\text {table }}=0,361$ with $\mathrm{N}=30$ and a significance of $5 \%$, the $r_{\text {count }}$ is more than the $r_{\text {table }}$ value. It turned into very clear that there is a correlation between the two variables. These facts indicate a correlation between students' vocabulary mastery and reading comprehension.

### 5.1. The Result of Students' Reading Comprehension Test

To get the students' reading comprehension results, the researcher gave 19 test numbers in the multiplechoice questions with a score of 1 if correct and 0 if incorrect. From the results of these tests, researchers checked student answers from a sample of 30 students. The sample vocabulary mastery was obtained by 17 students Very Good. 13 students were given a rating of 100,2 students were given a rating of 95,1 student was given a score of 89 , and 1 student was given a score of 84 . Additionally, 13 students were given a Less; the score is 37 . From the results above, the researcher concluded that most of the students from the grade Eighth B SMPN 2 Sojol reading comprehension, although some of them were nevertheless low.
5.2. The Result of Students' Vocabulary Mastery Test

To get the students' vocabulary mastery results, the researcher gave 20 test numbers in multiple-choice questions with a score of 1 if correct and 0 if incorrect. From the results of these tests, researchers checked student answers from a sample of 30 students. The sample of vocabulary mastery was obtained by 20 students in the Very Good category. The 19 students were rated 100, and 1 student was given a score of 90 . Additionally, 10 students from the results mentioned above, the researcher concluded that most of the students from the grade Eighth B SMPN 2 Sojol had vocabulary mastery. However, some of them were nevertheless still low.

### 5.3 The Correlation Between Students Vocabulary Mastery and Reading Comprehension

The correlation between students' vocabulary mastery and reading comprehension at the grade Eighth B of SMPN 2 Sojol turned high. Based on the findings, the calculation result confirmed that the mean score of correlation between the students' vocabulary mastery and reading comprehension in gaining knowledge of english the very last result became rxy $=0,797$. In the table of indexes correlation, it could be concluded that the correlation is 0,60 to 0,80 . Based on the $r_{\text {table }}$ of criteria, Person Product Moment was in the high correlation. The correlation between the students' vocabulary mastery and reading comprehension is high. Once the student has poor vocabulary knowledge, their reading comprehension will be low.

From the analysis of the mentioned data, the researcher found that $\mathrm{r}_{\mathrm{xy}}=0,797$ with $\mathrm{N}=30$ at a $5 \%$ correlation significance of 0,361 . The value of statistical analysis 0,797 is higher than 0,361 . With the result $r_{\text {count }}=0,797$ higher than $r_{\text {table }}=0,361$, there is a correlation between students' vocabulary mastery and reading comprehension.

Based on the findings and discussion, the researchers concluded that the student's vocabulary mastery is the most important in reading comprehension because students' vocabulary mastery tended to follow students' reading comprehension.

## 6. CONCLUSION

This research focuses on the correlation between students' vocabulary mastery and reading comprehension. The research also sought students' vocabulary mastery and reading comprehension. Based on the findings described in the previous chapter, while the correlation criterion between 0.60 to 0.80 is considered higher, researchers concluded that rxy $=0.797$ with N 30 has been too high. Therefore, based on Pearson's Formula Product Moment changed to compare to rtable. The research found that it was higher than rtable $=0,361$, which means the null hypothesis was rejected, and the alternative hypothesis was accepted. In conclusion, the final result exhibited a correlation between students' vocabulary mastery using reading comprehension.

## 7. SUGGESTION

The researchers also encouraged the following statements based on the findings, discussion, and conclusion.

The teacher should motivate the student to offer some interesting English Ebooks and translate them. The teacher also applies a lot of various teaching media to get to know the procedure and make students interested in reading it.

Then, students can learn English vocabulary and reading comprehension to master them. The students must also practice memorizing, pronouncing, and using them in words, phrases, sentences, or paragraphs. In addition, using the dictionary is also cautioned to help the students to enrich their vocabulary mastery.

The last, for other researchers, the result of the research can be fruitful using as a reference for similar vocabulary mastery and reading comprehension at different levels of students.

## 8. REFERENCES

1. Naniwarsih, A. \& Mulyadi E. Implementation of Running DIctation to Increase Reading Comprehension in English Expression. J Foreign Lang Educ Res. 2022;5(2):1-11.
2. Pebriawan, I.N.S.I et all. The Correlation Between Vocabulary Mastery and Students’ Reading Comprehension. Unila J English Teach. 2015;4(7).
3. Hayati A. The Correlation between Indonesian Students' Vocabulary Mastery and Their Reading Comprehension. 2016;23(2)
4. Oakhill, J. et al. Understanding and Teaching Reading Comprehension. London: Routledge; 2015. 12 p.
5. McNamara D. Reading Comprehension Strategies: Theories, Interventions, and Technologies. New Jersey: Lawrence Erlbaum Associates; 2007. 538 p.
6. Mangen, A. and Weel A. The evolution of reading in the age of digitisation an integrative framework for reading research. Literacy. 2016;50(3):116-24.
7. Naniwarsih A, Andriani A. The students' ability in literal reading comprehension. J Foreign Lang Educ

Res. 2018;1(1):1-8.
8. Röthlisberger M and et al. The Role of Vocabulary Components in Second Language Learners' Early Reading Comprehension. J Res Read. 2023;46(1):1-21.
9. Dujardin M et al. Vocabulary and reading comprehension: what are the links in 7- to 10 year-old children? Scand J Psychol. 2023;1-13.
10. Yang, Dai. Vocabulary Memorizing Strategies by Chinese University Students. Int Educ Stud. 2012;5(1):208-15.
11. Alqahtani M. The Important of Vocabulary in Language Learning and How To Be Taught. nternational J Teach Educ. 2015;III(3):21-34.
12. Kamil M., Hiebert EH. Teaching and Learning Vocabulary Bringing Research to Practice. New Jersey: Lawrence Erlbaum Associates, Inc.; 2005. 285 p.
13. Ur P. A Course in Language Teaching: Practice and Theory. Cambridge; 2009. 249 p.


[^0]:    The Correlation Between Students' Vocabulary Mastery and Reading Comprehension at the Eighth-Grade Students of
    SMPN 2 Sojol (Andi Naniwarsih)

