

## **THE CORRELATION BETWEEN READING COMPREHENSION AND VOCABULARY MASTERY (A STUDY CONDUCTED AT SMA NEGERI 1 KOTAMOBAGU)**

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*Received: 20 May 2023*

*Accepted: 10 July 2023*

*Published: 13 July 2023*

**Abstract:** This study investigates the correlation between students' reading comprehension and their vocabulary mastery in the first grade of SMA Negeri 1 Kotamobagu. Data were collected from 32 first grade students from XK class. The test item of reading comprehension and vocabulary mastery were given to the students to measure their level of reading comprehension and vocabulary mastery. The results were compared to find out the correlation between those variables. The researcher analyzed the data by using the formula of Pearson Product Moment. The significant value was  $0.000 \leq 0.005$ , indicating that there was a relationship between reading comprehension and vocabulary mastery among the students. According to the data, 0.671 is the value of the correlation coefficient it ranges from 0.40-0.70 it is clear that there is a positive degree of relevance relationship. The correlation test gave a score of 0.671, indicating a moderate level of correlation. The researcher discovered a positive relationship between students' reading comprehension and vocabulary mastery in first grades of SMA Negeri 1 Kotamobagu.

**Keywords:** *Correlation, reading comprehension, vocabulary mastery*

### **INTRODUCTON**

Language has an important role in developing the intellectual, social and emotional aspects of students. The function of language is not only as a subject but also as a tool for students to express their ideas or thoughts and feelings in everyday life, both in society and in the school environment. So, after learning the language, students are expected to have several abilities, especially speaking skills that will be able to make them communicate properly and correctly. According to Rao (2019)

Language is a communication tool that plays an important role in everyday life. Without communication, we will be left behind (Samola, 2023).

In learning English, students must learn English by balancing the four language skills so that students can absorb and apply English easily. One of the four language skills that is important to master and develop in school is reading skill. Reading is one of the activities that cannot be separated in the world of education. Manuas, Tatipang, & Pratasik, (2022) says "reading in education very essential", the students should master because by reading the students can enrich their ability to read. Reading is divided into word processing and comprehension (Lambe, 2011). That's mean reading is an important part of the learning process for students to understand the lesson. In addition, reading is the most important skill for interpreting the meaning and purpose of learning materials. Without reading, students cannot get what they want to learn. In every teaching and learning of English, students use reading as the first stage of learning. Students cannot write and speak if they do not read and comprehend the text.

Students cannot comprehend the text if they have low understanding in several processes. Students should focus on processes to develop their ability to interpret meaning and understand information from texts. (Faliyanti, 2015) stated that comprehension develops when the reader is able to understand what has been read, remember it, retell it, and discuss it with others. The processes in reading comprehension can be defined as advanced reading which involved students' background knowledge, vocabulary mastery, concentration, and grammar mastery (Bisry, 2018).

In terms of achieving students' reading comprehension, students must enlarge their vocabulary. According to Mokodompit, Samola, & Tuerah, (2021) vocabulary is a fundamental foundation in the process of learning languages, including English. Vocabulary acquisition is an important element that can improve students' language skills (Baharuddin, Nur, & Isma, 2022). (Samola, 2023) believes that Students must be taught to build vocabulary because vocabulary is an important component that serves as the basis of language.

The ability to interpret vocabulary correctly is a necessary prerequisite for reading in order to understand its meaning. A good reader must understand the meaning of the words used by the author. Therefore, students' reading comprehension is influenced by their mastery of vocabulary. To test this idea, the researcher conducted a survey research in schools, to find out whether reading comprehension is significantly related to vocabulary. The information obtained from this research is expected to be one of the inputs for teachers, students and people who are related to the English education so that the quality of learning can be improved.

## **METHOD**

This research applied a quantitative approach with a correlation design. This study described the correlation between two variables, those are reading comprehension and vocabulary mastery. The predictor variable (X) is reading comprehension and the criterion variable (Y) is vocabulary mastery. This study used an achievement test for testing and obtaining the score of both reading comprehension and vocabulary mastery that is 20 items for each variable multiple choice question.

The population was defined all of the first grade students of SMA Negeri 1 Kotamobagu in Academic year 2022/2023 there are 14 classes of students. The researcher selected one class due to the same standard, quality, and accreditation. The researcher use cluster sampling to limited the number of students by taking one class out of 14 class as the sample, that is class X K they are 37 students as the sample of this research.

The researcher gave the students two tests, the first is reading comprehension and the second is a vocabulary mastery test. The test consisted of 20 items of questions for reading and vocabulary tests. Both achievement tests took 60 minutes. After that, the researcher collected the scores of reading comprehension and vocabulary mastery tests to analyze. The test given has been tested using validity and reliability to measure whether the test given is accurate. After collecting the data, the researcher analyzed the data that followed some steps those are; dividing dependent and independent variables, measuring students' reading comprehension and vocabulary

mastery using tests, checking every student's work and decoding based on criteria, and computing the data using SPSS.

## FINDINGS AND DISCUSSION

### *The result validity and reliability*

#### *a. Validity*

In this study, the tests were given to 37 students with an  $r$  table of 0.334 with a significant level of 0.5 (5%). the test given can be said to be valid if  $r > r$  table is significant  $< 0.5$  otherwise, if  $r < r$  table is significant  $> 0.5$  then it is said to be invalid. based on the validity test using SPSS as follows.

**Table 1 validity of reading test**

| <b>No.</b> | <b>r observed</b> | <b>r table (df=n-2)</b> | <b>Description</b> |
|------------|-------------------|-------------------------|--------------------|
| 1.         | .643              | 0.334                   | valid              |
| 2.         | .470              | 0.334                   | valid              |
| 3.         | .610              | 0.334                   | valid              |
| 4.         | .387              | 0.334                   | valid              |
| 5.         | .464              | 0.334                   | valid              |
| 6.         | .464              | 0.334                   | valid              |
| 7.         | .832              | 0.334                   | valid              |
| 8.         | .597              | 0.334                   | valid              |
| 9.         | .509              | 0.334                   | valid              |
| 10.        | .394              | 0.334                   | valid              |
| 11.        | .346              | 0.334                   | valid              |
| 12.        | .432              | 0.334                   | valid              |
| 13.        | .654              | 0.334                   | valid              |
| 14.        | .533              | 0.334                   | valid              |
| 15.        | .576              | 0.334                   | valid              |
| 16.        | .426              | 0.334                   | valid              |
| 17.        | .563              | 0.334                   | valid              |
| 18.        | .371              | 0.334                   | valid              |
| 19.        | .573              | 0.334                   | valid              |
| 20.        | .893              | 0.334                   | valid              |

Based on table 1 above, it can be seen that  $r > r$  table therefore it can be concluded from the results of the instrument testing for the reading test that has

been carried out by the researcher showing that 20 question items are declared valid.

**Table 2 validity of vocabulary test**

| <b>No.</b> | <b>r observed</b> | <b>r table (df=n-2)</b> | <b>Description</b> |
|------------|-------------------|-------------------------|--------------------|
| 1.         | .448              | 0.334                   | valid              |
| 2.         | .469              | 0.334                   | valid              |
| 3.         | .483              | 0.334                   | valid              |
| 4.         | .412              | 0.334                   | valid              |
| 5.         | .823              | 0.334                   | valid              |
| 6.         | .543              | 0.334                   | valid              |
| 7.         | .533              | 0.334                   | valid              |
| 8.         | .752              | 0.334                   | valid              |
| 9.         | .672              | 0.334                   | valid              |
| 10.        | .721              | 0.334                   | valid              |
| 11.        | .508              | 0.334                   | valid              |
| 12.        | .640              | 0.334                   | valid              |
| 13.        | .352              | 0.334                   | valid              |
| 14.        | .433              | 0.334                   | valid              |
| 15.        | .497              | 0.334                   | valid              |
| 16.        | .849              | 0.334                   | valid              |
| 17.        | .591              | 0.334                   | valid              |
| 18.        | .544              | 0.334                   | valid              |
| 19.        | .490              | 0.334                   | valid              |
| 20.        | .576              | 0.334                   | valid              |

Based on table 2 above, it can be seen that  $r > r$  table therefore it can be concluded from the results of the instrument testing for the vocabulary test that has been carried out by the researcher showing that 20 question items are declared valid.

**b. Reliability**

To calculate reliability researchers using the Cronbach's Alpha formula. The result of the questions from reading test shows that the Cronbach's Alpha was 0.853. It indicates that the reading quiz questions were also reliable and ready to be applied. The result is shown in the table:

**Table 3 reliability of reading test**

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .853             | 20         |

While the result of the questions from vocabulary mastery test shows that Cronbach's Alpha was 0.890, it means that the questions from vocabulary mastery were reliable and ready to be applied. The result can be seen in the table below:

**Table 4 reliability of vocabulary test**

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .890             | 20         |

Conbarch's Alpha of Reading Comprehension and Vocabulary Mastery were 0.853 and 0.890, respectively, according to the data. An instrument is reliable if the measurement is higher than 0.05. Hence, it can be argued the reliability which was stated at the levels 0.853 and 0.890 can be categorized as significantly reliable.

***The result of students' test in reading comprehension and vocabulary mastery***

Based on the Reading score result, the researcher created the students' score frequency distribution as follows:

**Table 5 the result of reading comprehension**

| No.          | Category | frequency |
|--------------|----------|-----------|
| 1.           | 80 - 100 | 16        |
| 2.           | 66 - 79  | 6         |
| 3.           | 56 - 65  | 4         |
| 5.           | 40 - 55  | 3         |
| 6.           | <40      | 8         |
| <b>Total</b> |          | <b>37</b> |

Based on the data above, it can be seen that from thirty-seven students of First Grade Students of SMA Negeri 1 Kotamobagu, the score results vary. From the table, we know that there are sixteen students who achieved scores of 80 - 100, six students who achieved scores of 66 - 79, four students who achieved scores of 56 - 65, three students who achieved scores of 40 - 55, and eight students who achieved score <40.

In order to find the average score of students' vocabulary mastery, the researcher used the following formula:

$$M = \frac{\sum X}{N}$$

Where:

M = Mean

$\sum X$  = The sum of reading score

N = Number of students

It is known that:

M = Mean

$\sum X = 2455$

N = 37

The calculation as follow:

$$M = \frac{\sum X}{N}$$

$$M = \frac{2455}{37}$$

M = 66.35

So, the average score of the Students' reading comprehension was 66.35. Then based on the valuation scale used the students' average scores in reading comprehension were considered as Good criteria (66-79).

**Table 6 the result of vocabulary mastery**

| <b>No.</b>   | <b>Category</b> | <b>frequency</b> |
|--------------|-----------------|------------------|
| <b>1.</b>    | <b>80 - 100</b> | <b>21</b>        |
| <b>2.</b>    | <b>66 - 79</b>  | <b>3</b>         |
| <b>3.</b>    | <b>56 - 65</b>  | <b>5</b>         |
| <b>5.</b>    | <b>40 - 55</b>  | <b>2</b>         |
| <b>6.</b>    | <b>&lt;40</b>   | <b>6</b>         |
| <b>Total</b> |                 | <b>37</b>        |

Based on the data above, it can be seen that from thirty-seven students of First Grade Students of SMA Negeri 1 Kotamobagu, the score results vary. From the table, we know that there are twenty-one students who achieved scores of 80 - 100, three students who achieved scores of 66 - 79, five students who achieved scores of 56 - 65, two students who achieved scores of 40 - 55, and six students who achieved score <40

In order to find the average score of students' vocabulary mastery, the researcher used the following formula:

$$M = \frac{\Sigma X}{N}$$

Where:

M = Mean

$\Sigma X$  = The sum of vocabulary score

N = Number of students

It is known that:

M = Mean

$\Sigma X = 2705$

$$N = 37$$

The calculation as follow:

$$M = \frac{\sum X}{N}$$

$$M = \frac{2705}{37}$$

$$M = 73.10$$

So, the average score of the Students' vocabulary mastery was 73.10. Then based on the valuation scale used the students' average scores in vocabulary mastery were considered as Good criteria (66-79).

***Correlation between students' reading comprehension and vocabulary mastery***

This data was to determine about there was correlation between the students' reading comprehension and their vocabulary mastery at first grade of SMA Negeri 1 Kotamobagu. To see there was correlation between the student reading comprehension and their vocabulary mastery, the researcher tried to indicate in the table below.

***Table 7. the result of reading comprehension and vocabulary mastery***

|                       |                     | Reading | Vocabulary |
|-----------------------|---------------------|---------|------------|
| Reading comprehension | Pearson Correlation | 1       | .671       |
|                       | Sig. (2-tailed)     |         | .000       |
|                       | N                   | 37      | 37         |
| Vocabulary mastery    | Pearson Correlation | .671    | 1          |
|                       | Sig. (2-tailed)     | .000    |            |
|                       | N                   | 37      | 37         |

From the tables above, the result showed that the significance value is  $0.000 \leq 0.005$ . There was a relationship between students' reading comprehension and vocabulary mastery, and Pearson Correlation score is 0.671, the correlation coefficient is moderate, it is in the range of 0.40-0.70. According to the data, there is a

considerable degree of meaningful relationship. Then it can be said that there was a positive correlation between students' reading comprehension and vocabulary mastery, according to the findings.

The result of this research has answered that there is a correlation between students' vocabulary mastery and their reading comprehension. It could be considered as a moderate correlation since the result was included in a strong category. In addition to the ability of students' vocabulary mastery, the strategy and background knowledge of the text help students comprehend the text.

A student's reading comprehension ability is said to be good if she/he is able to capture or understand all the content contained in the reading. This ability can be done well if the student masters the vocabulary well. (Delatu, Diane, & Kamagi, 2020) by having enough vocabulary, the students' mastery of language components also will be improved. (Ibrahim, Sarudin, & Muhamad, 2016) analyzed that vocabulary size is one important factor to increase reading comprehension performance.

From the explanation above, it can be said that students who master vocabulary well have good reading comprehension skills. Based on the theories that have been described, it is suspected that there is a positive relationship between students' reading comprehension skills and vocabulary mastery. The higher the mastery of vocabulary, it is suspected that the higher the ability to read comprehension. So, it is clear that someone who has a large vocabulary or masters vocabulary and knows the exact meaning of the vocabulary will be able to understand the contents of the reading well.

## **CONCLUSION**

During the Academic Year 2022/2023, the goal of this research was to see if there was a relationship between reading comprehension and vocabulary mastery in first-grade SMA Negeri 1 Kotamobagu. The researcher discovered a good relationship between students' reading comprehension and vocabulary mastery in first-grade SMA Negeri 1 Kotamobagu based on the findings of this study. The correlation analysis obtained a score of 0.671, indicating a moderate of correlation. There was a positive

relationship between students' Reading Comprehension and Vocabulary Mastery in first grade SMA Negeri 1 Kotamobagu in the Academic Year 2022/2023.

There are many factors that help students to comprehend the reading materials. The result shows that student's background knowledge and experience. Those factors may help students comprehend reading materials. When they found an unknown word they could guess the meaning of an unknown word by referring them to the text.

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