# Journal of Science Innovations and Nature of Earth 

## Journal homepage : www.jsiane.com

# ENGLISH VOCABULARY AND ITS EFFECT ON ENGLISH READING SKILL BY THE FOURTH GRADE STUDENTS OF ELEMENTARY SCHOOL IN SURABAYA 

Frida Rullyati ${ }^{1}$, Djuwari, Djuwari* ${ }^{* 1}$, Tiyas Saputri ${ }^{1}$ and Novi Rahmania Aquarizah ${ }^{1}$<br>1English Education Department, Universitas Nahdlatul Ulama Surabaya, Indonesia<br>Corresponding Author and email - Djuwari, Djuwari*<br>Email : djuwari@unusa.ac.id<br>www.doi.org/10.59436/https://jsiane.com/archives3/2/79


#### Abstract

This study was aimed to determine the students' vocabulary mastery and its effect on the skills of fourth grade students at Airlangga I, Elementary School Surabaya in the 2022/2023 academic year. This study took the sample chosen by simple random sampling technique based on Slovin formula and finally the researcher got 87 . The data collection was done from July 2022 to November 2022 by administering vocabulary tests and reading tests. These data were analyzed by using statistical tests with SPSS program. For the data analysis, the researchers used the Classic Assumption Test (Normal Probability Plot Test, Heteroscedasticity Test, and Multicollinearity Test), Simple Regression Analysis, Coefficient of Determination, Partial Test (t-test) with the significance ( $\alpha$ ) of $5 \%$. This study used two variables, namely the predictor (Independent Variable X) and the response (Dependent Variable Y). From the calculation with the t-test, it was found that there is s significant effect of vocabulary skill on reading skill improvement. This evidence provides an implication that when the teacher increase the students' vocabulary skill, it will also increase the students' reading skills. It is recommended that the teachers of English should increase the students'" vocabulary for improving their reading skill.


Keyword: Vocabulary mastery, vocabulary building, English Reading Skill, authentic materials, language teaching.

## Introduction

In Indonesia, English is not spoken every day because it is not the national language. The students, especially, use English only when they study it in schools with limited hours or time. Like other students in other regions, the students in Surabaya also very seldom speak English in their daily life. They only use English when they get a subject of English at their schools. Yet, English is very important for the era of globalization and technology. Therefore, it is also essential for improving the students' English, especially their reading skill, at Airlangga 1 Elementary School in Surabaya.

The Indonesia government has implemented the program of literacy, reading habit for all the students not only in elementary but also at secondary schools. From this program of literacy, reading skill is considered important to teach at schools especially at early age, this case study was done at Elementary School (SD) Airlangga 1 Surabaya.

To enhance students' reading skills and support the government's literacy program, it is crucial to investigate the impact of vocabulary on their reading proficiency, as demonstrated by Laksono and Retnaningdyah (2018). Unfortunately, overall literacy levels in Indonesia are considered low due to the students' inadequate reading habits. Furthermore, there is a pressing need to improve students' English reading materials since English has become the predominant language for global information in the technology era.

Indonesian people primarily speak their native language and regional dialects, with limited use of English, making it a foreign language for them. As highlighted by Rizkan (2020) and previously acknowledged by Djuwari (2013), English is only utilized during specific school sessions, resulting in a significantly low English proficiency among Indonesian society. Hence, it is crucial and urgent for researchers to address this issue through further investigation.

The acquisition of vocabulary plays a crucial role in enhancing students' reading abilities. Simply put, achieving proficiency in reading is impossible without a solid foundation of vocabulary knowledge. As Mousavian and Siahpoosh (2018) suggest, the more extensive students' vocabulary, the more proficient their reading skills become. Fadi (2019) also supports this notion through research, emphasizing that improving vocabulary is a key factor in enhancing reading comprehension. By prioritizing vocabulary development, students can cultivate a habit of reading, thereby further enhancing their overall literacy. In summary, vocabulary is an indispensable component for students aiming to improve their reading skills.

Based on the arguments from some proponents above, the researchers in this present study, attempts to do a research on the effect of vocabulary on the students' reading skill. This study focuses on the analysis of the vocabulary and the effect on reading skill by the students at Elementary School (SD) Airlanggal Surabaya. This study tries to investigate to what degree of significance of the vocabulary possessed the
students at SD Airlangga 1 Surabaya towards their reading skills. Therefore, this study has its objectives such as too find out the degree of significant effect of vocabulary mastery on the reading skill and to provide as well the appropriate strategy to improve the students' ' reading skill.

## Literature Review

## Vocabulary

It is important to have a good knowledge of vocabulary by the students of English language in any schools. In general, vocabulary is really considered the prominent factor for improving the students' English reading skill (Bai, 2018). In his research, Bai found that vocabulary is not only good for improving reading skill but even more on their whole English language learning. This is also true as argued by Djuwari (2014) even for writing scientific articles also needs enough vocabulary. Like the authors of research articles, the students that Bai (2018) investigated also showed that their vocabulary can help them understand their English not only listening, speaking, but also reading or their English learning.

Similar to Bai (2018), Katemba (2021) conducted an analysis on the impact of vocabulary on language learning among students in rural areas of Indonesia. The study revealed that students in the experimental group, who underwent computer-assisted vocabulary learning, outperformed the control group that did not receive the same treatment. Furthermore, the study highlighted the significant difference made by technology in vocabulary acquisition. This aligns with the perspective of Arifah et al. (2022) who emphasize the importance of technology in supporting vocabulary development. As a result, Katemba recommended the teaching of vocabulary as a crucial factor for students to enhance their English learning and, consequently, improve their reading skills.

Based on the above arguments, vocabulary is important even not only for the students at elementary schools, it is also essential for the authors to write. For that reason, vocabulary is always considered a significant factor for improving the students' English learning, including their reading skill. Reading without having enough vocabulary is impossible to acquire. This present study is expected to improve their English learning, especially reading skill.

## Vocabulary Building

Various approaches have been implemented to enhance students' vocabulary skills. As noted by Putri (2022), one effective method employed by teachers is leveraging social media platforms such as Instagram. In her study, Putri observed that students who utilized Instagram demonstrated notable improvement in vocabulary. Specifically, the research examined how Instagram usage impacted students' vocabulary development and identified the features that contributed to this improvement. The study focused on the writing class PI 17 A and included a sample of 28 students.

Furthermore, Fu et al. (2019) conducted an analysis on students' vocabulary enhancement within authentic English learning and practice contexts, which in turn also improved their writing skills. Authentic materials were utilized to build vocabulary, thereby boosting motivation and language proficiency. This evidence underscores the significance of incorporating authentic materials to improve students' vocabulary. Moreover, apart from utilizing authentic
materials, the integration of gaming is also recognized as valuable in enhancing students' vocabulary skills. This indicates the importance of vocabulary in English language learning and highlights the benefits of incorporating authentic materials and gaming into instructional practices.

## Reading Skill

The act of reading involves critically engaging with language. In this context, critical reading is an essential skill that students must develop. According to Din (2020), critical reading refers to the active and discerning response to written material, where individuals establish connections between the content they read and their personal values, attitudes, and standards. The ability of university students to think critically is evident in their proficiency in critical reading. Din conducted a study to explore the students' attitudes towards critical thinking and to examine the relationship between these attitudes and their language abilities, specifically in reading. To assess their reading skills, Din administered a critical reading test (CRT) to the participants. This study employed a quantitative research methodology and included 550 male and female university students from various staterun colleges in Punjab, Pakistan.

According to Nanothabn Bbinyck (2021), reading encompasses two interconnected processes: word recognition and comprehension. Word recognition involves perceiving how written symbols correspond to spoken language. Comprehension, on the other hand, entails making sense of words, sentences, and coherent passages of text. Furthermore, students who engage in reading with the intention of expanding their vocabulary and achieving better text comprehension are able to think critically about the meaning of the words they encounter. Once again, reading is an activity that necessitates the reader to possess an adequate vocabulary, as it enables them to comprehend written text effectively. Therefore, by acquiring a sufficient vocabulary, students can effortlessly read and understand the text they encounter.

## Vocabulary towards Reading

Sufficient vocabulary knowledge enables students to enhance their reading comprehension. Boyer (2017) presents evidence supporting the idea that vocabulary instruction can contribute to improved reading comprehension, particularly for third-grade students who are English Language Learners and reading below grade level. Through data analysis using pretest and posttest assessments, and by comparing mean scores, it was observed that students with a strong vocabulary were more likely to excel in their reading skills. Additionally, an important outcome of this improved vocabulary was increased enthusiasm for reading, as students gained a better understanding of the meaning of the words they encountered.

English leaners should become readers who have in depth knowledge so that it requires them to have a mastery of enough vocabulary. According to Mehrpour et al quoted by Taghizadeh \& Khalili (2019), the students who have enough vocabulary can comprehend the text better. From the argument based on their study, it can be considered that the students can enhance their reading skill if they have good knowledge of the words they read in the text. Vocabulary has a significant effect to the students reading comprehersion. The conceptual framework of this research can be drawn as in Figure 1


Fig. 1 : Theoretical Framework
It is clearly indicated in Figure 1 that vocabulary towards reading has a significant effect. To find out the factors that influence student's English reading skill, the researchers focus on the background level of students English and their vocabulary. The researchers collected their English reading skill and vocabulary mastery through vocabulary test and reading test.

## Research Method

## Research Design and the Sample Selection

This study is quantitative descriptive in which the researchers try to test the effect of vocabulary mastery on reading of English by the students at Elementary School (SD) Airlangga I/198 Elementary School Surabaya. The data were collecting from the test of vocabulary and reading. This was also done by Novyanti and Gama Putra (2020) in term of quantitate descriptive research. The sample was taken from the SD Airlangga I Surabaya as the population. The technic of sample was therefore random sampling which is done by using Slovin formula, as referred also to Sugiyono (2017) that Slovin formula is used to obtain a sample size, which is capable of describing the entire existing population. The formula is as follows:

$$
n=\frac{N}{1+N(e)^{2}}
$$

n : The number of samples sought
N : Total Population
e : Tolerance margin of error $=5 \%$
The sample was taken from the population of 111 and by using the Slovin formula, the sample was 87 respondents. Therefore, the scores were taken from 87 students' test scores consisting of 49 male students and 38 female students, with an average age of 10 years. The researchers got 4 classes: 22 students from each of 3 classes while 21 students from the smallest population.

The research instrument for the text consists of vocabulary test and reading test. The vocabulary test instrument can be seen in Table 1. The test of vocabulary has alternative answers provided for the answers. The reading test is subjective tests using short answer types, namely questions to be with one word, one phrase, one number, or formula.

Table 1 : Vocabulary Test Instrument

| Type | Indicator | Number of <br> Questions |
| :--- | :--- | :---: |
| Objective <br> Test | Manifest according to orders <br> Choose the word that fits the <br> meaning | 13 |

The test of vocabulary was done objectively and it has a score of 7,6 for the correct answer and a score of 0 for the wrong answer. Due to practicality, the researchers used the objective test in terms of both in implementation and examination. In other words, it is more objective in its assessment system. The reading test consists of objective and subjective test as shown in Table 2. The objective type has 10 question while the subjective test has 5 items.
Table 2 : Reading Test Instrument

| Type | Indicator | Number of <br> Questions |
| :---: | :---: | :---: |
| Objective <br> Test | Understanding the meaning <br> of words according to their <br> use in discourse | 10 |
| Subjective <br> Test | Be able to answer questions <br> whose answers are explicitly <br> contained in the discourse | 5 |

Objective tests has ots range of the score such as a score of 5 for the correct answer and 0 for the wrong one. In addition, the subjective test is given a score of 10 for the answer and a score of 0 for the wrong answer. Objective tests are used because they are more practical and subjective tests are used because they can make students remember, organize and combine the knowledge learned in a series of regular sentences.

## Data Analysis Techniques

Classic Assumption Test

## (a) Normal Probability Plot Test

According to Raharjo (2017), the P.P normality test was carried out to find out whether a data can be said to be normally distributed or not. The plot is by looking at the figure that comes from the SPSS output by looking at the plotting points that are on the diagonal line. If these points are around the diagonal line then it is said to be normal.

## (b) Test Heteroscedasticity with the SPSS Scatter Plot chart

As referred to Raharjo (2017), this study used Heteroscedasticity Test to see whether there is Heteroscedasticity in a data, by looking at the Scatter Plot figure on the SPSS output. The conditions for passing or a good model are when the Figure are as follows: (1) At the zero point a horizontal line is drawn. If above the line and below the line there are regular pattern dots then it is said to have passed the Heteroscedasticity test. (2) Conversely, if there is no clear pattern, then it is said that it does not pass the Heteroscedasticity test.

The Heteroscedasticity test is employed to assess potential variations between individual residuals and other observations. For a regression model to satisfy the necessary conditions, it should exhibit a consistent variance between the residuals of different observations, known as homoscedasticity. The presence of Heteroscedasticity can be determined by utilizing the scatterplot technique, which involves plotting the ZPRED value (predicted value) against the SRESID value (residual value.

## (c) The Test of Multicollinearity

According to Ghozali (2016), the Multicollinearity test is utilized to determine if there is a correlation among the independent variables in a regression model. Statistical tools
such as the Variance Inflation Factor (VIF) and tolerance are commonly employed for this purpose.

The researchers conducted the aforementioned test by considering the tolerance and VIF values within the regression model. The decision criteria for the Multicollinearity test are as follows: (1) If the VIF value is less than 10 or the tolerance value is greater than 0.01 , Multicollinearity is not present. (2) If the VIF value exceeds 10 or the tolerance value is below 0.01 , Multicollinearity is confirmed. (3) Simple Regression Analysis.

Simple regression analysis aims to examine the impact of one variable on other variables. In this analysis, the variable that has an effect is known as the independent variable, while the variable being influenced is referred to as the dependent variable. When the regression equation contains only one independent variable and one corresponding dependent variable, it is termed a simple regression equation.

The fundamental principle of a simple regression equation is that there should be a causal relationship, based on theory, previous research findings, or logical explanations, between the dependent variable ( Y ) and the independent variable (X). Simple linear regression analysis explores the linear relationship between a single independent variable (X) and a dependent variable (Y). Through this analysis, one can determine the direction of the relationship (positive or negative) between the independent and dependent variables. Additionally, this analysis facilitates the prediction of the dependent variable's value based on changes in the independent variable, whether it increases or decreases.

The researchers used regression analysis with the formula as the following:
Regression Coefficient Formula b

$$
b=\frac{n \cdot \sum X Y-\sum X \cdot \sum Y}{n \cdot \sum X^{2}-\left(\sum X\right)^{2}}
$$

Constant formula a

$$
a=\frac{\left(\sum y\right)\left(\sum x^{2}\right)-\left(\sum x\right)\left(\sum x y\right)}{n\left(\sum x^{2}\right)-\left(\sum x\right)^{2}}
$$

Simple Linear Regression Formula

$$
\begin{aligned}
& Y=a+b X \\
& Y=\text { Dependent Variable (Reading) } \\
& X=\text { Independent variable (Vocabulary) } \\
& a=\text { Constant (the value of } Y \text { if } X=0)
\end{aligned}
$$

## (d) Coefficient of Determination

The coefficient of determination, also known as Rsquared, can be calculated by squaring the correlation coefficient. It is typically represented by the value R -squared (R2) in the summary table. This coefficient provides insight into the extent to which the dependent (exogenous) variable is influenced by the (endogenous) independent variable. Rsquared is a value ranging from 0 to 1 , indicating the strength of the collective impact of the independent variables on the dependent variable.

## (e) Partial Test (t test)

The steps that need to be carried out in the t-test on linear regression are:
Determine the hypothesis
$\mathrm{H} 0: \beta=0$, vocabulary has no significant effect on Reading
$\mathrm{H} 1: \beta \neq 0$, Vocabulary has a significant effect on reading

## (f) Determine the significance level ( $\alpha$ )

The level of significance $\alpha$ that is often used is

$$
\alpha=5 \%(\alpha=0.05)
$$

(g) Calculating the value of $t$ count using the formula:

$$
\mathrm{t}-\mathrm{count}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}
$$

To determine the rejection area H 0 (critical area) the researchers did it by two-way testing, so using a two-way ttest. H0 will be rejected if t count $>\mathrm{t}$ tab, or significant < $5 \%$.; H0 will be accepted if t count $<\mathrm{t}$ tab or significant $>$ $5 \%$. Then, the researchers determined the t table (using the t test table, see attachment)
t - table for $\alpha=5 \%$ and degrees of freedom ( df ) $=\mathrm{n}-$ k, , $\mathrm{n}=$ number of samples, $\mathrm{k}=$ number of variables (independent variable + dependent variable).

The test uses the criteria as follows: value of $t$ count and $t$-table. If the $t$-count is $<t$ table or significant $>5 \%$, the H 0 is accepted, H 1 is rejected. If the of t -count is $>\mathrm{t}$ tab or significant $<5 \%$, then H0 is rejected, H1 is accepted. From this, the researchers concluded the significance test results.

## Results and Discussion

## Results

Normality test is used to determine whether the distribution of data in the study is normally distributed or not. The Normality Test was tested with the help of SPSS 2023 with the $\alpha$ value of $5 \%$, as in Figure 2.


Fig. 2 : PP Plot Normality Test Figure
Observing Figure 2, it becomes evident that the data is scattered around the diagonal line and follows its direction, indicating a normal distribution pattern. Consequently, it can be inferred that the regression model adheres to the
assumption of normality based on the PP Plot Figure. Therefore, it can be concluded that the regression model meets the assumption of normality.

## (a) Heteroscedasticity Test With Scatterplot Figure

To know whether there is Heteroscedasticity in it, the researchers conducted the Heteroscedasticity by looking at the Scatter Plot figure on the SPSS 2023 output.


Figure 3 : Scatter plot
Upon observing the Scatterplot depicted above, it is evident that the data points are dispersed in a random manner and are distributed both above and below the zero mark on the Y axis. Based on this observation, it can be inferred that there are no indications of Heteroscedasticity in the utilized regression mode.

## (b) Multicollinearity Test

According to Ghozali (2016), the Multicollinearity test aims to find out whether the regression model found a correlation between the independent variables. Statistical tools that are usually used to test for Multicollinearity interference are the Variance Inflation Factor (VIF) and tolerance.
Table 3 : Table of VIF Multicollinearity Test Results

$$
\text { Coefficients }{ }^{\text {a }}
$$

| Model | Collinearity Statistics |  |
| :---: | :---: | :---: |
|  | Tolerancw | VIF |
| 1. Vocabulary | 1,000 | 1,000 |

a. Dependent Variable : READING

In Table 3, it can be seen that the vocabulary $<10$ has a VIF value $<10$ and a tolerance $>0.1$ so that the data is declared to have passed the Multicollinearity test.

## (c) Simple Regression Analysis

The hypothesis is a temporary guess on the problem formulated. Therefore, this provisional hypothesis must be verified. The hypothesis testing technique used in this study is the Simple Linear Regression Analysis Technique.

The researcher employed Simple Linear Regression Analysis to ascertain the impact or linear association between a single independent variable and a dependent variable. In order to test this hypothesis, the researcher utilized the SPSS program and arrived at decisions based on the following criteria in the analysis:

## (a) Simple Linear Analysis

In Simple Linear Regression Analysis, calculated with the help of the SPSS Program is presented in the Output Coefficients column B on Unstandardized Coefficients. The result is as in Table 4.
Table 4 : Table of Regression Analysis Results and Partial Test

| Coefficients ${ }^{\text {a }}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model |  | Unstandardized Coefficients |  | $\begin{gathered} \begin{array}{c} \text { Standardized } \\ \text { Coefficients } \end{array} \\ \hline \text { Beta } \end{gathered}$ | t | Sig. |
|  |  | B | Std. Error |  |  |  |
| 1 | (Constant) | 56,420 | 7,592 |  | 7,432 | ,000 |
|  | VOCABULARY | ,287 | ,081 | , 358 | 3,530 | ,001 |

In this simple regression, there is an equation that is $\mathrm{Y}=$ $a+b X$. This equation is an equation that is obtained when $X$ is 0 and the regression coefficient which shows an increase or decrease in variable Y is based on variable X .

Based on calculations with the SPSS program, a constant value of 56.420 is obtained and the regression coefficient value is 0.287 , so that the regression equation for simple linear regression is as follows:

$$
Y=56,420+0,287 X
$$

From this equation it means that if X is 0 , then the Reading value is 56.420 . If each increase in the vocabulary score is 1 , then the reading value will also increase by 0.287 .

## (b) Coefficient of Determination

The coefficient of determination is used to determine how much influence the independent variable has on the dependent variable. The magnitude of the coefficient of determination can be calculated by squaring the correlation coefficient and then converted into a percentage, or it can be seen in column R2 of the output model summary by calculating the SPSS program (See Table 5).
Table 5 : Table of Determination Coefficient Results

| Model Summary ${ }^{\text {b }}$ |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|   Adjusted Std. Error of Durbin- <br> Model R R Square R Square  <br> the Estimate     | Watson |  |  |  |  |
| 1 | , $358^{\mathrm{a}}$ | , 128 | , 118 | 12,42069 | 1,535 |

a. Predictors: (Constant), VOCABULARY
b. Dependent Variable: READING

From the SPSS, the results obtained a value of 0.128 . This means that $12.8 \%$ of the reading variable is influenced by vocabulary, while the remaining $87.2 \%$ is influenced by other factors not examined in this study.

## (d) T- test

If the coefficient of determination (r2) has been determined, then a significant test of the proposed hypothesis is then carried out. With this partial test ( $t$ test), it can be seen whether the predictor (independent variable X ) has a significant effect on the response (dependent variable Y). The meaning of significant is the influence between variables applies to the entire population. In the research discussed, it uses a significance test, namely the $t$-test. Based on Table 4.3, the t -test is used to determine whether vocabulary has a significant effect on reading. The test uses a significance level of 0.05 .

In calculations with the SPSS program, the calculated tvalue can be seen in the output coefficient of t-column. The value in the t -column is then compared with the value in the t -table. The test criterion is if t -count is $>\mathrm{t}$-table, then the proposed hypothesis is accepted. And, it can also be done by looking at the significance-column. With the condition that if the significance is $<0.05$, then H 1 is accepted. First, the tcount $>\mathrm{t}$ tab and Second it is $7,432>1,98793$, finally, the significance $<5 \% 0,001<5 \%$.

It can be concluded that the hypothesis that has been formulated is accepted, that there is an effect of vocabulary on reading. Again, as the previous studies, this result is also supported by Fadi (2019) and Mousavian \& Siahpoosh (2018). They also found that vocabulary mastery can increase the students" reading skill. Not only di Fadi (2019) and Mousavian \& Siahpoosh (2018), Bai (2018) also provided evidence showing that vocabulary mastery can increase the students' reading skill. In general, vocabulary skill is an influential factor for the reading skill improvement.

## Discussion

## Vocabulary

The vocabulary can increase reading skill by 0 , 287. It is also in line with the previous studies as done by Bai (2018) and also by Katemba (2021). It was also proved that vocabulary skill can increase the reading skill. Theoretically, it is supported by Putri (2022) who stated that vocabulary can increase the students' reading skill and therefore, she was interested in using some media for increasing the students' vocabulary. This vocabulary in turn can improve the students' reading skill.

As based on the theories, the vocabulary test here is of the objective test type and is only limited to the garden field. This is based on the fourth grade vocabulary material, covering the field of gardening. This is the authentic materials for the vocabulary. The indicators used to measure student vocabulary include: a) Build according to orders and b) Choose the word that fits the meaning.

Before doing the vocabulary test, the researchers the teaching of vocabulary by using vocabulary cards strategy. Where the previous researcher, Nasri, C $(2022,68)$ suggested that vocabulary cards could be a strategy for effective vocabulary teaching.

## Reading

The reading test here is of the type of objective test and subjective test and is only limited to the field of heroism. This is with the consideration of fourth grade reading material covering the field of heroism. The indicators used to measure student reading include: a) Understanding the meaning of words according to their use in discourse; and b) able to answer questions whose answers are explicitly contained in the discourse.

During the testing phase, the researchers employed a word mapping strategy for ten questions and a game strategy for five questions. This approach, as highlighted by Graves (2011), aids students in comprehending the material more effectively by encouraging them to explore and utilize the given words. Additionally, Marzono et al. (2011) suggest that games serve as a crucial strategy to capture students' attention and foster a desire to enhance their vocabulary. In this particular test, a Pictionary game was utilized, which involves guessing based on pictorial representations. The students found it easy to answer the test questions since the J. Sci. Innov. Nat. Earth
visual cues provided by the pictures helped them understand the intended inquiries. The intention behind this approach is to motivate students to read the text effortlessly. By mastering vocabulary through such methods, students can improve their vocabulary skills and, ultimately, their reading proficiency.

## The Effect of Vocabulary on Reading

By looking at the vocabulary test and the reading test, this shows that there is a relationship between vocabulary and reading. If students' vocabulary is high, then their reading ability will be high, and vice versa. As again it is indicated by the increase of 0,287 if the vocabulary is increased too.

As mentioned by Tarigan (2015: 2) and Djuwari et al. (2019), a person's language proficiency is determined by both the quantity and quality of their vocabulary. Consequently, this study also provides evidence that vocabulary plays a crucial role in enhancing students' reading skills. It is evident that possessing a broader vocabulary enhances one's proficiency in speaking. Considering this viewpoint, it becomes apparent that vocabulary holds significant importance, as it influences all aspects of language skills.

It is true that students are required to have a large vocabulary building; students are expected to understand the reading. Vocabulary is expected to help a lot of Airlangga I Surabaya Elementary School students should be able to understand all the information in the reading so that they can also understand easily the content of the reading text. It should be enhanced by improving the students' vocabulary mastery as it is proved in this study that vocabulary can increase the students'" reading skill by $0,287 \%$.

This is also evident from several statistical tests that were calculated with the help of the SPSS Program. Thus, the coefficient of determination is $12.8 \%$. With the regression equation $Y=56.420+0.287 \mathrm{X}$. Based on the t test, the t count value is 7.432 and it is significant 0.000 and the $t$ table value is 1.98793. Because the t count $>\mathrm{t}$ table and a significance value of 0.05 , it can be argued that the hypothesis that has been formulated is accepted, namely that there is an effect of vocabulary on reading.

This means that this study succeeded in proving the hypothesis which states that there is an effect of vocabulary on reading ability in fourth grade students of Airlangga I Elementary School Surabaya. Vocabulary students can affect students' reading skills. Reading ability can be used to provide an understanding of the contents of the reading and their knowledge will increase.

However, this study also suspected that other factors, besides vocabulary, are probably able to affect reading skills. It was not found in the analysis. In this case, some of the previous studies did not mention other factors that can influence the students' reading skill. Yet, it can also be due to the strategy of teaching reading. Even Fadi (2019) and Mousavian and Siahpoosh (2018) did not mention other factors which are probably to influence the reading skill.

## Conclusion

The relationship between students' English vocabulary and their reading skills has a noticeable impact. The data collected in this study indicates that English vocabulary significantly contributes to the improvement of students'
reading abilities. The results of the data analysis demonstrate a clear correlation between English vocabulary and English reading skill. To put it simply, the greater the vocabulary students possess, the higher their proficiency in English reading becomes.

In addition to obtaining the data obtained from the effect of vocabulary on reading skills, it shows that this evidence cannot be separated from strategies to improve vocabulary mastery. The strategies used by these researchers for improving the students' vocabulary were done by using the vocabulary cards. It was done by mapping and Pictionary games.

The researcher's chosen strategy highlights the significance of vocabulary building as it relates to the enhancement of students' English reading skills. The findings of this study ultimately conclude that there exists a strong correlation between English vocabulary and English reading skills.

The limitation might be due to the object used for the research. It was only one school that is the Elementary School (SD) Airlangga 1 Surabaya. It can be more generalizable when in the future, the other researchers can also do the same research on the same purpose. In addition, they can also add more independent variables other than vocabulary. However, it is recommended that the schools and the teachers should increase their students' vocabulary skill in order they an also improve their readings skill.

Theoretically, it can be implied that vocabulary can be used for improving the students' reading skill. Practically, the teachers in school can enhance their students' vocabulary first to improve the readings' skill. Pedagogically, teaching reading requires the students to have enough knowledge of vocabulary. Otherwise, they cannot improve their reading skill.

In order to be a good teacher, he or she has to increase the students' English reading skills. This can be done by improving the vocabulary skill first. By having a lot of English vocabulary, the English reading skills are also increased or the other ways around. If the English vocabulary is small, the English reading skills are also not good.

## References

Arifah, L.Z., Djuwari, D., Basuki, E.P. and Afandi, M. D. (2022). Students and Teachers' Perception on Using Microsoft Team Application as English Learning Media. Indiana Journal of Humanities and Social Sciences, 3(8): 7-15.
Bai, Z. (2018). An analysis of English vocabulary learning strategies. Journal of language Teaching and Research, 9(4): 849-855.
Boyer, K. (2017). The relationship between vocabulary and reading comprehension in third grade students who are English language learners and reading below grade level.
Chatrsimab, E. (2015). Authentic reading texts and vocabulary acquisition in EFL students. UK: Amazon.co.uk, Ltd: Marson Gate.
Dauyah, E. and Yulinar, Y. (2018). Faktor-Faktor Yang Mempengaruhi Motivasi Belajar Bahasa Inggris Mahasiswanon-Pendidikan Bahasa Inggris. Jurnal Serambi Ilmu, 19(2): 196-2009.
Din, M. (2020). Evaluating university students’ critical thinking ability as reflected in their critical reading
skill: A study at bachelor level in Pakistan. Thinking Skills and Creativity, 35: 100627.
Djuwari, D. (2013). Error Analysis of English Sentences Written by Administrators at STIE Perbanas Surabaya, Indonesia. IAMURE International Journal of Education, 5(1): 1-1.
Djuwari, D. (2014). Common Errors in English Written by the Academic Journal Contributors. IAMURE International Journal of Education, 9(1): 1-1.
Djuwari, D., Budiana, K.M. and Hudiwinarsih, G. (2019). The Teachers' Motivation in Joining the Training on Scientifc Paper Writing. SMCC Higher Education Research Journal, 6(1): 1-1.
Etikan, I., Musa, S.A. and Alkassim, R.S. (2016). Comparison of convenience sampling and purposive sampling. American journal of theoretical and applied statistics, 5(1): 1-4.
Fadi, A.K. (2019). The impact of vocabulary knowledge on the reading comprehension of Saudi EFL learners. Journal of Language and Education, 5(3(19)): 24-34.
Fu, Q.K., Lin, C.J., Hwang, G.J. and Zhang, L. (2019). Impacts of a mind mapping-based contextual gaming approach on EFL students' writing performance, learning perceptions and generative uses in an English course. Computers \& Education, 137: 59-77.
Graves, M. (2011). What Research Has to Say About Reading Instruction, Buenos Aires: International Reading Association, 2011.
Katemba, C. (2021). Enhancing vocabulary performance through mobile assisted language learning at a rural school in Indonesia. Enhancing Vocabulary Performance Through Mobile Assisted Language Learning at a Rural School in Indonesia, 6(1).
Laksono, K. and Retnaningdyah, P. (2018). Literacy Infrastructure, Access to Books, and the Implementation of the School Literacy Movement in Primary Schools in Indonesia. In IOP Conference Series: Materials Science and Engineering, 296(1): 012045.

Lee, K. and Chen, X. (2019). An emergent interaction between reading fluency and vocabulary in the prediction of reading comprehension among French immersion elementary students. Reading and Writing, 32(7): 1657-1679.
Marzano, R.J., Pickering, D.J. and Heflbower, T. (2011). The Highly Engaged Classroom. USA : Marzano Research Laboratory.
Marzuki, A.G., Santiana, Kuliahana, A., Alek, Fadhilah, N., Darmawati, B. and Bin-Tahir, S.Z. (2021). Thea Teaching of EFL Vocabulary Through Anticipatory Learning Strategy In Islamic Higher Education Context In Indonesia. Proceedings of The International Conference On Industrial Engineering and Operations Management, 3543-3551.
Mohammed, A. (2020). Towards 'gresilient'supply chain management: A quantitative study. Resources, Conservation and Recycling, 155, 104641.
Mousavian, S. and Siahpoosh, H. (2018). The Effects of vocabulary pre-teaching and pre-questioning on intermediate Iranian EFL learners' reading comprehenstion ability. International Journal of Applied Linguistics and English Literature, 7(2): 58-63.

Napratilora, M., Lisa, H. and Bangsawan, I. (2020). Using WhatsApp as a learning media in teaching reading. Mitra PGMI: Jurnal Kependidikan MI, 6(2): 116-125.
Noviyanti, N., \& Gamaputra, G. (2020). Model Pengembangan ADDIE Dalam Penyusunan Buku Ajar Administrasi Keuangan Negara (Studi Kualitatif di Prodi D-III Administrasi Negara FISH Unesa). Jurnal Ilmiah Manajemen Publik Dan Kebijakan Sosial, 4(2): 100.

Pardede, P. (2019). Print vs Digital Reading Comprehension in EFL. Journal of English Teaching, 5 (3) DOI : https://doi.org/10.35341/jet.v5i2.1059.
Putri, E. (2022). An impact of the use Instagram application towards students vocabulary. Pustakailmu. Id, 2(2): 110.

Raharjo, Sahid (SPSS Tutorials). www.spssindonesia.com/ 2017
Rizkan, M., Hartarto, R.B., Supiandi, S. and Hou, C.T. (2022). The Role of Technology Information on Financial Literacy in Indonesia. Jurnal Ekonomi \& Studi Pembangunan, 23(1): 157-170.
Taghizadeh, M. and Khalili, M. (2019). Engineering Student's Academic Reading Comprehension : The Contribution of Attitude, Breadth and Depth of Vocabulary Knowledge. 8(1): 49-66. 13/12/2019
Tarigan, Henry Guntur, 2015. Pengajaran Kosakata. Bandung : Angkasa Bandung.
Yang, J. and Wang, J. (2022). Effect of English Vocabulary on English Reading Performance in the Wenzhou-Kean University.

Cite this article-
Frida Rullyati, Djuwari, Djuwari, Tiyas Saputri and Novi Rahmania Aquarizah., 2023"English Vocabulary and Its Effect on English Reading Skill by the Fourth Grade Students of Elementary School in Surabaya" Journal of Science Innovations and Nature of Earth, Vol. 3(2), Page- 23-30
www.doi.org/10.59436/https://jsiane.com/archives3/2/79

