



THE CORRELATION BETWEEN STUDENTS' VOCABULARY MASTERY AND READING COMPREHENSION OF GRADE TENTH SMK BINA PROFESI

Layla Suci Ramadhani¹, Ardiya², Siti Niah³

^{1,2,3}Pendidikan Bahasa Inggris, Universitas Muhammadiyah Riau

e-mail: ¹190602027@student.umri.ac.id, ²ardiya@umri.ac.id, ³sitiniah@student.umri.ac.id

Abstrak

Tujuan penelitian ini adalah untuk mengetahui apakah terdapat korelasi antara penguasaan kosakata siswa dengan pemahaman membaca di SMK Bina Profesi Pekanbaru. Populasi penelitian ini berjumlah 128 siswa. Sampel diambil dengan menggunakan proses simple random sampling. Penelitian ini menggunakan metodologi kuantitatif. Melalui pemanfaatan Tes Kosakata dan Tes Pemahaman Membaca. Penelitian ini menggunakan perhitungan koefisien product-moment Pearson di SPSS untuk mengevaluasi korelasi antara penguasaan kosakata siswa dan pemahaman membaca. Hasil analisis menunjukkan bahwa terdapat hubungan yang signifikan antara penguasaan kosakata dan pemahaman membaca. Hal ini terlihat dari nilai signifikansi data sebesar $0,001 < 0,05$. Nilai korelasi Pearson sebesar 0,563 yang menunjukkan bahwa tingkat korelasinya sangat baik dan arahnya positif, yang berarti H_0 ditolak dan asumsi peneliti (H_a) diterima. Dapat disimpulkan bahwa terdapat hubungan yang signifikan antara Penguasaan Kosakata dengan Pemahaman Membaca.

Kata kunci: Penguasaan, Kosakata, Pemahaman, Membaca

Abstract

The purpose of this study was to determine whether there is a correlation between students' vocabulary mastery and reading comprehension at SMK Bina Profesi Pekanbaru. The population of this study was a total population of 128 students. The sample was taken using a simple random sampling process. This study employed quantitative methodologies. Through the utilization of Vocabulary Test and Reading Comprehension Test. The study employed the Pearson product-moment coefficient calculation in SPSS to evaluate the correlation between students' vocabulary mastery and reading comprehension. The analysis results show that there is significant correlation between vocabulary mastery and reading comprehension. This can be seen from the significance value of the data which is $0.001 < 0.05$. The Pearson correlation value is 0.563, which indicates that the level of correlation is greater and the direction is positive, which means H_0 is rejected and the researcher assumption (H_a) is accepted. It can be concluded that the significant relationship between Vocabulary Mastery and Reading Comprehension.

Keywords: Vocabulary, Mastery, Reading, Comprehension

1. Introduction

Language is a statement with a view to share something with others, something meant by the speaker can be understood by the listening or the person speaking through spoken language. According to Frans et al., (2023) Language is an inseparable part of human life, we all know that language is a communication tool to convey ideas and feelings. Indonesian people's main language is Indonesian, but in Indonesian there are many indigenous languages that are used as communication tools in each area, while English is a foreign language studied by Indonesian.

English is the international language taught or learned widely in Indonesia. English can be used for some people or communities who need it (Tatipang et al., 2021). In process at learning English, students must also master many language components such as grammar, pronunciation, and vocabulary. When students learn English, they must know a language vocabulary in order to communicate well. Vocabulary plays a major role in both written and spoken communication. The more vocabulary we have, the more likely it is that the person will be fluent in language or in communication, so that the message is well received.

Vocabulary was the subject of language before we had speaking, writing, listening and reading skills, we needed to know English as powerful as vocabulary, structure and grammar (Taslim et al., 2019). Vocabulary is a set of words that are needed to communicate or interact in language. The vocabulary is also one of the most important aspects for students in learning English. There are so many vocabulary we use every day, Person who has or knows a lot of vocabulary, then he will be able to learn language easily. Vocabulary that we rarely use in our daily life is sometimes difficult to understand, let us learn more about vocabulary so that it will not be difficult to apply it in our daily lives.

To have a good English, students may have to master four basic language skills they are Speaking, Listening, Writing, Reading. In the learning process, Reading is an important and out of control part of student's understanding of the learning materials. Additionally, Reading is a key skill for learning the meaning and purpose. In each English learning activity, Reading is used by students at the first step of learning [4].

It can be said that reading greatly enhances knowledge and the first steps in mastering other skills. Bahri (2019) stated that reading forces a reader's brain cells to work on a regular basis because this will make the reader sharper and smarter. Someone who reads a book or newspaper gets more information and can read the text again when he forgets or attempts to get detailed information, but there are some information that can be obtained without reading, such as by listening teachers explanation, seminar, radio, television, etc.

According to Vienarahayu et al. (2022) reading comprehension is essential, because reading is not just for students but for everyone who needs information in each daily activity, It is an action where people can get information and ideas from books, newspapers, magazines, letters, contracts, advertising, and other material. By reading, someone acquires a lot of information and increases intelligence and is more creative even without realizing it can also inspire us. When reading, the brain is required to think, analyze problems, work out solutions and until new things are discovered.

Based on the interviews with an English teacher of grade tenth at SMK Bina Profesi Pekanbaru on July 11, 2023 there are many problems students face: First, the grade tenth students still have difficulty in vocabulary mastery around 30% with a totally of 38 students. Second, Students find it difficult to grammar learning because it makes students think hard and feel very bored. Third, because of the lack trained in reading, when teacher request students to trying of reading comprehension in English text are still afraid make mistakes. Fourth, Students lack of interest in monotonous English learning because of use media not yet optimal.

Vocabulary and reading are two things that cannot be separated (Sumaini, 2018). When reading students need vocabulary to understand ideas and students need a lot of reading because reading is an active way to learning vocabulary.

Curriculum is an activity that includes various detailed student activities with the aim of achieving educational goals [7]. The Independent Curriculum for the grade tenth provides

students freedom according to their individual talents. [8] claimed Independent Curriculum is a very strategic and innovative step and is a big challenge in the world of education.

2. Research Method

Research method is so much needed in obtaining data, getting problem solving, studying, and summarizing the research being studied to achieve desired goals. The correct method enables researcher to reach its purpose. The researcher uses the quantitative approach to do research. According to Sugiyono (2018) quantitative research is research methods based on positive philosophy, used to research in specific populations or samples, data collection uses research instruments. The purpose of employing quantitative is to measure the students' vocabulary mastery and reading comprehension. Called the quantitative method because research data of numbers and analyses use statistics.

The method used to take a group of sample members, researcher used a lottery system. The researcher made a lottery for all classes and took it randomly. As a result, class UPW sixteen students and class PBK sixteen students was chosen as the sample group. So, the total sample in this research was 32 students.

In this study, the researcher use the method of collecting data between the two variables using vocabulary test and reading comprehension test. The vocabulary test purpose is measuring the mastery of a person's vocabulary in achieved learning language and demanding their thought activity. The researcher gave the students a vocabulary test with 20 multiple choice questions. The researcher gives the student a test to know their reading comprehension, consisting of a number of multiple choice questions that a person must answer to provide certain data for the purpose of this study. The reading test consists of 25 items.

2.1 Data Collection Method

1) Vocabulary Test

The vocabulary test purpose is measuring the mastery of a person's vocabulary in achieved learning language and demanding their thought activity. M.Ridho (2021) defined test is one way that researcher collects data by using questions to measure matters. In this study, the researcher gave the students a vocabulary test with 20 multiple choice questions.

Table 2.1 Students Vocabulary Test

No.	Indicator of Students Vocabulary Mastery	Number of Item	Item Number
1	Students are able to master the content word Noun, Verb, Adjective, Adverb	4	4, 7, 17, 20
2	Students are able to master the function word Preposition, Article, Pronoun	7	8, 9, 10, 11, 12, 13, 14
3	Students are able to use appropriate choice of word	3	1, 16, 19
4	Students are able to distinguish the: meaning, synonym and antonym of words	6	2, 3, 5, 6, 15, 18.

After the students has done the test, the researcher can assess the results of the vocabulary test. The formula score students' vocabulary mastery was explained as follows:

$$Student's\ score = \frac{Students' correct\ answer}{Total\ items} \times 100$$

Figure 2.1 Formula to Score Students' Vocabulary

2) Reading Comprehension Test

According to Wandi (2022), test is a series of encouragement given to individuals to get results in numerical values. Test are a series of questions often used to measure skill, knowledge, and comprehension. The researcher gives the student a test to know their reading comprehension, consisting of a number of multiple choice questions that a person must answer to provide certain data for the purpose of this study. The reading test consists of 25 items.

Table 2.2 Rubric of Reading Comprehension Test

No	Indicator of Students Reading Comprehension	Number of Item	Item of Question
1	The students are able to find the main idea in the text	5	2, 13, 18, 20, 24
2	The students are able to finding factual information in the text	5	1, 4, 7, 9, 10
3	The students are able to identify the meaning of vocabulary in the text	5	6, 8, 11, 14, 16
4	The students are able to identify references to reinforce the text	5	3, 15, 17, 21, 25
5	The students are able to inference in the text	5	5, 12, 19, 22, 23

The formula score students' reading comprehension was explained as follows:

$$Student's\ score = \frac{Students' correct\ answer}{Total\ items} \times 100$$

Figure 2.2 Formula to Score Students' Reading Comprehension

2.2 Data Analysis Technique

1) Normality Test

Normality test is used to know data distribution in variables to be used in research. Normality test is a test intended to test whether or not in the model of variable regression is bound or free has normal distribution or not (Arnas et al., 2023). The normality test used in this study used the Kolmogorof-Smirnov test if its value score > 0.05, then the data was a normal distribution.

2) **Linearity Test**

Linearity test is used to know whether two variables have a linear relationship or not in significantly. Linearity test used at a level of 0.05 significance. When the result of the linearity test get significance < 0.05 , it could be said that the research variable was linear.

3) **Hypothesis Test**

In this study, the hypothesis used analyzed by simple correlation. In this simple correlation analysis, correlation is used to determine the degree of correlation between X variables (vocabulary mastery) and Y variables (reading comprehension in report text). To measure level between variable X and Y, researcher used Pearson's Coefficient to analyzed using the SPSS application. To know the coefficient correlation level can be seen the table below:

Size of Correlation	Level of Correlation
0.80 to 1.00 (-100 to -0.80)	Very Strong Positive (Very Strong Negative)
0.60 to 0.799 (-0.799 to -0.60)	Strong Positive (Strong Negative)
0.40 to 0.599 (-0.599 to -0.40)	Average (Average Negative)
0.20 to 0.399 (-0.399 to -0.20)	Weak (Weak Negative)
0.00 to 0.199 (-0.199 to -0.00)	Very Weak (Very Weak Negative)

To determine whether there was correlation between the X variables and Y variables or not. The following are hypothesis testing guidelines (Senthilnathan, 2019):

1. If the probability or Sig. < 0.05 , then the H_a is accepted.
2. If the probability or Sig. > 0.05 , then the H_a is rejected.

3. Finding And Discussion

3.1 Result

The data described were based on the research that had been conducted at SMK Bina Profesi Pekanbaru. This chapter is intended to answer the formulation of the problem in this research. The formulation of the problem in this research is there any correlation between vocabulary mastery and reading comprehension in report text of grade tenth at SMK Bina Profesi Pekanbaru?

In the process of this study, the researcher gave a reading comprehension test to respondents. For the second variable, the researcher gave also vocabulary mastery test to respondents. Then the result measurement of these variables were correlated to determine their significance student's vocabulary mastery and reading comprehension. The data that were gotten are:

1. The Description of Research Data

1) Vocabulary Mastery

Based on the descriptive statistics table above, it can be identified that the total sample (N) is 32 students.

Table 3.1 Descriptive Statistic Of Vocabulary Mastery Test
Statistics

		Vocabulary Mastery	Reading Comprehension
N	Valid	32	32
	Missing	0	0
Mean		44.38	56.38
Std. Error of Mean		3.228	3.424
Median		45.00	52.00
Mode		45	68
Std. Deviation		18.261	19.367
Variance		333.468	375.081
Range		60	76
Minimum		15	12
Maximum		75	88
Sum		1420	1804

The highest value (Maximum) is 75. Then, the range of values (Range) is 60. While the lowest value (Minimum) is 15. Finally, the total score of students' vocabulary mastery is 1420.

To see the classification of the scores obtained by students, it can be seen in the table and graph below:

Table 3.2 Frequency Distribution Of Vocabulary Mastery Test
Vocabulary Mastery

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	POOR	8	25.0	25.0	25.0
	AVERAGE	13	40.6	40.6	65.6
	GOOD	11	34.4	34.4	100.0
	Total	32	100.0	100.0	

2) Reading Comprehension

The results of measurement of the reading comprehension test instrument were used to determine the level of student's reading comprehension.

Table 3.3 Descriptive Statistic Of Reading Comprehension Test Statistics

		Vocabulary Mastery	Reading Comprehension
N	Valid	32	32
	Missing	0	0
Mean		44.38	56.38
Std. Error of Mean		3.228	3.424
Median		45.00	52.00
Mode		45	68
Std. Deviation		18.261	19.367
Variance		333.468	375.081
Range		60	76
Minimum		15	12
Maximum		75	88
Sum		1420	1804

Based on the table above, it can be identified that the number of students tested for reading comprehension is 32 students. The highest score achieved by students is 75 points. Then the range of scores obtained is 60. Meanwhile, the lowest score achieved by students is 15 points. Finally, the total value of points achieved by students is 1804.

To see the classification of the scores obtained by students, it can be seen in the table and graph below:

Table 3.4 Frequency Distribution Of Reading Comprehension Test

Reading Comprehension

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Good	1	3.1	3.1	3.1
	Good	7	21.9	21.9	25.0
	Fairly Good	5	15.6	15.6	40.6
	Fair	2	6.3	6.3	46.9
	Poor	13	40.6	40.6	87.5
	Very Poor	4	12.5	12.5	100.0
Total		32	100.0	100.0	

2. Prerequisite Test

1) Normality Test of The Data

Normality testing is generally used to determine whether sample data in research has a normal distribution. The following are guidelines for using the One-Sample Kolmogorov Smirnov Test normality test:

Table 3.5 Result Of Normality Test
One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			32
Normal Parameters ^{a,b}	Mean		.0000000
	Std. Deviation		15.09765274
Most Extreme Differences	Absolute		.113
	Positive		.113
	Negative		-.067
Test Statistic			.113
Asymp. Sig. (2-tailed)			.200 ^{c,d}

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

2) Linearity Test of The Data

Linearity test is a test that is carried out to find whether two variables have a linear relationship or not. The researcher utilized IBM SPSS 25 to conduct the linearity test. To get linear data, the significance level of deviation must be above 0.05. To see the linearity test results can be seen in the table below:

Table 3.6 Result of Linearity Test
ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Vocabulary Mastery * Reading Comprehension	Between Groups	(Combined)	6315.417	13	485.801	2.174	.064
		Linearity	3271.387	1	3271.387	14.640	.001
		Deviation from Linearity	3044.029	12	253.669	1.135	.392
	Within Groups Total		4022.083 10337.500	18 31	223.449		

3) Correlation Analysis

Correlation analysis was conducted to determine whether or not there was a significant correlation between variable X (Vocabulary Mastery) and variable Y (Reading Comprehension). The correlation analysis in this research uses the Pearson Product Moment formula which is analyzed using the SPSS version 25. The results of the analysis can be seen in the table below :

Table 3.7 Result of Correlation Analysis
Correlations

		VocabularyMastery	ReadingComprehension
VocabularyMastery	Pearson Correlation	1	.563**
	Sig. (2-tailed)		.001
	N	32	32
	Pearson Correlation	.563**	1
ReadingComprehension	Sig. (2-tailed)	.001	
	N	32	32

** . Correlation is significant at the 0.01 level (2-tailed).

Continuing from the explanation above, to determine the significance of the correlation between the two variables, is seen from the results of the significance value. From the table, the significant result is 0.001. Referring to the test reference, it can be concluded that there is correlation between variable X1 (Vocabulary Mastery) and Variable X2 (Reading Comprehension). This can be seen from the significance value of $0.001 < 0.05$.

3.2 Discussion

This study was conducted to determine the significance of the correlation between the vocabulary mastery and the reading comprehension in report text. Based on the result analysis of vocabulary mastery, it can be identified that 8 students got a "Poor" score. Then, 13 students got a score "Average". 11 students got a score "Good". It can be concluded that there are 21 students whose vocabulary mastery is stil low and there are 11 students whose vocabulary mastery is good.

The result the analysis of reading comprehension, it can be identified that 1 students got a "Very good" score. 6 students got a score "Good". 1 students got a score "Fairly good". 7 students got a score "Fair". 13 students got a score "Poor". 4 students got a score "Very poor". It can be concluded that there are 8 students whose reading comprehension is good and there are 24 students whose vocabulary mastery is still low. For the significance of the correlation between these two variables, there is significant correlation, characterized by a significance value of 0.001. This figure is smaller than 0.05. Finally, the result is also supported by the Pearson correlation test number of 0.563, which means the correlation is qualified.

This study is based on the researcher's curiosity about the problems by students at grade X of SMK Bina Profesi Pekanbaru. in improving student's vocabulary mastery and reading comprehension. After conducting research for several meetings, the researcher has an assumption whether the problem occurs because they feel less mastering grammar or not. Based on the data results, the highest score are in the average 60, which means that students value is good in vocabulary mastery. meanwhile reading comprehension has an average value 76 which means that students value is very good in. So it can be said that students in this school have no problems in improving vocabulary mastery and reading comprehension.

3. Conclusion

On the whole, Based on the finding of the research designed to determine the correlation between students vocabulary mastery and Reading comprehension at SMK Bina Profesi Pekanbaru class X UPW and X PBK, Therefore, the researcher conducted this study with the aim of investigating whether the relationship between students vocabulary mastery and reading comprehension and can help provided additional information to teachers and students to be able to overcome these problems.

In this study there were 32 samples from 128 populations. The researcher conducted research in grade ten, namely classes UPW and PBK by taking sixteen students in the class. The challenge researchers face is selecting a sample that is representative of the population. If researchers take all students in a class it may be difficult due to various factors, inactivity, lack of response and ethical issues.

The challenge researcher face is selecting a sample that is representative of the population. If researcher take all students in a class it may be difficult due to various factors, inactivity, lack of response and ethical issues. After the researcher conducts the study, there is significant relationship between Vocabulary mastery and Reading comprehension. The significant value of the data of Vocabulary mastery and Reading comprehension is $0.001 < 0.05$. The Pearson correlation is 0.563, which indicates that the level of correlation is greater and the direction is positive.

References

- [1] A. Y. U. J. Frans, J. I. M. R. Tuna, And N. V. F. Liando, "Increasing Student ' S Speaking Ability Through Think Pair Share," Vol. 2, No. 5, Pp. 699–709, 2023.
 - [2] D. P. Tatipang, E. Z. Oroh, And N. V. F. Liando, "The Application Of Mind Mapping Technique To Increase Students' Reading Comprehension At The Seventh Grade Of Smp," *Kompetensi*, Pp. 389–397, 2021.
 - [3] T. Taslim, A. Asrifan, Y. Chen, And N. Nr, "Correlation Between Student's Vocabulary Mastery And Speaking Skill," *J. Adv. English Stud.*, Vol. 2, No. 2, P. 65, 2019, Doi: 10.47354/Jaes.V2i2.64.
 - [4] Juliana, "The Post Graduate Program Of State Islamic University Sultan Syarif Kasim Riau 1442 H/2021 M," 2021.
 - [5] D. S. Bahri, "The Correlation Between Students' Vocabulary Mastery And Their Reading Comprehension At The Seventh Grade Students' Of Mts Daarul Ihsan," *Proj. (Professional J. English Educ.*, Vol. 1, No. 2, P. 77, 2019, Doi: 10.22460/Project.V1i2.P77-84.
 - [6] I. G. A. Vienarahayu, I. K. Budiarta, And N. W. Krismayani, "The Correlation Between Vocabulary Mastery And Reading Comprehension Of The Eighth-Grade Students Of Smpn 1 Blahbatuh In Academic Year 2021/2022," *Acad. J. English Stud.*, Vol. 2, No. 1, Pp. 17–23, 2022.
 - [7] Ima Frima Fatimah, "Strategi Inovasi Kurikulum," *Eduteach J. Edukasi Dan Teknol. Pembelajaran*, Vol. 2, No. 1, Pp. 16–30, 2021, Doi: 10.37859/Eduteach.V2i1.2412.
 - [8] Z. Hayati1, I. Ikhsan2, I. 3, And Fauzan Azim 4, "Implementasi Kurikulum Merdeka Pada Pembelajaran Pendidikan Agama Islam," *Eduteach J. Edukasi Dan Teknol. Pembelajaran*, 2024, [Online]. Available: <https://ejurnal.umri.ac.id/index.php/eduteach/article/view/6572>.
 - [9] Sugiyono, *Metode Penelitian Kuantitatif*, Cetakan Ke. Bandung: Alfabeta, Cv, 2018.
 - [10] A. H. M.Ridho, "The Correlation Between Students' Interest In Game Activities And Their Vocabulary Mastery Of The Fourth Semester At English Education Department Of Uin Suska Riau," 2021.
 - [11] K. H. Wandu, "The Influence Of Reading Motivation And Gender On Students Reading Comprehension At Anshor Al Sunnah Boarding School," 2022.
 - [12] Y. Arnas And Y. Harsono, "The Effect Of Work Discipline And Work Environment On Employee Performance At Pt Axia Multi Sarana Kota Jakarta Selatan," *Int. J. Econ. Account. Res. Peer Rev. J.*, Vol. 7, No. 1, 2023, [Online]. Available: <https://jurnal.stie-aas.ac.id/index.php/ljeb>.
 - [13] S. Senthilnathan, "Samithambe Senthilnathan," No. July, Pp. 0–8, 2019.
-