

# **THE CORRELATION BETWEEN VOCABULARY SIZE AND TOEFL SCORE OF ENGLISH DEPARTMENT STUDENTS AT UNIVERSITY OF RIAU**

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**Abstract:** *The aims of this research were to find out the correlation between students' vocabulary size and students' TOEFL score. This was a quantitative research with 39 students as a sample. This research used the Vocabulary Size Test to measure the student vocabulary size. This research got the students' TOEFL score from the UPT Bahasa University of Riau. The result showed that the average of students' vocabulary size was 8,215 and the average of students' TOEFL score is 422,1. The correlation value of students' vocabulary size and students' TOEFL score is 0,707. It means there is a significant correlation between students' vocabulary size and students' TOEFL score and it is categorized as "Strong Correlation" because of the correlation value of students' vocabulary size and students' TOEFL score are between 0,60 – 0,80.*

**Key Words:** *Correlation, Vocabulary Size, TOEFL Score.*

# **HUBUNGAN JUMLAH KOSAKATA DAN SKOR TOEFL MAHASISWA JURUSAN BAHASA INGGRIS UNIVERITAS RIAU**

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**Abstrak:** Tujuan dari penelitian ini adalah untuk mengetahui hubungan antara jumlah kosakata siswa dan skor TOEFL siswa. Penelitian ini merupakan penelitian kuantitatif dengan jumlah sampel 39 siswa. Penelitian ini menggunakan Vocabulary Size Test (VST) untuk mengukur jumlah kosakata siswa. Skor TOEFL siswa diperoleh dari UPT Bahasa Universitas Riau. Hasil penelitian menunjukkan bahwa rata-rata jumlah kosa kata siswa adalah 8,215 dan rata-rata skor TOEFL siswa adalah 422. Hasil indeks korelasi jumlah kosakata siswa dan skor TOEFL siswa adalah 0,707. Artinya terdapat hubungan yang signifikan antara jumlah kosakata siswa dan skor TOEFL siswa dan dikategorikan “Korelasi Kuat” karena nilai korelasi jumlah kosakata siswa dan skor TOEFL siswa adalah antara 0,60 – 0,80.

**Kata Kunci:** Hubungan, Jumlah Kosakata, Skor TOEFL.

## INTRODUCTION

One of the most important aspects of English fluency is having a large vocabulary. Thornbury (2002) stated the student will have progress in English if the students spend most of the time learning grammar, but if they start to learn about vocabulary and words it will improve a lot. It will be difficult for the students to learn English if they only have limited vocabulary (Subekti & Lawson, 2007) because a learners' vocabulary has a direct impact on their ability on their reading comprehension (Biemiller, 2005). From the statement above, vocabulary is the key if the students want to improve their English. Even if the students spent most of their time learning grammar, listening, reading, and speaking it will not complete if they have a lack of vocabulary. In the English Department at University of Riau, the English students learned vocabulary in the first semester, which is a vocabulary subject.

Many students all over the world dream to study abroad, such as America, Canada, and the other country that has a favorite University in the world. The student must prove their English language skills as one of the application requirements. The students' English language proficiency can be proved using the TOEFL score. The student who already got the standard scores in TOEFL will automatically have a big chance to study abroad. Besides for study abroad, a TOEFL score also can be used for applying for a scholarship or applying for a job in some countries.

TOEFL is used to measure students' English proficiency. The University of Riau requires a TOEFL score as one of the prerequisites for students who want to graduate. The test was held by UPT Bahasa University of Riau. The University of Riau uses the TOEFL PBT (Paper-Based Test), a previous version of the TOEFL that assesses language ability in three sections: listening comprehension, structure and written expression, and reading comprehension. Although there is no vocabulary section, all the sections in the TOEFL PBT test exists the vocabulary. All of the students who study at University of Riau are allowed to take the TOEFL test for free since they have joined the University. The first test takes in the first semester when they are still freshmen. If the students have already got the standard score, they will get the certificate. In case some students have not yet received the standard score, they can take the test again in the next TOEFL test schedule.

Based on the explanation above, the writer is interested in investigating the Correlation between Vocabulary Size and TOEFL Score of English Department students at the University of Riau.

## METHODOLOGY

This research method uses quantitative research. A theory in quantitative research is a set of interrelated structures (or variables) that constitute propositions or hypotheses that specify the relationship between variables (usually in magnitude or direction). If there is a relationship between two variables, it means that the score of one variable in a certain range is related to the score of the other variable in a certain range. This study analyzed the correlation between vocabulary size and TOEFL score. This research was conducted within the period October 2020 – July 2021. This study involved 39 first year students of English Department at University of Riau selected the sample by using

cluster random sampling technique. The researcher used one class as a sample of the research even there are three classes by using three papers written with each class and took randomly one paper. Class 2A came out as the sample.

To get the data, the students were given tests online. The test is the Vocabulary Size Test (VST) adopted from Nation & Belgar (2007) to measure the vocabulary size of the students. The vocabulary size test was contributed to the students with Online Google Form at home. While the students' TOEFL score took from the UPT Bahasa University of Riau. In order to find out the correlation between students' receptive vocabulary size and TOEFL score, the researcher used the formula of correlation product moment to test the significant correlation between students' vocabulary size and students' TOEFL score by using SPSS 25. The correlation value of students' vocabulary size and students' TOEFL score based on SPSS was classified into several categories of interpretation. Determine the criteria of correlation by applying the interpretation of number correlation as suggested by Sugiyono (2017:231).

## RESEARCH FINDINGS

After distributed the vocabulary size to students and took the students' TOEFL score from the UPT Bahasa University of Riau, here is the students' vocabulary size and students' TOEFL score.

**Table 1. The scores of Vocabulary Size and TOEFL Score**

Student	Vocabulary Size Score	TOEFL Scores
Student 1	12900	510
Student 2	10400	527
Student 3	10300	377
Student 4	7200	330
Student 5	10600	413
Student 6	5900	367
Student 7	12900	557
Student 8	3000	310
Student 9	6800	363
Student 10	10200	437

Student 11	12900	587
Student 12	9200	450
Student 13	10600	493
Student 14	10400	440
Student 15	2000	353
Student 16	7800	367
Student 17	4300	367
Student 18	11400	557
Student 19	5300	353
Student 20	9300	317
Student 21	3800	340
Student 22	8000	413
Student 23	6300	423
Student 24	8200	477
Student 25	3000	400
Student 26	5100	367
Student 27	12900	570
Student 28	5900	357
Student 29	5900	403
Student 30	9200	500
Student 31	6200	387
Student 32	9400	490
Student 33	3500	357

Student 34	11400	367
Student 35	9400	553
Student 36	5600	300
Student 37	12900	573
Student 38	9700	330
Student 39	10600	380

Based on the data above, it can be seen that the highest score of student vocabulary size was 12.900 and the lowest score of students vocabulary size was 2,000. The highest score of student TOEFL score was 587 and the lowest score of student TOEFL score was 300. To find the statistical score of the data including mean, median, mode, maximum score, minimum score, and standard deviation of the data the writer uses SPSS 25. The findings are presented as follows:

**Table 2. Statistical Scores of Vocabulary Size**

Statistics		
Vocabulary_Size		
N	Valid	39
	Missing	0
Mean		8215.38
Median		9200
Mode		12900
Std. Deviation		3142.371
Minimum		2000
Maximum		12900

Table 2 shows that the average score of the student's vocabulary size is 8,215. The median score is 9200. The mode is 12,900. The highest score of vocabulary size is 12,900 and the lowest score is 2,000. The standard deviation is 3,142. The classification of the students' can be described on Table 3.

**Table 3. The Interpretation of Data Analysis of Student's Vocabulary Size**

Word Families	Classification	Frequency	Percentage
1000 – 2000	High-frequency	1	2,6 %
3000 – 9000	Mid-frequency	24	61,5 %
>10000	Low-frequency	14	35,9 %
	Total	39	100 %

Table 3 shows 1 of the student sample in the English Department at the University of Riau were classified into High-frequency level (2,6%), 24 students in Mid-frequency level (61,5%), and 14 students in Low-frequency level (35,9%). The higher scores were 12,900 word-families and included into the Low-frequency level and the lowest score was 2,000 word-families and included into the High-frequency level.

**Table 4. Statistical Scores of TOEFL Score**

Toefl_Score		
N	Valid	39
	Missing	0
Mean		422.1
Median		400
Mode		367
Std. Deviation		84.155
Minimum		300
Maximum		587

Table 4 shows that the average score of the student's TOEFL score is 422,1. The median score is 400. The mode is 367. The highest score of TOEFL is 587 and the lowest score is 300. The standard deviation is 84,15. The classification of the students' can be described on Table 5.

**Table 5. The Interpretation of Data Analysis of Student's TOEFL score**

Score	Classification	Frequency	Percentage
300 – 420	Elementary Level	23	59,0 %
421 – 480	Lower Intermediate Level	5	12,8 %
481 – 520	High Intermediate Level	4	10,3 %
521 – 677	Advance Level	7	17,9 %
	Total	39	100 %

Table 5 shows that 23 of students sample in English Department at University of Riau were classified into Elementary Level (59,0%), 5 students in Lower Intermediate Level (12,8%), 4 students in High Intermediate Level (10,3%) and the rest 7 students in Advanced Level (17,9%).

## Hypotheses

The hypothesis of the research is whether there is a significant correlation between students' vocabulary size and students' TOEFL scores. This research used Pearson Product Moment formula by using SPSS 25 program to prove the correlation between Vocabulary Size and TOEFL Score of English Department Students at the University of Riau.

The Normality of the Data

**Table 6. The Normality of the Data  
One-Sample Kolmogorov-  
Smirnov Test**

N		39
Normal Parameters <sup>a,b</sup>	Mean	0
	Std. Deviation	59.47414
Most	Absolute	0.09
Extreme Differences	Positive	0.073
	Negative	-0.09
Test Statistic		0.09
Asymp. Sig. (2-tailed)		0.2

a. Test distribution is Normal.

b. Calculated from data.

From the data above, it can be seen that Asymp. Sig. (2-tailed) value of the data is 0.200. Based on the Kolmogorov-Smirnov test, the data is categorized as normal if the significant value > 0.05. So, it can be concluded that the test distribution is normal because 0.200 is higher than 0.05.

The Linearity of the Data

**Table 7. Linearity Testing  
ANOVA Table**

			Sum of Squares	Df	Mean Square	F	Sig.
(Combined)			228574.1	25	9142.962	2.931	0.023
Toefl Score * Vocabulary Size	Between Groups	Linearity	134709	1	134709	43.189	0
		Deviation from Linearity	93865.06	24	3911.044	1.254	0.343
	Within Groups		40547.53	13	3119.041		
	Total		269121.6	38			

From the data above, it can be seen that the significant linearity is 0.343. It means the data of students' vocabulary size and students' TOEFL score have a linear correlation because 0.343 is lower than 0.05.



## Correlation Analysis

**Table 8. Correlation Analysis**  
**Correlations**

		Vocabulary Size	Toefl Score
Vocabulary Size	Pearson Correlation	1	.707**
	Sig. (2-tailed)		0
	N	39	39
Toefl Score	Pearson Correlation	.707**	1
	Sig. (2-tailed)	0	
	N	39	39

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

Based on the table above, the significance value happens to be 0.000 (less than 0,05). If the value  $< 0,05$  it indicated that there is a correlation between students' vocabulary size and TOEFL score. If the value  $> 0,05$  it indicated there is no correlation between students' vocabulary size and TOEFL score. Because the value of students' vocabulary size and TOEFL score is 0,00 it means the two variables have a correlation.

The correlation value of students' vocabulary size and TOEFL score is 0.707. Based on the interpretation by Sugiyono (2017) if the correlational value is between 0,60 – 0,80, it means that the two variables have a “Strong Correlation”.

## Determination Coefficient

**Table 9. Determination Coefficient**  
**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.707 <sup>a</sup>	0.501	0.487	60.272

a. Predictors: (Constant), Vocabulary Size

The determination coefficient is purposed to acknowledge how much the independent variable's contribution in defining the value of a dependent variable. From the table above it can be seen that the determination coefficient value (R square) is 0,501. It means that the vocabulary size as the independent variable has a 50% contribution to students' TOEFL scores. It can be concluded that 50% contribution of students' TOEFL score is gained from other factors.

## **DISCUSSION**

The research question of the study is to find out if there is a correlation between vocabulary size and TOEFL scores of English Department Students at the University of Riau. Based on the result of this study first, the highest score of students vocabulary size is 12,900 and the lowest score is 2,000. The average of students' vocabulary size is 8,215 and it is categorized as Mid-frequency level which means that most of the first-year students of the English Department at the University of Riau already master the High-frequency level which was the first 2,000 most used word-families. Based on the result of students' vocabulary size test 1 student categorized in High-frequency level, 24 students were categorized in Mid-frequency level, and 14 students categorized in Low-frequency level.

The students' TOEFL scores are categorized into four levels. That is elementary level, lower intermediate level, High Intermediate level, and advanced level. Based on the result of this study, 23 students are categorized in the elementary level, 5 students are categorized in lower intermediate level, 4 students are categorized in high intermediate level, and 7 students are categorized in advanced level.

Based on the result of this study, the description of the data in this research indicated that there was a correlation between students' vocabulary size and students' TOEFL scores. The correlation value of students' vocabulary size and students' TOEFL score is 0,707. According to Sugiyono (2017), the correlation value between 0,60 – 0,80 is categorized as "Strong Correlation". Thus, the correlation between students' vocabulary size and students' TOEFL scores is a strong positive correlation. As it has been mention in the previous chapter, the positive correlation means if two variables increase or decrease at the same time. In this research, the variables increase at the same time. This means that the higher a students' vocabulary size, the better their TOEFL score will be.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

Based on the finding and the interpretations of the data, some conclusions can be drawn. The result of this research shows that the correlation value of students' vocabulary size and students' TOEFL score is 0,707. It means there is a significant correlation between students' vocabulary size and students' TOEFL score and it is categorized as "Strong Correlation" because of the correlation value of students'

vocabulary size and students' TOEFL score are between 0,60 – 0,80. It can be concluded that the null hypothesis is rejected and the alternative hypothesis is accepted.

## **Recommendations**

Concerning the conclusion above, the writer suggests the students to increase their vocabulary because the students need to realize that vocabulary is one of the important things in learning English and to make their TOEFL score more increase. The TOEFL score English Department at the University of Riau must 500 before graduate from the University. This research has proved that vocabulary size is correlated with TOEFL scores. It means most students that have higher vocabulary size, will be have higher TOEFL scores. For other researchers, the writer would suggest to continuing this research, especially with other instruments, and with the large sample at the University of Riau or other University in Riau.

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