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THE CORRELATION BETWEEN STUDENTS' VOCABULARY AND THEIR TRANSLATION ABILITY AT SMK NAHDLATUL ULAMA

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Abstract

This research is aimed to answer whether or not there is a significant correlation between students' vocabulary mastery and their translation ability. In this research, the researcher used a correlational method in a quantitative design. The data were collected through a vocabulary test and a translation test. The finding showed that the students' vocabulary mastery is fair; it is showed by the mean score of the test that is 61.3. The students' translation ability is fair also the mean score of the test that is 60.6. The regression model is significant with F-observed 118.41which was less than the F table 7.64 in 1% level of error. The correlation between students' vocabulary mastery and their translation ability is linear with F-observed 1.97 which less than F table 3.52 in 1% level of error. There is a positive correlation between the two variables whose total 0.902 (very high correlation). The coefficient determination is 81%, it means that translation ability 81% was affected by the students' vocabulary mastery and the rest was 19% was affected by the other variables or factors.

Keyword: *Correlation, translation ability, and vocabulary mastery*

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Abstrak

Penelitian ini bertujuan untuk menjawab ada atau tidaknya hubungan yang signifikan antara penguasaan kosakata siswa dan kemampuan terjemahannya. Dalam penelitian ini, peneliti menggunakan metode korelasional dalam desain kuantitatif. Data dikumpulkan melalui tes kosa kata dan tes terjemahan. Temuan menunjukkan bahwa penguasaan kosakata siswa adalah adil, hal ini ditunjukkan oleh skor rata-rata tes yaitu 61,3. Kemampuan penerjemahan siswa adalah adil dan juga skor rata-rata tes 60,6. Model regresi signifikan dengan F-mengamati 118,41 yang kurang dari F tabel 7,64 di tingkat kesalahan 1%. Korelasi antara penguasaan kosakata siswa dan kemampuan penerjemahannya linear dengan F-mengobservasi 1,97 yang kurang

dari F tabel 3,52 pada tingkat kesalahan 1%. Ada korelasi positif antara kedua variabel yang totalnya 0,902 (korelasi sangat tinggi). Koefisien determinasi adalah 81%, artinya kemampuan terjemahan 81% dipengaruhi oleh penguasaan kosakata siswa dan sisanya 19% dipengaruhi oleh variabel atau faktor lain.
Kata kunci: *Korelasi, kemampuan terjemahan, dan penguasaan kosakata*

INTRODUCTION

English is used to disseminate the information and news around the world. For our country, in Indonesia English helps the Indonesian English speaker to be aware the development of the world and expanding their perception. So it gives many benefit for Indonesian English speaker especially to expand their knowledge.

Indonesian English speaker use English as a foreign language because they do not use English in daily activity to communicate among Indonesian, Learning English as foreign language is different from learning mother language, Fromkin, Rodman & Hyams said "Another language is due to the diversity of words and their various forms, but these are the accidental properties of grammer, people can acquire a second language under many different circumstance (2014, p.425)". Learner will meet a lot of difficulties in learning a foreign language as a target language, because each language has vocabulary items and unfamiliar ways of arranging the words into sentences as a target language.

Translation becomes a very important thing to connect two different languages between source language and target language. Rusmawati's book in Foundations of Translating said, "Translation consists of transfering meaning of source language into receptor language". It has contribution between Source Language (SL) and Target Language (TL) to make the information in the source language become acceptable to target language and understandable for learners. Translation typically to transfer written or spoken source language to equivalent written or spoken in target language. In general, the purpose of translation is to reproduce various kinds of texts including religious, literary, scientific, and philosophical texts into another language and thus making them available to wider readers.

To get an information from source language in translation is not easy as reading and then move words meaning the written or spoken to other language, it can not be done by anyone without knowing the procedures, methods and techniques of translating. Rusmawati said, "Translation is basically a change of form, it refers to actual word, phrases, clauses, sentences, and paraghraph". The difference between the source language and the target language and the variations of their cultures make the process of translating a real challenge not only change the word to another word but also have to transfer the message about what writer or speaker want to tell. Among the problematic factors

involved in translation are form, meaning, style, proverbs, idioms, grammar mastery, and vocabulary mastery.

Something influential of translation is the vocabulary mastery. According to Fromkin, Rodman & Hyams, "When you know a language, you know words in that language. (2014, p.3)". in addition Ehara, Y, et all said "a translator knowing the meaning of a word is dependent on the vocabulary ability of the translator (2016, p.371)", so vocabulary ability an important role in translation, learners have to be able to understand words. In fact, it happens that students want to express something in English but they do not know how to express the word appropriately because of the lack of vocabulary.

According to Penny (2009, p.60), "Vocabulary as the words which are taught in the context of foreign language". Field (2007, p.13) states that, "vocabulary is defined as the single words which are easily translated from one language to another language". and Linse (2005, p.121) states that, "vocabulary is the collection of words which are known by an individual".

Vocabulary is one of the most important aspects in translation. Kridalaksana (2008, p.142) states that, "Vocabulary contains all information not only about meaning but also know how to use it in language". Mc Keen and Olge (2005, p.66) states that,"The vocabulary is refers to knowledge of words, word meaning, and how to use word effectively to communicate". According to Munday (2001, p.5) states "Translation is the process of meaning transfer between two different written languages involves the translator changing an original written text in the original verbal language into a written text in different verbal language." This statement is also supported by House (2009, p.3). He states translation as "the replacement of an original text with another text." Cook (2010, p.55) states, "Translation involves a transfer of meaning from one language to another." Suratinah (2007, p. 4) states that, "Translation is displacement, the act of uniform movement".

From several definition above, translation is a process that aims transfer meaning of a written language to another without change the message what author wants to say of the original language.

In translation process automatically we have to know the meaning of words itself and can use it in a sentence as target language. Wilkins (2002, p. 130) states that, "Target language from the meanings of their nearest 'equivalent' in the mother language. It is also learning to make the most appropriate lexical choice for particular linguistics and situational context".

RESEARCH METHODS

To obtain the data, facts and information that will describe and explain the problem about the correlation between students' vocabulary mastery and their translation ability, the writer uses quantitative research. The method in this

research is a correlational method in a quantitative design. In correlational method, the researcher uses the correlation statistical test to describe and measure between two or more variables. This study is conducted to know the correlation between two variables. They are students' vocabulary mastery as the independent variables and students' translation ability as the dependent variable.

RESULTS AND DISCUSSION

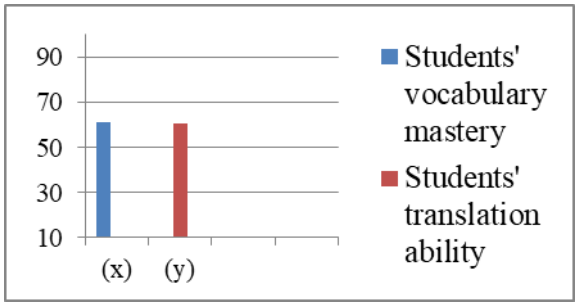
Students' Vocabulary Mastery (X) and Translation Ability (Y)

In vocabulary test, there were thirty multiple choice questions. Each question has four choices. The score of each item was one. Students' marks are got by dividing the total score by three multiplied by 100. To facilitate the measurement of student's mastery of vocabulary. While in translation test, there were three texts, they are report, narrative and analytical exposition. The test was divided into four components to simplify the identification of the students' translation ability. They are descriptive equivalent, fungtional equivalent, cultural equivalent and paraphrase. Maximum score for each component was 5. The maximum score of each text was 20, so the maximum total score was 60. Students' marks are got by adding up the score of the text divided by 60 multiplied by 100. After computing both test, students vocabulary mastery and translation ability scores were various from hight to low score as follow:

Table of Vocabulary mastery and translation ability Scores

Mean	61.3	60.6
Maximum score	83	73
Minimun score	30	38

Based on the table above, both average score can be said that the students' vocabulary mastery and translation ability of the second grade students of SMK Nahdlatul Ulama in the academic year of 2017/2018 was fair because scores 61.3 and 60.6 were classification 56 – 65 (fair). These scores can be saw on the chart as follow:



Central Tendency

In central tendency researcher talk about the central point in the distribution of score in the data, there were three indexes to measure central tendency there were mode, median and mean.

Table of Frequency score of vocabulary test (X)

Score (X)	Tally
30	1
45	1
50	5
53	3
55	3
60	4
63	1
65	2
70	2
73	3
77	1
80	3
83	1
Total	30

Table of Frequency score of vocabulary test (Y)

Score (Y)	Tally
38	1
40	1
50	1
53	5
55	2
58	3
60	3
63	4
68	2
70	4
73	4
Total	30

a. Mode

Variable X = 50 From the data of vocabulary test in table 4.2, that score often appeared was 50. Variable Y = 53. From the data of translation test in table 4.3, that score often appeared was 53.

b. Median

Variable X = 63. The median of variable X was the order of 63. Variable Y = 58. The median of variable Y was the order of 58.

c. Mean

The mean of score of vocabulary test was 61.3, while the mean of score of translation test was 60.6.

Data Analysis

Table of Data computation of variable X and variable Y

No.	X_i	Y_i	X_i^2	Y_i^2	$X_i Y_i$	$(X_i-X)^2$	$(Y_i-Y)^2$
Σ	ΣX_i 1841	ΣY_i 1819	ΣX_i^2 117551	ΣY_i^2 112847	$\Sigma X_i Y_i$ 114710	$\Sigma(X_i-X)^2$ 4575.1	$\Sigma(Y_i-Y)^2$ 2555

Notes: X_i = Variable X, Y_i = Variable Y, X_i^2 = Sum square of variable XY_i^2 = Sum square of variable Y, X = Mean of variable X,Y = Mean of variable Y

Simple Linear Regression

The regression above showed regression equation of variable X and variable Y. The regression of variable Y was influenced by variable X, the regression equation is Y = 19.26 + 0.67X thus if the coefficient correlation is high, Y will be high too, on the other hand , if the coefficient is low Y will be low too. If coefficient correlation is negative Y will be negative too, and if coefficient correlation is positive Y will be positive too. The computation above show that the regression is linear. The regression linearity test is done to know whether the regression line between variable X and Y forms a linear line or not.

Where:

SS (T) = sum square of the total
SS (a) = sum square of coefficients a
SS (b|a) = sum square of coefficient b|a
SS (S) = sum square of coefficient residual
SS (G) = sum square of error
SS (TC) = sum square of f-observed

a. SS (T) $= \Sigma Y^2$
$= 112847$

b. SS (a) $= \frac{(\Sigma Y)^2}{n}$
$= \frac{(1819)^2}{30}$
$= 110292.03$

c. SS (b|a) $= b\left\{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{n}\right\}$
$= 0.67\left\{114710 - \frac{(1841)(1819)}{30}\right\}$

= 2066.30

d. SS (S) = SS (T) – SS (a) – SS (b|a)
= 112847 - 110292.03 - 2066.30
= 488.67

To make it easier to calculate SS (G) required table as follow:

The Group of Variable X and Y

X	Group	n_i	Y
30	1	1	38
45	2	1	40
50 50 50 50 50	3	5	63 53 53 55 60
53 53 53	4	3	50 53 60
55 55 55	5	3	58 53 55
60 60 60 60	6	4	53 63 58 58
63	7	1	60
65 65	8	2	63 63
70 70	9	2	68 73
73 73 73	10	3	70 70 70
77	11	1	73
80 80 80	12	3	73 70 73
83	13	1	70

e. SS (G) $= \Sigma \left\{ \Sigma Y^2 - \frac{(\Sigma Y)^2}{n_i} \right\}$

$$\left\{38^2 - \frac{38^2}{1}\right\}$$
$$\left\{40^2 - \frac{40^2}{1}\right\}$$
$$\left\{63^2 + 53^2 + 53^2 + 55^2 + 60^2 - \frac{(63 + 53 + 53 + 55 + 60)^2}{5}\right\}$$
$$\left\{50^2 + 53^2 + 60^2 - \frac{(50 + 53 + 60)^2}{3}\right\}$$
$$\left\{58^2 + 53^2 + 55^2 - \frac{(58 + 53 + 55)^2}{3}\right\}$$
$$\left\{53^2 + 63^2 + 58^2 + 58^2 - \frac{(53 + 63 + 58 + 58)^2}{4}\right\}$$
$$\left\{60^2 - \frac{60^2}{1}\right\}$$
$$\left\{63^2 + 63^2 - \frac{(63 + 63)^2}{2}\right\}$$
$$\left\{68^2 + 73^2 - \frac{(68 + 73)^2}{2}\right\}$$
$$\left\{70^2 + 70^2 + 70^2 - \frac{(70 + 70 + 70)^2}{3}\right\}$$
$$\left\{73^2 - \frac{73^2}{1}\right\}$$
$$\left\{73^2 + 70^2 + 73^2 - \frac{(73 + 70 + 73)^2}{3}\right\}$$
$$\left\{70^2 - \frac{70^2}{1}\right\}$$

$= 0 + 0 + 80.8 + 52.67 + 12.67 + 50 + 0 + 0 + 12.5 + 0 + 0 + 6 + 0$
$= 214.64$

f. SS (TC) = SS (S) – SS (G)
= 488.67 - 214.64
= 274.03

List of Varians Analysis of Simple Linear Regression

Source of variation	Dk	Sum Square	Sum of Total	F Distribution
Total	N	ΣY^2	ΣY^2	
Coefficient (a) Regression (b|a) Rest	1 1 n-2	SS(a) SS(b|a) SS(S)	SS(a) S^2_{reg} = SS(b|a) $S^2_{sis} = \frac{SS(S)}{}$	 $\frac{S^2_{reg}}{}$

			n-2	S^2_{sis}
F-Observed Error	k-2 n-k	SS(TC) SS(G)	$S^2_{TC} = \frac{SS(TC)}{k-2}$ $S^2_{G} = \frac{SS(G)}{n-k}$	 $\frac{S^2_{TC}}{S^2_{G}}$

Result of Varian Analysis of Simple Linear Regression

Source of variation	Dk	Sum Square	Sum of Total	F Distribution
Total	30	3308.76		
Coefficient (a) Regression (b|a) Rest	1 1 28	110292.03 2066.30 488.67	 2066.30 17.45	 118.41
F-Observed Error	11 17	274.03 214.64	24.91 12.62	 1.97

After the average sum of square was calculated, then the test of significance regression had to be done to know whether the hypothesis of linear regression was significance or not.

Significant Test

This test is used to measure the regression model test. There are two possible hypothesis namely Ho and Ha.

Ho : Coefficient of regression is not significant (b = 0)

Ha ; Coefficient of regression is significant (b ≠ 0)

The hypothesis of this coefficient regression is Ha. It means has correlation between variable X and Y is significant.

To prove that hypothesis = 0, the formula is:

$$\text{F-Observed} = \frac{S^2_{reg}}{S^2_{sis}} = \frac{2066.30}{17.45} = 118.41$$

F-observed had to be compared to F table whose numerator degree of freedom is 1 and denominator degree of freedom is n-2. To prove hypothesis, the criterion is: F-observed > F table, it means that Ho is rejected based on chosen error level and appropriate degree of freedom.If the error level is 1%, F table (1.28) = 7.64. The conclusion was F-observed < F table for error level 1%.

Ho was rejected and Ha was accepted. Thus, the coefficient regression was significant.

Linearity Regression test

This test is used to measure the whether the regression equation is linear or non linear regression. Ho : Linear regression. Ha : Non linear regression

The formula is:

F-Observed $= \frac{S^2_{TC}}{S^2_G}$

$= \frac{24.91}{12.62}$

$= 1.97$

F-observed had to be compared to F table whose numerator degree of freedom is k – 2 and denominator degree of freedom is n - k. To prove that the hypothesis = 0, the criterion is: F-observed < F table, it means that Ho is rejected based on chosen error level and appropriate degree of freedom. If the error level is 1%, F table (11.17) = 3.52. The conclusion was F-observed < F table for error level 1%. And Ho was accepted and Ha was rejected. Thus, the regression was linear.

Coefficient Correlation Test

This test is used to measure the hypothesis has a positive correlationor no, the hypothesis of this research is Ha that three is a positive correlation between students' vocabulary mastery and their translation ability.

According to Sugiyono (2015, p.228), the formula is:

$$r_{xy} = \frac{N\sum XiYi - (\sum Xi)(\sum Yi)}{\sqrt{(N\sum Xi^2 - (\sum Xi)^2 (N\sum Yi^2 - (\sum Yi)^2)}}$$

Where:

r = Correlation Coefficient

Xi = Score of students' vocabulary mastery

Yi = Score of students' translation ability

N = Number of respondents

$$r = \frac{(30)(114710) - (1841)(1819)}{\sqrt{[30(117551) - (1841)^2][30(112847) - (1819)^2]}}$$

$$= \frac{3441300 - 3348779}{\sqrt{(3526530 - 3389281)(3385410 - 3308761)}}$$

$$= \frac{92521}{\sqrt{(137249)(76649)}}$$

$$= \frac{92521}{\sqrt{10519998601}}$$

$$= \frac{92521}{102567.04}$$

$$= 0.902$$

t-test

t-test is a test to measure the significant of coefficient correlation (Sugiyono, 2016, p.230). According to him, the formula of t-test is:

$$t\text{-observed} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where:

r = Correlation Coefficient

n = Number of Respondents

$$= \frac{0.902\sqrt{30-2}}{\sqrt{1-(0.902)^2}}$$

$$= \frac{0.902\sqrt{28}}{\sqrt{1-0.81}}$$

$$= \frac{(0.902)(5.291)}{\sqrt{0.18}}$$

$$= \frac{4.772}{0.424} = 11.254$$

t-table = n – 2

= 30 – 2

= 28

= 2.467

From the computation above, test of significant (t-observed) (11.254) and (t-table) 2.467. The researcher use the level of significant 1% (0.01). this called significant correlation because t-observed 11.254 > t-table 2.467. Thus, Ha was accepted and Ho was rejected.

Correlation Coefficient Interpretation

Coefficient Interval	Interpretation
0.00 – 0.199	Very Low Correlation
0.20 – 0.399	Low Correlation
0.40 – 0.599	Moderate Correlation
0.60 – 0.799	High Correlation
0.80 – 1.000	Very High Correlation

It is clear, based on the data computation, researcher found that there was a positive correlation between two variables. It was proven by score r_{xy} was 0.902. Then, r-observed above had to be compared to r table whose error levels was 1% and n = 30. Thus: If the error level is 1% r table is 0.463.The conclusion

was r-observed > r observed for error level 1%. Thus Ha was accepted and Ho was rejected. Then, the coefficient determination is

CD = r^2
= 0.902^2
= 0.81 x 100%
= 81%

It means that translation ability 81% was affected by the vocabulary mastery. The rest was 19% was affected by the other variables or factors.

CONCLUSION

The students' vocabulary mastery of the second grade SMK Nahdlatul Ulama is fair. It is showed by the mean score of the test that is 61.3. The students' translation ability is fair also. It is showed by the mean score of the test that is 60.6. The regression model between the students' vocabulary mastery and their translation ability which is significant with F-observed 118.41which was less than the F table 7.64 in 1% level of error. The correlation between students' vocabulary mastery and their translation ability which is linear with F-observed 1.97 which less than F table 3.52 in 1% level of error. There is positive correlation between students' vocabulary mastery and their translation ability, whose total 0.902 (very high correlation).The coefficient determination is 81%. It means that translation ability 81% was affected by the students' vocabulary mastery. The rest was 19% was affected by the other variables or factors.

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