CAKRAWALA PENDIDIKAN

FORUM KOMUNIKASI ILMIAH DAN EKSPRESI KREATIF ILMU PENDIDIKAN

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Forum Komunikasi Ilmiah dan Ekspresi Kreatif Ilmu Pendidikan

Terbit dua kali setahun pada bulan April dan Oktober
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1. Artikel belum pernah diterbitkan di media cetak yang lainnya.
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3. Pengetikan Artikel dalam format Microsoft Word, ukuran kertas A4, spasi 1.5, jenis huruf *Times New Roman*; ukuran huruf 12. Dengan jumlah halaman; 10 – 20 halaman.
4. Artikel yang dimuat dalam Jurnal ini meliputi tulisan tentang hasil penelitian, gagasan konseptual, kajian dan aplikasi teori, tinjauan kepustakaan, dan tinjauan buku baru.
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6. Artikel konseptual meliputi; (a) judul, (b) nama penulis, (c) abstrak dalam bahasa Indonesia dan Inggris (maksimal 200 kata), (d) kata kunci, (e) identitas penulis (tanpa gelar akademik), (f) pendahuluan yang berisi latar belakang dan tujuan atau ruang lingkup tulisan, (g) isi/pembahasan (terbagi atas sub-sub judul), (h) penutup, dan (i) daftar rujukan. Artikel hasil penelitian disajikan dengan sistematika: (a) judul, (b) nama-nama peneliti, (c) abstrak dalam bahasa Indonesia dan Inggris (maksimal 200 kata), (d) kata kunci, (e) identitas penulis (tanpa gelar akademik), (f) pendahuluan yang berisi pembahasan kepustakaan dan tujuan penelitian, (g) metode, (h) hasil, (i) pembahasan (j) kesimpulan dan saran, dan (k) daftar rujukan.
7. Daftar rujukan disajikan mengikuti tata cara seperti contoh berikut dan diurutkan secara alfabetis dan kronologis.

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CAKRAWALA PENDIDIKAN

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Daftar Isi

MULTIPLE CORRELATIONS OF STUDENTS' STRUCTURE AND VOCABULARY MASTERY TOWARD THEIR WRITING ABILITY OF THE FIRST YEAR STUDENTS AT MTS MAFTAHUL ULUM KARANGSONO 1

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Abstrak: Penelitian ini menggunakan desain korelasi. Ada tiga variabel yang diteliti dalam penelitian ini, yaitu: Struktur dan kosa kata sebagai variabel independen dan kemampuan menulis sebagai variabel dependen.Tujuan dari penelitian ini adalah untuk mengetahui apakah ada beberapa hubungan yang signifikan struktur dan penguasaan kosakata siswa terhadap kemampuan menulis mereka. Subyek dalam penelitian ini adalah siswa tahun pertama MTs Maftahul Ulum Karangsono 1 Blitar tahun ajaran 2022/2023. Pengumpulan data dilakukan dengan menggunakan tes. Alat ukur kemampuan siswa dalam struktur, kosakata dan tes tertulis yang dilakukan dengan lembar kerja. Untuk mengetahui koefisien korelasi, data yang dianalisis dengan menggunakan rumus korelasi Pearson Product Moment. Hasil penelitian menunjukkan bahwa ada beberapa hubungan yang signifikan antara struktur siswa dan penguasaan kosakata terhadap kemampuan menulis mereka. Penelitian ini berakhir dengan memberikan saran yang penting bagi guru, siswa, dan administrator sekolah untuk membantu memperbaiki struktur kalimat dan penguasaan kosakata dalam menulis teks deskriptif dan bidang pendidikan pada umumnya.

Kata Kunci: Hubungan, Struktur, Kosakata dan Kemampuan membuat karangan

Abstract: This research employs the correlation design. There are three variables investigated in this study, namely: Structure and vocabulary as independent variables and writing ability as dependent variable.. The purpose of this study is to know whether there are significant multiple correlation of students' structure and vocabulary mastery toward their writing ability. The subjects in this study were the first year students of MTs Maftahul Ulum Karangsono 1 Blitar school year 2022/2023. The data was collected using tests. The students' structure, vocabulary and writing test that are carried out by work sheet. To find out the coefficient correlation, data analyzed by using the correlation formula of Pearson Product Moment. The result showed that there are significant multiple correlation of students' structure and vocabulary mastery toward their writing ability This study ends by offering suggestion which is important for teacher, students, and the school administrator to help improve students' structure and vocabulary mastery in writing a descriptive text and education field in general.

Key words: Correlation, Structure, Vocabulary and Writing Ability

BACKGROUND OF THE STUDY

Language is something important in communication for all people. In our daily activity, we always do what we call as communication. Communication can be in form of verbal and non-verbal language. On a verbal communication, the delivery of the message can be done in two ways, written or spoken. Written language can be in form of newspaper, magazine, book, article etc. While spoken language is in form of speaking, one way direction and two or more ways direction. English subject is a primary subject at Madrasah Tsanawiyah, which function as a means to develop students' knowledge in science, technology and culture.

The aim of teaching English is to make students master the four language skills: listening, speaking, reading and writing. In educational, writing subject is very important to help students consider that writing is difficult subject. They have to master vocabulary, structure, punctuation and spelling, so they can write correctly.

Structure is always used in all language skills: listening, speaking, reading and writing. However, teaching English is needed especially for writing subject, mainly in the master of grammar, the students are able to write correctly. Almost every student gets trouble because there are certain rule in studying English. So, structure would influence writing ability. In other words, both of them can not be separated.

Vocabulary is total number of words that make up a language. It is one of important aspects and role in developing the first language skill. Having many vocabularies makes it easier for students to develop their four skills. By mastering vocabulary they get information to express the ideas especially in written language in form an article, books etc.

A Descriptive text is one kind of English writing text. It is one subject of semester 2 in MTs Maftahul Ulum Karangsono 1 Blitar too. The students think that this topic is difficult. On the other hand structure and vocabulary are parts of writing English text. So the difficulties in writing English text is influenced by mastering structure and vocabulary. In this case to write a descriptive text are needed mastering structure of sentence especially simple present tense and some vocabularies.

A. Structure

The structure is used to combine some words or elements to make a good sentences. Without structure we can not write sentences well. According to Hornby: Structure is the way in which the parts of something are put together. In this case without structure also the writing can not be done.

The structure mastery is the ability of the students in applying English structure.

Stockwell (1969 : 293) as quoted by Roshida (2007) says that sentences

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are not formed by randomly stringing words together from dictionary but there are exceedingly tight restrictions.

It means that the students may able to write the sentences or paragraph which they know the meaning from dictionary, but without knowledge of structure mastery the words and sentences will be unreadable. Not knowing the structure will keep the students from writing good sentences or paragraphs.

In his famous book used world wide, Allen (1969 : 07) as quoted by Roshida (2007) said that common problem of English language structure have to be overcome by all students. This means that mastering English structure is very important in developing the language skills.

According to Finicehiaro in her book: "English as a second language" says that: Structure is the recurring pattern of the language as they accur of words, arrangement of word in utterance and the grammar of the language.

Azar (2003) says that there are three fundamental tenses, namely:

1. The simple present
2. The simple past
3. The future

B. Vocabulary

The American Heritage Dictionary of English Language (1982:1353) defines vocabulary as "The sum of words used by, understood by, or the command of particular person, social group, profession, trade, or the like". This definition refers to all the words that a person uses and understands to communicate with other people in certain situation.

Words according to Read (2001:1), are "The basic building blocks of language, the units of meaning from which larger structures such as sentences, paragraph, and the whole text are formed". Thus without words there will be no language, as a River (1981)statement cited in Thalib (1996:1) that "It is impossible to learn a language without vocabulary and words". According to Norris as quoted by Rahmawati (2010), vocabulary is a list of words and often phrases, usually arranged alphabetically and defined or translated all the word of language. Moreover based on definition of vocabulary on the web is a listing of the words used in some enterprice a language user's knowledge of words the system of technique or symbol serving as a means of expression. (Oxford Advanced Learners Dictionary of Current English AS Hornby 1974)

The vocabulary mastery is the ability of the students in applied English vocabulary. According to Stockwell (1969 : 293) as quoted by Roshida (2007): says that sentences are not formed by randomly stringing words together from dictionary and there are exceedingly tight restrictions.

Means students may able to write the sentences or paragraph which they know the meaning from dictionary, but without knowledge of vocabulary mastery the words and sentences will be unreadable. Without knowing the vocabulary it will be hard for the students to write the sentences or paragraphs.

Allen (1969 : 07) as quoted by Hendra (2007) states that common problem of English language structure have to be overcome by all students. This means that mastering English vocabulary is very important in developing the language skills.

According to Finicehiaro quoted by Roshida (2007): "English as a second language" says that Structure is the recurring pattern of the language as they accur of words, arrangement of word in utterance and the grammar of the language.

According to Collier (1971:1) "when student has mastered the fundamental grammatical patterns of language, his next task is to master its vocabulary that needs". It is obvious that vocabulary is something important in learning a language especially English.

From the statement above it means that vocabulary is considered as the most important part in learning a language. It is impossible for the students read, write and speak a foreign language without having enough knowledge of vocabulary. Learning the new vocabulary does not only mean memorizing the form of the word but also understand the meaning. So, it make us easier to write an English text.

According to Jackson and Amuela (2002:2) as quoted by Roshida (2007), words classified on the basic of the roles; they play in the structure of sentences. He divides words into two classes; large classes and small classes. While Hatch and Brown (2002:219) classify words into major word classes or open classes. However, both classifications have the same concept.

According Doff (1988:19) as quoted by Roshida (2007)stated: There are two types of vocabulary:

1. Active vocabulary is words in which students will need to understand and also by themselves.
2. Passive vocabulary is words in which the teachers want their students to understand.

C.   Writing

Writing is the students activity in trying to write the composition in English. The writing depend on the students' ability. According to Heaton (1975:127) in his book "Writing English Test" says that:

The writing composition in task which involves the students in manipulating words in grammatically correct sentences and in linking those sentences to form a piece of continuous writing which successfully communicates the writer's though and ideas on a certain topic".

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The correlation of structure and vocabulary mastery in writing ability has been offered by some expert. They are as the follows:

1. According to Hornby it says that: "Writing is the activity of written or printed word". It means that writing is the transfer into target language by the students' ideas.

2. Leech in his book "A Communicative Grammar of English (1989:1) says that: "To use language property, we of course have to know the grammatical structures of language and their meaning".

Oshima and Haque in their book "Writing Academic English" say that: "Writing is a skill that people in all walks of life must perform almost daily".

Writing ability means the students able to write composition of English by using good sentences and the criteria of paragraph.

According to Auer at all (1981:1) says that, writing is one way of making meaning from experience for ourselves and others. The outcome visible language is satisfying permanent record of thought effective ways of arranging and connecting up what we want to say.

According to Pamela I Sharpe in his book entitled "How to prepare for Toefl" (1992:521) says that :there are three steps that most good writers follow in organizing writing. You should use these steps when you write a short composition like that on the three:

a. First, tell your reader what you are going to write.

b. Second, write it

c. Third, tell your reader what you write.

There are kinds of writing, as follows:

1. Exposition
2. Argumentation
3. Persuasion
4. Narration
5. Description

Correlation

Correlation is a connection between two ideas, fact etc, especially when one may be the cause of the other. It is very important to understand the meaning correlation. Yordan defined correlation as the average degree of the resemblance that exists between two tests, two traits in the same group of individuals, each individual being measured twice. This means that correlation is the extent in which the result of another test is the set to be the same group of person. Lado states that correlation with the measurement of the variation existing between variables. He further maintains that correlation analysis makes possible such observation as these, dealing with the relationship with objective result.

1. Coefficient of Correlation

Guilford describes a coefficient of correlation as a single number that tells us to what extant two things are related. A review

previously the relationship between two traits is usually determined by mean of correlation, method, by using of some statistical analysis. It is quite reasonable for Throndike Hagen to describe a coefficient of correlation as a type statistical index indicating the degree of relationship with objectively expressible result.

2. Uses of correlation

The important of correlation method is as a matter of fact, is clearly admitted by Guilforrd in his words, "No single statistical produces has opened up so many new avenues of discovery in psychology, and behavioral science in general, as that of correlation, this is understandable when we remember scientific progress depends upon finding out what things are correlated and things are not"

Correlation has most significantly been used as a basic on which prediction can be made. Ferguson considers that correlation and prediction is concerned with estimating one variable from knowledge of another, it would certainly not be exaggerated to say correlation, by definition in the most fitting partner.

3. Multiple Correlation of Structure, Vocabulary and Writing ability

One reason why students find writing an English text is difficult, because of their lack of structure and vocabulary. Whereas in fact of structure and vocabulary are the most important thing in writing ability.

Most of us if we find the difficult word, we still just continue our writing in hope that the word we write is not really important or that its meaning will become clear later on. But sometimes, these word that we passed usually as the key of our writing. We cannot catch the structure and vocabulary from our writing as well as possible. So looking up the difficult words in dictionary is better for us.

Descriptive text is one subject of semester 2 in MTs Maftahul Ulum Karangsono 1. It is difficult enough to learn by the students. Descriptive is a type of text function to describe particular thing, animal and person. The students can use simple present and adjective clause in writing descriptive text. The method that are usually used to teach writing in the class are guided writing and individual writing. In guided writing method the students' activity is to write out grammar exercise. Whereas in individual writing the students' activity is to write paragraph individually, they work alone in their own task. Those method do not increase the students' writing ability, the problems are the students still feel strange and face some difficulties with English lesson especially in developing paragraph.

RESEARCH METHOD

Research method represents the way of uses to get data and analyze, developed data in order to obtaining knowledge by using procedure which is reliable and

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trustworthy. With this chapter will be elaborate research design, population and sampling, research instrument, data collecting, and data analysis.

A. Research Design

This research has correlation design. The design of this research is correlative one where the researcher uses correlation approach to find out multiple correlations of students' structure and vocabulary mastery toward writing ability. The purpose of correlation study is finding out multiple correlations of students' structure and vocabulary mastery toward their writing ability at the first year students of MTs Maftahul Ulum Karangsono Because this study is correlation in this study the researcher doesn't manipulate the data.

There are two kinds of variables in this research namely independent and dependent variable. The first variable is the students' structure and vocabulary score which are taken by counting how many score of structure and vocabulary that students know from the test given by researcher. It is considered as independent variable (variable x). The second variable is their writing ability score which is taken from writing test. It is considered as dependent variable (variable y). The students' structure, vocabulary and writing test that are carried out by work sheet.

B. Population and Sample

In the research, population and sample are essential. The population is all subjects which are observed. Sample is part of population which is observed.

The population of this research is the first year students of MTs Maftahul Ulum Karangsono 1. There are 2 classes as population of this research. There, researcher took 1 class consisting of 44 students as a sample.

The sample are taken by purposive sampling. In this case, every student has opportunity to be chosen as sample. Therefore, the samples are representative.

C. Research Instrument

Research instrument is the tool to collect the data from the object to solve the problem that has been formulated. The data needed for this research is test. The test used in this research are and objective test and subjective test. The objective test is divided into two parts, the first structure which consist of 20 items and the second vocabulary which consist of 20 items. The subjective test is writing ability which consist of 1 item. The researcher used one type of objective test. It is multiple – choice type. It can be scored objectively and can measure learning out come directly.

1. Try Out of the test

Try out was conducted on Monday April 1st up to August 31th 2022 to the first year students of MTs Maftahul Ulum. There are 44 students used as the subject of try out. This try out is done to find out the reliability of test.

2. Reliability of test

To make sure that the data collected by the instrument are appropriate, dependable, and applicable, the instruments must be valid and reliable. One quality the researcher must consider to get the valid test is that the test must be reliable since reliability is necessary for validity. Reliability is meant the stability of test score. A test can not measure anything well unless it measures consistently. It meant the characteristic of a good test to be death with reliability is got by using test – retest procedure. The reliability of measurement is usually in term of correlation of two set of scores made by some students on the some test. There are various ways of estimating the reliability of measurements have been formulated by statistics. There are four commonly used in educational researchers, namely:

1. Resetting Method
2. Alternate Method
3. Split – half Method
4. Kuder Richardson Formula,

which based on the correlation of interconsistency.

To measure the reliability of the test in this study, the writer will use the split – half technique. She will correlate the first half and the second half using the parson product moment formula. The formula is as follows:

$$r_{xy} = \frac{\sum xy - \frac{(\sum X) - (\sum Y)}{N}}{\sqrt{(\sum x^2) - \frac{(\sum x)^2}{N}(\sum y^2) - \frac{(\sum y)^2}{N}}}$$

Where:

r_{xy} = coefficient of correlation of two halves of the scores / the reliability of the test

N = the number of the students

X = the scores of the first half

Y = the scores of the second half

Because correlation index got still indicates the relationship of the two halves of the tests, so in order to get reliability index or the tests, the writer uses the Spearman Brown formula:

$$R_{11} = \frac{(2xr_{1/2.1/2})}{(1+r_{1/2.1/2})}$$

Where:

R_{11} = coefficient reliability of the test

$R_{1/2.1/2} = R_{xy}$

Table 3.1 The result of the analysis of the reliability test

Number of Sample	Sub test	r. Observable	r. table at level of significance		Conclusion	Reliability of the test
			0.05	0.01		
34	Structure	0.999	0.325	0.418	The test are reliability at 0.05 level of significance	Reliable
34	Vocabulary	0.997	0.325	0.418	The test are reliability at 0.05	Reliable

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Number of Sample	Sub test	r. Observable	r. table at level of significance		Conclusion	Reliability of the test
			0.05	0.01		
					level of significance	
34	Writing	0.995	0.367	0.418	The test are reliability at 0.05 level of significance	Reliable

Based on the computation it can be conclude that the instrument of the test was reliable. Because r observe grater than r table at level significant 5% that is 0.999 > 0.325 for structure, 0.997 > 0.325 for vocabulary and 0.995 > 0.325 for writing ability. The data of reliability test is presented in appendix 1.

3. Validity Test

The validity of a test is the extent to which an instrument measures what it supposed to measure.

The researcher used content validity because it is good to know the achievement of the test. She made the test based on the English material on the SMP / MTs curriculum then she construct by arranging the variable into sub variable and indicators. The last she designs the test based on the indicators. The items of the test are the lesson that has been discussed in the teaching learning process.

Table 3.2 Content validity of vocabulary

No	The Material of The Curriculum	The Material used in Research	Number of Item
1	Transactional chat 1	Greeting	5
2	Transactional chat 2	Asking and Giving information	5
3	Transactional chat 3	Instruction	4
4	Short Functional text 1	Asking for service and favor	8
5	Short Functional text 2	Simple present Tense	8

Table 3.3 Content validity of structure

No	The Material of The Curriculum	The Material used in Research	Number of Item
1	Transactional chat 1	Introduction	5
2	Transactional chat 2	Thanking and Forgiving	5
3	Transactional chat 3	Shopping List	4
4	Short Functional text 1	Introduction	8
5	Short Functional text 2	Showing Congratulation	8

Table 3.4 Content validity of structure

No	The Material of The Curriculum	The Material used in Research	Number of Item
1	Short Functional text 2	Simple present Tense	1

D. Technique of Analyzing The Data

1. To compute the correlation between students' structure, vocabulary mastery and their writing ability

$$r_{xy} = \frac{N.\sum xy - (\sum x)(\sum y)^2}{\sqrt{N.\sum x^2 - (\sum x)^2(N.\sum y^2 - (\sum y)^2)}}$$

Where:

r_{xy} = coefficient correlation between variable x and y

N = the total of subject

X = the total score of variable one

Y = the total score variable two

$$R_{x_1 x_2 y} = \sqrt{\frac{r_{x_1 y}^2 + r_{x_2 y}^2 - 2.r_{x_1 y}.r_{x_2 y}.r_{x_1 x_2}}{1 - r_{x_1 x_2}^2}}$$

Where:

$R_{x_1 x_2 y}$ = coefficient of multiple correlation on students' structure, vocabulary and writing ability

$r_{x_1 y}$ = coefficient of correlation on students' structure and writing ability

$r_{x_2 y}$ = coefficient of correlation on students' vocabulary and writing ability

$r_{x_1 x_2}$ = coefficient of correlation on students' structure and vocabulary

3. To compute the significance of multiple correlation between students' structure

Pearson Product Moment correlation is used in this study by suharsini Arikunto (1988:1206)

The Pearson Product Moment formula as follows:

2. To compute the multiple correlation between students' structure and vocabulary mastery to their writing ability

The writer will use the following Pearson Product Moment formula by Suharsini Arikunto (1986:159)

and vocabulary mastery to their writing ability

The writer will use $F_{observe}$.

The computation is as follows:

$$F_o = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

Where:

F_o = F observe

R = The coefficient of the multiple correlation of students' structure and vocabulary mastery toward writing ability

k = total of independent variable

n = total of sample

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E. The Procedure of Data Analysis

The Data of structure and vocabulary mastery are analysis in the following procedures:

Students' score is:

$$\frac{The\ students'\ correct\ answer}{Maximal\ score} \ x\ 100$$

2. The second step is to correct the answer sheet of writing mastery. The

1. The first step is to correct the answer sheet of structure and vocabulary mastery. The correct answer is given 2,5 point.

characteristic of students' writing score is:

Table 3.5 Writing score

Topic sentence	Supporting sentence	Unity	Coherence	Conclusion
20	10	20	20	20

3. The third step, score are given to each respondent answer sheet as follow
   a. Structure test consist of 30 items, the highest score is 100
   b. Vocabulary test consist of 30 items, the highest score is 100
   c. Writing test consist of 1 item, the highest score is 90

RESEARCH FINDING

Description of the Data

Before analyzing the data, it is necessary to describe the data. According to this title, there are three variables namely structure, vocabulary and writing ability. To determine the data, the researcher takes instrument namely test. The tests used in the research are structure test, vocabulary test and writing ability test. The structure and vocabulary tests measure the ability of writing. After analyzing the data, the researcher wants to report the result of the analysis. All the answers are scored then she made the computation of each score. It is computed in order to know the level of respondents form computation, the researcher got score that was shown in table 4.1

Table 4.1 The List of students' structure, vocabulary, and their writing in Learning English of the first Year Students.

No Subject	Students' structure (X1)	Students' vocabulary (X2)	Writing ability (Y)
1	50	60	65
2	60	70	65
3	60	70	75

No Subject	Students' structure (X1)	Students' vocabulary (X2)	Writing ability (Y)
4	60	75	70
5	65	75	75
6	70	70	80
7	50	60	65
8	90	80	90
9	90	80	85
10	60	70	65
11	70	70	75
12	55	60	70
13	50	60	60
14	60	60	65
15	60	65	60
16	65	65	75
17	80	75	85
18	55	60	60
19	60	75	75
20	65	75	75
21	65	75	70
22	55	70	60
23	60	70	65
24	55	70	60
25	55	70	60
26	80	80	75
27	60	70	60
28	75	75	80
29	70	75	70
30	55	70	70
31	60	75	75
32	55	75	70
33	80	70	60
34	80	70	70
35	70	75	75
36	50	70	60
37	90	85	90
38	75	75	70
39	60	70	65
40	50	70	55
41	75	75	80
42	50	70	65
43	65	70	75
44	70	75	60
	2,835	3,125	3,070

4.2 Analysis Data

Having finished the field research by using structure test, vocabulary test and writing ability test, the researcher uses statistic computation of the Pearson Product Moment Formula to analyze the data

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from the result of structure, vocabulary and writing ability test.

4.2.1 The Correlation Between Students' Structure and Writing Ability

Table 4.2 The result analyzes of the correlation between the students' score in structure and writing

No Subject	X_1	Y	$X_1{}^2$	Y^2	$X^1 Y^1$
1	50	65	2,500	4,225	3,250
2	60	65	3,600	4,225	3,900
3	60	75	3,600	5,625	4,500
4	60	70	3,600	4,900	4,200
5	65	75	4,225	5,625	4,875
6	70	80	4,900	6,400	5,600
7	50	65	2,500	4,225	3,250
8	90	90	8,100	8,100	8,100
9	90	85	8,100	7,225	7,650
10	60	65	3,600	4,225	3,900
11	70	75	4,900	5,625	5,250
12	55	70	3,025	4,900	3,850
13	50	60	2,500	3,600	3,000
14	60	65	3,600	4,225	3,900
15	60	60	3,600	3,600	3,600
16	65	75	4,225	5,625	4,875
17	80	85	6,400	7,225	6,800
18	55	60	3,025	3,600	3,300
19	60	75	3,600	4,900	4,200
20	65	75	4,225	5,625	4,875
21	65	70	4,225	4,900	4,550
22	55	60	3,025	3,600	3,300
23	60	65	3,600	4,225	3,900
24	55	60	3,025	3,600	3,300
25	55	60	3,025	3,600	3,300
26	80	75	6,400	5,625	6,000
27	60	60	3,600	3,600	3,600
28	75	80	5,625	6,400	6,000
29	70	70	4,900	4,900	4,900
30	55	70	3,025	4,900	3,850
31	60	75	3,600	5,625	4,500
32	55	70	3,025	4,900	3,850
33	80	60	6,400	3,600	4,800
34	80	70	6,400	4,900	5,600
35	70	75	4,900	5,625	5,250
36	50	60	2,500	3.600	3,000
37	90	90	8,100	8,100	8,100
38	75	70	5,625	4,900	5,250
39	60	65	3,600	4,225	3,900
40	50	55	2,500	3,025	2,750
41	75	80	5,625	6,400	6,000

No Subject	X_1	Y	$X_1{}^2$	Y^2	X^1Y^1
42	50	65	2,500	4,225	3,250
43	65	75	4,225	5,625	4,875
44	70	60	4,900	3,600	4,200
	2,835	3,070	188,425	217,400	200,900

To compute the analysis of statistical data was used the Product Moment Formula as follows:

$$r_{X_1Y} = \frac{N\sum X_1 Y - (\sum X_1)(\sum Y)}{\sqrt{\{N.\sum X_1{}^2 - (X_1)^2\}\{N.\sum Y^2 - (\sum Y)^2\}}}$$

$$= \frac{44 \times 200,900 - (2,835)(3,070)}{\sqrt{\{44 \times 188,425 - (2,835)^2\}\{44 \times 217,400 - (3,070)^2\}}}$$

$$= \frac{8,839,600 - 8,703,450}{\sqrt{\{8,290,700 - 8,037,225\}\{9,565,600 - 9,424,900\}}}$$

$$= \frac{136,150}{\sqrt{\{253,475\}\{140,700\}}} = \frac{136,150}{188,848.9674}$$

$$= 0.72094 = 0.721$$

The coefficient of correlation between students' structure and writing ability which is obtained in final computation by using Pearson Product Moment Formula is 0.721. This is larger than r table Product Moment.

To know the correlation structure and vocabulary in 5% and 1% significance, the researcher used r table with df formula as follows:

$$df = N - nr$$

Where:

df = degrees of freedom

N = total number of respondents

nr = number of variable

$$df = 44 - 3$$
$$= 41$$

df = 41, so it is used nearest df that is 40.

At the degree of significance of 5% = 0.304

At the degree of significance of 1% = 0.393

4.2.2 The Correlation Between Students' Vocabulary and Writing Ability

Table 4.3 The result analyzes of the correlation between the students' score in vocabulary and writing

No Subject	X_2	Y	$X_2{}^2$	Y^2	X_2Y
1	60	65	3,600	4,225	3,900
2	70	65	4,900	4,225	4,550
3	70	75	4,900	5,625	5,250
4	75	70	5,625	4,900	5,250
5	75	75	5,625	5,625	5,625
6	70	80	4,900	6,400	5,600
7	60	65	3,600	4,225	3,900
8	80	90	6,400	8,100	7,200
9	80	85	6,400	7,225	6,800

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No Subject	X_2	Y	$X_2{}^2$	Y^2	X_2Y
10	70	65	4,900	4,225	4,550
11	70	75	4,900	5,625	5,250
12	60	70	3,600	4,900	4,200
13	60	60	3,600	3,600	3,600
14	60	65	3,600	4,225	3,900
15	65	60	4,225	3,600	3,900
16	65	75	4,225	5,625	4,875
17	75	85	5,625	7,225	6,375
18	60	60	3,600	3,600	3,600
19	75	75	5,625	4,900	5,625
20	75	75	5,625	5,625	5,625
21	75	70	5,625	4,900	5,250
22	70	60	4,900	3,600	4,200
23	70	65	4,900	4,225	4,550
24	70	60	4,900	3,600	4,200
25	70	60	4,900	3,600	4,200
26	80	75	6,400	5,625	6,000
27	70	60	4,900	3,600	4,200
28	75	80	5,625	6,400	6,000
29	75	70	5,625	4,900	5,250
30	70	70	4,900	4,900	4,900
31	75	75	5,,625	5,625	5,625
32	75	70	5,625	4,900	5,250
33	70	60	4,900	3,600	4,200
34	70	70	4,900	4,900	4,900
35	75	75	5,625	5,625	5,625
36	70	60	4,900	3,600	4,200
37	85	90	7,225	8,100	7,650
38	75	70	5,625	4,900	5,250
39	70	65	4,900	4,225	4,550
40	70	55	4,900	3,025	3,850
41	75	80	5,625	6,400	6,000
42	70	65	4,900	4,225	4,550
43	70	75	4,900	5,625	5,250
44	75	60	5,625	3,600	4,500
	3,125	3,070	223,425	217,400	219,725

The computation of students' vocabulary mastery and writing ability is as follows:

$$r_{X_2Y} = \frac{N \sum X_2Y - (\sum X_2)(\sum Y)}{\sqrt{\{N.\sum X_2{}^2 - (X_2)^2\}\{N.\sum Y^2 - (\sum Y)^2\}}}$$

$$= \frac{44 \; x \; 219,725 - (3,125)(3,070)}{\sqrt{\{44 \; x \; 223,425 - (3,125)^2\}\{44 \; x \; 217,400 - (3,070)^2\}}}$$

$$= \frac{9,667,900 - 9,593,750}{\sqrt{\{9,830,700 - 9,765,625\}\{9,565,600 - 9,424,900\}}}$$

$$= \frac{74,150}{\sqrt{\{65,075\}\{140,700\}}} = \frac{74,150}{95,687.26404}$$

$$= 0.7749 = 0.775$$

The coefficient of correlation between students' structure and writing ability which is obtained in final computation by using Pearson Product Moment Formula is 0.775.

This is larger than r table Product Moment.

4.2.3 The Correlation Between Students' Structure and Vocabulary Mastery

Table 4.4 The result analyzes of the correlation between the students' score in structure and vocabulary

No Subject	X_1	X_2	$X_1{}^2$	$X_2{}^2$	$X_1 X_2$
1	50	60	2,500	3,600	3,000
2	60	70	3,600	4,900	4,200
3	60	70	3,600	4,900	4,200
4	60	75	3,600	5,625	4,500
5	65	75	4,225	5,625	4,875
6	70	70	4,900	4,900	4,900
7	50	60	2,500	3,600	3,000
8	90	80	8,100	6,400	7,200
9	90	80	8,100	6,400	7,200
10	60	70	3,600	4,900	4,200
11	70	70	4,900	4,900	4,900
12	55	60	3,025	3,600	3,300
13	50	60	2,500	3,600	3,000
14	60	60	3,600	3,600	3,600
15	60	65	3,600	4,225	3,900
16	65	65	4,225	4,225	4,225
17	80	75	6,400	5,625	6,000
18	55	60	3,025	3,600	3,300
19	60	75	3,600	5,625	4,500
20	65	75	4225	5,625	4,875
21	65	75	4.,225	5,625	4,875
22	55	70	3,025	4,900	3,850
23	60	70	3,600	4,900	4,200
24	55	70	3,025	4,900	3,850
25	55	70	3,025	4,900	3,850
26	80	80	6,400	6,400	6,400
27	60	70	3,600	4,900	4,200
28	75	75	5,625	5,625	5,625
29	70	75	4,900	5,625	5,250
30	55	70	3,025	4,900	3,850
31	60	75	3,600	5,625	4,500
32	55	75	3,025	5,625	4,125
33	80	70	6,400	4,900	5,600
34	80	70	6,400	4,900	5,600
35	70	75	4,900	5,625	5,250
36	50	70	2,500	4,900	3,500
37	90	85	8,100	7,225	7,650
38	75	75	5,625	5,625	5,625
39	60	70	3,600	4,900	4,200

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No Subject	X_1	X_2	$X_1{}^2$	$X_2{}^2$	$X_1 X_2$
40	50	70	2,500	4,900	3,500
41	75	75	5,625	5,625	5,625
42	50	70	2,500	4,900	3,500
43	65	70	4,225	4,900	4,550
44	70	75	4,900	5,625	5,250
	2,835	3,125	188,425	223,425	203,300

The computation of students' structure and vocabulary mastery is as follows:

$$r_{X_1 X_2} = \frac{N \sum X_1 X_2 - (\sum X_1)(\sum X_2)}{\sqrt{\{N.\sum X_1{}^2 - (\sum X_1)^2\}\{N.\sum X_2{}^2 - (\sum X_2)^2\}}}$$

$$= \frac{44 \times 203,300 - (2,835)(3,125)}{\sqrt{\{44 \times 188,425 - (2,835)^2\}\{44 \times 223,425 - (3,125)^2\}}}$$

$$= \frac{8,945,200 - 8,859,375}{\sqrt{\{253,475\}\{65,075\}}}$$

$$= \frac{85,825}{128,432.4166}$$

$$= 0.6682$$

$$= 0.668$$

The coefficient of correlation between students' structure and writing ability which is obtained in final computation by using Pearson Product Moment Formula is 0.668. This is larger than r table Product Moment.

$$R_{YX_1 X_2} = \sqrt{\frac{r^2 y x_1 + r^2 y x_2 - 2.r y x_1 . r y x_2 . r x_1 x_2}{1 - r^2 x_1 x_2}}$$

$$R_{YX_1 X_2} = \sqrt{\frac{(0.72)^2 + (0.77)^2 - 2.(0.72)(0.77)(0.67)}{1 - (0.67)^2}}$$

$$= \sqrt{\frac{0.5184 + 0.5929 - 0.742896}{1 - 0.4489}}$$

$$= \sqrt{\frac{0.368404}{0.5511}}$$

$$= \sqrt{0.668488477}$$

$$= 0.8176 = 0.818$$

4.2.4 The multiple correlations of students' structure, vocabulary mastery and their writing ability make the $\left(R_{YX_1 X_2}\right)$ formula.

The computation is as follows:

The result can be seen the following table:

Table 4.5

Variable correlation	Result
Students' structure and writing ability	0.721 as $r_{X_1 Y}$
Students' vocabulary mastery and writing ability	0.775 as $r_{X_2 Y}$
Students' structure and vocabulary mastery	0.668 as $r_{X_1 X_2}$
Students' structure and vocabulary mastery toward writing ability	0.818 as $R_{YX_1 X_2}$

The coefficient of correlation of students' structure and vocabulary mastery toward writing ability which is obtained in final computation by using Pearson Product Moment Formula is 0.818. This is larger than r table Product Moment.

From the table 4.5 we know that $R_{YX_1X_2} > r_{X_1Y}, r_{X_2Y}, r_{X_1X_2}$ so the significance of the R is tested by $F_{observe}$. The computation is as follows:

$$F_o = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

Where:

F_o = F observe

R = The coefficient of correlation of students' structure and vocabulary mastery toward writing ability

k = total of independent variable

n = total of sample

$$F_o = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

$$F_o = \frac{(0,818)^2/2}{(1-(0,818)^2)/(44-2-1)}$$

$$F_o = \frac{0,335}{0,00807} = 41.512$$

From the result of F_o above is combined by F_t with dk column = k = 2 and dk row = (n − k − 1) = 41 at level significance of 5% F_t = 3.23. So $F_o > F_t$, it mean coefficient of multiple correlation of students'

structure and vocabulary mastery toward writing ability is significant.

4.3 Interpretation of the Data

This part deals with the interpretation of the data has been analyzed by using the correlation of Pearson Product Moment. The purpose is to find out the significant correlation of three variables.

According to the data that had been analyzed, it could be seen that df = 41 is closer to r table df = 40, so the writer took the r table df = 40. The researcher get point 0.304 on r table for the 5% significance degree, and point 0.393 on 1% significance degree.

1. The correlation coefficient calculated with r = 0.721 is greater than value r at the table (0.721 > 0304 and 0.721 > 0.393)

Thus it can be concluded that the hypothesis is accepted. Based on the hypothesis testing it is found that there is positive and significant correlation between students' structure and writing ability at the first year students of MTs Maftahul Ulum Karangsono 1.

To make it clear, the testing of hypothesis is shown as follows:

Achievement	Calculated r	r. table at level of significance		Conclusion	Note	Research Design
		0.05	0.01			
Structure and writing ability	0.721	0.304	0.393	The hypothesis is accepted	There is significant correlation	44

2. The correlation coefficient calculated with r = 0.721

is greater than value r at the table (0.775 > 0.304 and 0.775 > 0.393)

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Thus it can be concluded that the hypothesis is accepted. Based on the hypothesis testing it is found that there is positive significant correlation between students'

vocabulary and writing ability at the first year students of MTs Maftahul Ulum Karangsono 1.

To make it clear, the testing of hypothesis is shown as follows:

Achievement	Calculated r	r. table at level of significance		Conclusion	Note	Research Design
		0.05	0.01			
Vocabulary and writing ability	0.775	0.304	0.393	The hypothesis is accepted	There is significant correlation	44

3. The correlation coefficient calculated with r = 0.721 is greater than value r at the table (0.668 > 0.304 and 0.668 > 0.393)
Thus it can be concluded that the hypothesis is accepted. Based on the hypothesis testing it is found that

there is positive significant correlation between students' structure and vocabulary mastery at the first year students of MTs Maftahul Ulum Karangsono 1.
To make it clear, the testing of hypothesis is shown as follows:

Achievement	Calculated r	r. table at level of significance		Conclusion	Note	Research Design
		0.05	0.01			
Structure and vocabulary	0.668	0.304	0.393	The hypothesis is accepted	There is significant correlation	44

4. From the result of F_o above is combined by F_t with dk column = k = 2 and dk row = (n – k – 1) = 41 at level significance of 5% F_t = 3.23. So F_h > F_t , it mean coefficient of multiple correlation of students' structure and vocabulary mastery toward writing ability is significant.

Thus it can be concluded that the hypothesis is accepted. Based on the hypothesis testing it is found that there is positive significant multiple correlation of students' structure and vocabulary mastery toward writing ability at the first year students of MTs Maftahul Ulum Karangsono 1.
To make it clear, the testing of hypothesis is shown as follows:

Achievement	Calculated f	f. table at level of significance		Conclusion	Note	Research Design
		0.05	0.01			
Structure and vocabulary toward writing ability	41.512	3.23	5.18	The hypothesis is accepted	There is significant multiple correlation	44

CONCLUSION AND SUGGESTION

Conclusion

From the results and discussion, the score of structure and writing ability test have satisfactorily linier correlation, in other word, students achievement in structure and writing ability reflect their achievement in writing ability. It means that there is significant correlation between vocabulary and writing ability at first year students of MTs Maftahul Ulum Karangsono 1. It is important to note that this research does not out causal relationship between two variables, that is the variable x caused the coefficient of correlation which have been calculated by using the formula of product moment is measure of linier correlation only. Moreover, it can also be concluded that the score of vocabulary and writing ability test have satisfactorily linier correlation, in other word, students achievement in vocabulary and writing ability reflect their achievement in writing ability.

The score of structure and vocabulary test have satisfactorily linier correlation, in other word, students achievement in structure and vocabulary reflect their achievement in vocabulary. Furthermore, there is significant multiple correlation of structure and vocabulary toward writing ability at first year students of MTs Maftahul Ulum Karangsono since the score of structure, vocabulary and writing ability test have satisfactorily linier correlation, in other word, students achievement in structure, vocabulary, and writing ability reflect their achievement in writing ability.

5.2 Suggestion

After analyzing the result of structure and vocabulary mastery, the writer can suggest that:

1. The teacher must be able to help students' structure in their writing study of English, so they get good writing result.
2. To improve the students' vocabulary mastery in writing of English, the student should read books or magazine or

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other materials written in English. It will broaden their horizon and enrich their vocabulary.

3. The headmaster provides the library with interesting English books. So the students can improve their knowledge about structure and vocabulary.

4. The students themselves make some effort to read any interesting English article or story in order to get a good mastery.

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