The Effect Of Project-Based Learning On Students' Vocabulary Achievement At Second Grade Of Islamic Junior High School

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ABSTRACT

This article aims to find out the empirical evidence of enriching students' vocabulary through project-based learning (PjBL). Project-based learning (Project Based Learning) is a learning method that uses projects as the core of learning. This is an innovative learning method that involves project work where students work independently in constructing their learning and culminating in real products. The researcher uses experiments and samples are students of the second grade of junior high in Sugihwaras Bojonegoro. The result shows that the pretest average of the experimental group is 2.100. The post-test average of the experimental group is 2.500. The obtained t-test is 15, 20, whereas the t-table is 2, 02 for a = 5%. The t-test score is higher than the t-table (15, 20› 2, 02). It means that Ha is accepted while Ho is rejected. Since the t-test score was higher than the t-table, that can include project-based learning were an effective model in enriching students' vocabulary of English learning process at the second grade of Islamic Junior High in Sugihwaras Bojonegoro.

Keywords: English Vocabulary, Project-Based Learning

I. INTRODUCTION

Learning vocabulary as one of the basic communication tools is often considered by language learners as the most difficult field in language learning (Çelik & Toptaş, 2010). Many researchers (Coady & Huckin, 1997; Derakhshan & Khatir, 2015; Feng & Webb, 2019; Grabe & Stoller, 2018; Mokhtar, Rawian, Yahaya, Abdullah, & Mohamed, 2017; Peters, Heynen, & Puimege, 2016; Tosun, 2015) considered a good knowledge of vocabulary to be crucial for

communicative competence. Indeed, in order to understand the meaning of different kinds of English sentences and passages, it is important to have excellent and huge vocabulary storage (Nelson, Dole, Hosp, & Hosp, 2015). (Maftoon, Hamidi, & Sarem, 2015; Tozcu & Coady, 2004) acquires adequate knowledge of vocabulary is one of the significant issues which enhance reading comprehension.

Because of the efficient strategy to enhance students' vocabulary competence can be an identification of efficient language learning strategies (LLSs) followed by training the learners how to utilize them effectively. When we learn a language, there are four skills that we need for complete communication (Reed, Petscher, & Foorman, 2016). Communicative competence includes linguistic competence which students can achieve by having the abilities in grammar and vocabulary (Vaca Torres & Rodríguez Gómez, 2017). Besides, that English learners must comprehend the vocabulary component. Further, teaching and learning will improve success if students' vocabulary supported by some factors as a method that is used in teaching English competence. In this research, the writer's attention focused on vocabulary as one of the English language components.

There is no doubt that vocabulary plays a significant role in foreign language learning. Adequate knowledge of words is a prerequisite for effective language use. Learners whose vocabulary is below a specific threshold level struggle to decode the essential elements of a text, which makes it hard for them to develop any higher-level understanding of the context. Vocabulary is an essential component of all uses language (Aziz & Dewi, 2019). Furthermore, (Kim, 2016) explain that Vocabularies are components of language proficiency and provide much of the basis for how well learners learn a language. Without an extensive vocabulary strategy for acquiring new vocabulary, learners often achieve less than their potential and maybe discouraged from making use of language learning opportunities around them such listening to the radio, listening to the native speakers, using the language in different contexts, reading, or watching television.

This study aims to share versatile teaching methods suitable for teaching English (project-based, problem-based learning, and "just-in-time" teaching) are taught in the teaching process. In problem-based learning, students are confronted with an open-ended, real-world problem and work in teams to identify learning needs and

develop a viable solution, with instructors acting as facilitators rather than primary sources of information. Problem-based learning is not a secure teaching method to implement. It requires considerable subject expertise and flexibility on the part of instructors, who may be forced out of their areas of expertise (Fasihuddin & Skinner, 2015). Project-based learning begins with an assignment to carry out one or more tasks that lead to the production of the final product design, a model, a device or a computer simulation and is very suitable for engineering education. The culmination of the project is usually a written report summarizing the procedure used to produce the product and presenting the outcome.

Project-based Learning is one of the methods recommended to be used. Project-Based learning refers to a method allowing students to design, plan, and carry out an extended project that produces a publicly exhibited output such as a product, publication, or presentation (Hugerat, 2016). Through PBL, the learners are engaged in purposeful communication to complete authentic activities (project-work), so that they have the opportunity to use the language in a relatively natural context.

Project-Based Learning focuses on students' vocabulary while constructing personally meaningful artifacts (Vaca Torres & Rodríguez Gómez, 2017), the tone of a classroom may change. It is uncomfortable for the students and the teacher. Different students will be researching different topics, so the role of the teacher, as well as the role of the student, may change. It's important to begin slowly. One experienced teacher with twenty-five years under her belt suggests her comfort zone would include two projects rather than a continuous series of project-based science units (Prince & Felder, 2006). The class time it is necessitated by project-based learning forces the discussion.

Overall, the research on Project Based Learning reports positive outcomes related to student learning in the areas of content knowledge, collaborative skills, engagement and motivation, and critical thinking and problem-solving skills. There are five criteria to define project-based learning; Projects are central, not peripheral to the curriculum, projects are focused on questions or problems that 'drive' students to encounter and struggle with the central concepts and principals of the discipline, projects involve students in a constructive investigation, projects are student-driven to some

significant degree, and projects are realistic, not school-like (Prince & Felder, 2006).

Project-based learning has several positive effects on student content knowledge. Compared to traditional classes, students in project-based learning classes performed better on assessments of content knowledge also reported that had a positive effect on specific groups of students. For example, students with average to low verbal ability and students with little previous content knowledge learned more in Project classes than in traditional classes. For instance, students working on a geometry project linked to architecture and design utilized measurement skills. Project-based Learning is one of the methods recommended to be used.

II.   LITERATURE REVIEW

A.   *Understanding of Language Vocabulary*

Generally, vocabulary can be defined as a list of words with their meanings, especially at the back of a book used for teaching a foreign language. Vocabulary is an essential component of all uses language (Lin, Liu, Sun, Wong, & Yeung, 2017). In other words, vocabulary is always related to the words and dictionary. There are some definitions of vocabulary by some experts. As taken from Wikipedia, vocabulary refers to all the words known and used by a particular person. It usually grows and evolves with age, and serves as a useful and fundamental tool for communication and acquiring knowledge.

A similar statement the term of vocabulary refers to a list or set of words for a particular language or a list or set of words that individual speakers of language might use (Treiman, Decker, & Kessler, 2019; Wang, Teng, & Chen, 2015). It means that there are more than one words used by the speaker of a specific language. Vocabulary also refers to a group of words used by a person as a means of communication (Wang et al., 2015). Furthermore, Vocabulary is the total number of words that have been mastered by students to produce a language in communication.

Vocabulary cannot be separated from the language; it is an essential part of the language because it is a component of language that maintains all of the information about the meaning and using a word in the language (Marx et al., 2015). It means that vocabulary is a vital part of the language, without vocabulary the language cannot be used to maintain all information in language. Vocabulary can be defined as sound that expresses a meaning and forms an

independent unit in a language. It can be said that vocabulary is the smallest unit of speech that processes individuals meaning to speak and can be used to interact with one another and vocabulary can be said as a group of words on specific languages as a part of teaching-learning in a foreign language.

B. *Project-Based Learning*

Project-based learning has a long history. As far back as the early 1900s, John Dewey supported "learning by doing" (Ulrich, 2016). Students learn best by doing, not by having information "poured" into their heads. They would demonstrate their knowledge through creativity and collaboration. Students should be provided with opportunities to think from themselves and articulate their thoughts.

This sentiment is also reflected in constructivism and constructionism. Constructivism is a learning theory of how student constructs knowledge from experience, which is unique to each individual (Anthony, 1996; Duffy & Jonassen, 2013; Perkins, 1991). Through interacting with their environment, conducting investigations, conversations or activities, an individual constructs new knowledge on his/ her prior knowledge, and thus each individual's knowledge construction is different.

Project-Based Learning is a student-driven, teacher-facilitated approach to learning (Thomas, 2000). Learners pursue knowledge by asking questions that have piqued their natural curiosity. The genesis of project is an inquiry. Students develop a question and are guided through research under the teacher's supervision. Discoveries are illustrated by creating a project to share with a select audience. Organizers support systematization of the processes that will be implemented throughout the research and project phases of Project-Based Learning. Student choice is a key element of this approach. Teachers oversee each step of the process and approve each choice before the student embarks in a direction. Children with similar inquiries may elect to work cooperatively, thereby nurturing twenty-first-century collaboration and communication skills and honoring students' learning styles or preferences.

Project-based learning is not a supplementary activity to support learning. It is the basis of the curriculum. Most projects include reading, writing, and mathematics by nature. Many inquiries are science-based or originate from current

social problems. The outcome of Project Based Learning is greater understanding of a topic, deeper learning, higher-level reading, and increased motivation to learn. Project is a key strategy for creating independent thinkers and learners. Children solve real-world problems by designing their inquiries, planning their learning, organizing their research, and implementing a multitude of learning strategies. Students flourish under this child-driven, motivating approach to learning and gain valuable skills that will build a strong foundation for their future in our global economy (Bell, 2010; Erdogan & Bozeman, 2015).

Project-based learning is a student-centered in which students learn about subject materials through the experience of problem-solving by using specific terms. Problem-based learning is quickly complicated by the use of specific terms that have a variety of definitions and understandings in broader literature (Savery, 2015). Project-Based Learning is not a new instructional approach, but it now has new respectability and an ever-growing number of proponents. Overall, the research on Project-based learning reports positive outcomes related to student learning in the areas of content knowledge, collaborative skills, engagement and motivation, and

critical thinking and problem-solving skills. This summary utilizes learning there are five criteria **to** define project-based learning in are central, not peripheral to the curriculum";(b) "projects are project-based: (a) "Projects questions or problems that 'drive-students to encounter (and struggle with) the central concepts and principals of the discipline";(c) "projects involve students in a constructive investigation";(d) "projects are student-driven to some significant degree"; and (e) "projects are realistic, not school-like (Savery, 2015)".

III.   METHOD

The researcher used Pre-experimental, which is conducted without a controlling group. The one-group pretest and posttest design usually involves three steps: administering a pretest measuring the dependent variable, applying the experimental treatment X to the subjects, and administering a post-test, again measuring the dependent variable

A.   Participants

Students who carry out this activity are second-grade students as many as 36 students which consists of male and female students.

B. Instrument

The researcher needs to make a plan in preparation or instrument commonly. Grating instrument preparation showed a link between the variables studied with data sources from which the data be retrieved, the method used and the instruments are arranged. Test item consists of two forms, namely questions about the pre-test and post-test. At the pre-test, the question does not require a grating instrument, while for the matter post-test grating instrument is needed.

Based on the instrument are made, researchers can measure that project-based learning can enrich students' vocabulary in the English learning process. Students should be able to understand and answer a question from text. If connecting with the collecting data, the researcher uses:

1. The instrument of a test is T-test as follow pre-test and post-test

2. The instrument of the questionnaire method is questionnaire Scale Likert

3. The instrument of documentation method is a book documentation

IV. RESULT AND DISCUSSION

The first item validity analysis is to know the index validity of the test. Try out tests were conducted for VIII K of MTs Mambaus Sholihin. Class VIII K consisted of 36 respondents. They were given a try out using the instrument that will be used in the experiment class. The following is the interpretation of the tryout test to find out the validity and reliability of the instrument.

a. Validity is obtained that from 25 test items; 20 test items are valid and 5 test items, which are invalid because the computation result of their r_{xy} value is lower than their r_{table} value.

The following is the example of item validity computation for item number 5 and for the other items would use the same formula.

Formula:

N $= 22$

$\Sigma Y = 389$

ΣXY $= 353$ $\Sigma X2$ $= 19$

ΣX $= 19$ $\Sigma Y^2 = 7363$

$$r_{xy} \quad \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N\Sigma X^2 - (\Sigma X^2)\}\{N\Sigma Y^2 - (\Sigma Y^2)\}}}$$

criteria: the item is valid if $r_{xy} > r_{table}$

rxy

$$\frac{(22 \times 353)-(19)(389)}{\sqrt{\{(22 \times 19)-(19^2)\}\{(22 \times 7363)-(389^2)\}}}$$

= 0, 481

Because of r_{xy} > r_{table} , so item number 5 is valid.

b. Reliability of the TryOut Test

It is to find out whether a test has a higher critical score and give the stability or consistency of the test scores or not. From the computation of reliability of the try out instruments, it was obtained 0.783, for α 5 % with N = 22 It was obtained 0.423.thus, the value resulted from computation is higher than its critical value. It could be concluded that the instruments that were used in this research were reliable. The complete analysis and the computation as follow: Before computing the reliability, the writer had to compute Varian (S^2) with the formula below:

N = 22   Σ y = 389

Σ y² = 7363 Σ pq = 5,492

$$S^2 = \frac{\Sigma y^2 - \frac{(\Sigma y)^2}{N}}{N}$$

$$S2 = \frac{7363 - \frac{(389)^2}{22}}{22}$$

$$S^2 = \frac{7363-6878}{22}$$

$$S2 = \frac{485}{22}$$

S2 = 22, 05

The computation of the Varian (S^2) is 20, 72. After finding the Varian (S^2) the writer computed the reliability of the test as follows: $r_{11} = \left(\frac{n}{n-1}\right)\left(\frac{S-\Sigma pq}{S^2}\right)$

$$r_{11} = \left(\frac{25}{22-1}\right)\left(\frac{22,05 - 5,492}{22,05}\right)$$

$$r_{11} = 1,04 \left(\frac{16,56}{22,05}\right)$$

= 0,782

The result shows that 0,782 is more than 0,423, it's meant that the items of instrument were valid.

a. Discriminating Power of Try Out Test

The discrimination power of an item indicated the extent to which the item

discriminated between the tests, separating the more able tests from the less able. To do this analysis, the number of try-out subjects was divided into two groups, upper and lower groups

$$D = \frac{B_A}{J_A} - \frac{B_B}{J_B} = P_A - P_B$$

0, 00 < DP ≤ 0, 20: Less

0, 20 < DP ≤ 0, 40: Enough

0, 41 < DP ≤ 0, 70: Good

0, 71 < DP ≤ 1, 00: Excellent.

Below is the example of the computation discriminating power on item number 5.

BA = 11

BB = 8

JA = 11

JB = 11

$$D = \frac{11}{11} - \frac{11}{8} = 0,27$$

The result obtained D = 0, 27

Because of the result is between 0,21-0,40. So the item number 15 is enough.

b. Difficulty Level of Try Out Test

The following is the computation of the level difficulty for item number 5 and for the other items would use the same formula.

Criteria:

0.00 ≤ P< 0.30 is difficult

0.30 ≤ P< 0.70 is sufficient

0.70 ≤ P< 1.00 is easy

Calculation

B = 11 = 8 = 19

JS = 22

$$P = \frac{B}{JS}$$

$$P = \frac{19}{22}$$

P = 0, 86

Because of the result is between 0, 70 – 1,00, so the item number is easy.

The second analysis represents the result of the pre-test and post-test that was done both in the experimental and control group. This analysis will answer the research question "Does Project-Based Learning model enrich students' vocabulary in second grade of junior high school of Darul Huda Sugihwaras Bojonegoro" We can conclude

project Based Learning is sufficient when the result of posttest of the experimental class has significant differences or the assumption that class is equal is not fulfilled.

Based on the result of VIII students in the experimental group, before they were taught students vocabulary through Project-Based Learning, it found that the maximum score was 80 and the minimal score is 35.

1) The Data of Value Pre-Test And Post-Test Student In Students Vocabulary. This data procurable from result Pre and Posttest value vocabulary through Project-Based learning in the English learning process of typescript last.

Table 1
Tabulating the result of pre-test and post-test

No	Name	pretest	postest
1	AQ	45	60
2	AR	50	60
3	AF	55	70
4	BY	50	65
5	C	50	60
6	DF	45	60
7	DR	45	60
8	FO	35	55
9	FA	45	60
10	FK	55	65
11	GM	50	60
12	HYK	70	70
13	HI	60	85
14	IMS	55	65
15	I	60	75
16	INR	65	80
17	JAS	60	80
18	MAQ	70	75
19	MBM	75	90
20	MB	50	65
21	MRA	55	60
22	MSA	70	70
23	MMBP	55	65
34	MS	50	70
25	NFS	75	80
26	PL	55	65
27	PBP	60	85
28	RIS	40	55
29	RA	60	70
30	SSFA	40	65
31	VSK	60	70
32	VS	80	95
33	ZA	60	75
34	LF	50	60
35	AFA	60	80
36	AK	70	75

Table (4.1) shows that there is a significant effect size of each item and the total degree of test, which means the project-based strategy had a large effect and improved the English of the experimental group. Consequently, it can be assured that the project-based strategy had a significant effect on learning English among second grade of junior high school. Consequently, the null hypothesis was rejected.

The data analysis form contents from research, with the data analysis that be intended to born or "t" test propriety on

hypotheses have forward is for try propriety about does Project-Based Learning model enrich students vocabulary typescript in English learning process at second-grade students of MTs Darul Huda Sugihwaras Bojonegoro.

a. The data lacked

b. The result of value pre-test and post-test

c. Alternative Hypotheses (Ha) that try building on research problems that explain as the following: does the Project-Based Learning model enrich students' vocabulary in the English learning process.

d. Null Hypotheses (Ho), not the Project-Based Learning model, enrich students' vocabulary in the English learning process.

e. For the forward "t" test hypotheses as already forward, so the writer uses analysis statistics "t" test with table extrapolation the following:

Table 2
Tabulating the result of the data experimental class

No	Pre-Test	Post-Test	Gain (d) posttest and pre-test	D2
1	45	60	+15	225
2	50	60	+10	100
3	55	70	+15	225
4	50	65	+15	225
5	50	60	+10	100
6	45	60	+15	225
7	45	60	+15	225
8	35	55	+20	400
9	45	60	+15	225
10	55	65	+10	100
11	50	60	+10	100
12	70	70	-	
13	60	85	+25	625
14	55	65	+10	100
15	60	75	+15	225
16	65	80	+15	
17	60	80	+20	400
18	70	75	+5	25
19	75	90	+15	225
20	50	65	+15	225
21	55	60	+5	25
22	70	70	-	
23	55	65	+10	100
24	50	70	+20	400
25	75	80	+5	25
26	55	65	+10	100
27	60	85	+25	625
28	40	55	+15	225
29	60	70	+10	100
30	40	65	+15	225
31	60	70	+10	100
32	80	95	+15	225
33	60	75	+15	225
34	50	60	+10	100
35	60	80	+20	400
36	70	75	+5	25
N = 36	X1 = 2100	X2 = 2500	Md = Σd = 460	D2 = 6775

The table shows the result pre-test and post-test and finding the gain in the experimental class — the total of students in second grade in MTs. Darul Huda is 36. The total of prê-test in the experimental class is 2100 and the total score of the post-test is 2500. The finding between pre-test and post-test (Md) is 460, and the next total (D2) is 6775. From the explanation above, it can be concluded that the total of pre-test and post-test scores were improving.

So, Data analysis of pre-test and post-test experimental class. In this research, the researcher analysis the data based on the result of the test.

$$Md = \Sigma d \qquad = \frac{460}{36} = 12,77$$

$$\Sigma X^2 d \qquad = \Sigma d^2 - \frac{(\Sigma d)^2}{N}$$

$$= 6775 - \frac{(460)^2}{36}$$

$$= 6775 - \frac{211600}{36} = 6775$$

$$-5877,77$$

$$= 897,23$$

$$t = \frac{12,77}{\sqrt{\frac{897,23}{1260}}}$$

$$= \frac{12,77}{\sqrt{0,71}}$$

$$= \frac{12,77}{0,84}$$

$$= 15,20$$

The result of the research shows that the experimental class has a mean value of 2.100 in the pre-test. Meanwhile, the post-test (the students who are taught using project-based learning) has a mean value of 2.500. It can be said that the student's vocabulary of the post-test is higher than the pre-test. Based on the t-test analysis that was done, it was found that the t-score (15,20) was higher than t-table by using 5% alpha of significance (2,02) and t-table by using 1% alpha of significance (2,71).

Since *score t > table t* , it proved that there was a significant difference between the improvement of students vocabulary that was given a new treatment (using project-based learning) and the improvement of

students vocabulary that was given a usual treatment.

Since the obtained t-score was higher than the critical score on the table, the difference was statistical significance. Therefore, based on the computation there was a significant difference in the vocabulary of students achievement scores between students were taught using project-based learning model and those were taught without using project-based learning for the second-grade students of MTs Darul Huda Sugihwaras Bojonegoro. So it can be said that using project-based learning is effective to improve students' vocabulary, and so the action hypothesis is accepted.

Analysis Questionnaire

In this analysis, the researcher gives a questionnaire about students' vocabulary. The researcher takes all of the respondents from the second grade of junior high school Darul Huda and the total all of this is 36 students as criteria 30 questionnaire with the follows 15 for variable X and 15 to variable Y.

The questionnaire has three alternative answers.

1. a with score 3
2. b with score 2
3. c with score 1 to know clearly about the result of analysis questionnaire the researcher gives the data as follows:

Table 4. 3
The Score of Students Values of Variable X

No	1	2	3	4	5	6	7	8	9	10	Total Score X
1	3	3	3	3	3	3	3	3	3	3	39
2	2	2	3	3	3	3	3	1	3	3	33
3	3	2	3	3	3	1	3	3	3	2	34
4	3	2	3	2	3	3	2	3	3	3	27
5	3	3	3	3	3	3	2	2	2	3	36
6	3	3	2	2	3	3	3	2	1	3	35
7	3	3	3	3	3	2	3	3	3	3	30
8	3	3	3	3	3	3	3	3	3	3	34
9	3	3	1	1	3	3	2	3	3	3	31
10	3	3	3	3	3	3	3	2	3	3	30
11	3	3	3	3	3	3	3	3	3	3	37
12	3	3	3	3	2	2	3	3	3	3	35
13	3	3	3	3	2	2	2	3	3	1	35
14	3	3	3	3	3	3	3	3	3	3	39
15	3	2	2	3	3	3	2	3	3	2	37
16	3	3	3	3	3	3	3	3	3	3	41
17	2	2	2	2	3	3	3	3	3	3	42
18	3	3	3	3	3	3	3	3	3	3	42
19	3	3	3	3	3	3	2	2	3	3	42
20	3	3	3	3	3	3	3	3	3	3	37
21	3	3	3	3	3	3	3	3	2	2	40
22	3	3	3	3	2	3	3	3	3	3	39
23	3	3	3	3	3	3	3	3	3	3	41

No	1	2	3	4	5	6	7	8	9	10
24	3	3	3	3	3	3	3	3	3	3
25	3	2	3	3	3	3	3	3	3	3
26	2	3	3	3	3	3	2	1	3	3
27	3	3	3	3	3	3	3	3	3	3
28	3	2	2	2	2	2	3	3	3	3
29	2	3	3	3	2	3	3	3	3	3
30	3	3	3	3	3	3	2	2	3	3
31	3	3	3	3	3	3	3	3	3	3
32	3	3	3	3	3	3	2	3	3	3
33	2	3	3	3	3	3	3	3	2	2
34	3	3	3	3	3	3	3	3	3	3
35	2	2	2	3	3	3	3	3	3	3
36	3	3	1	2	2	2	2	2	2	3

No	1	2	3	4	5	6	7	8	9	10	Total
13	3	3	3	3	3	3	3	3	3	3	43
14	3	3	3	3	3	3	3	3	3	3	44
15	3	3	3	3	3	3	3	3	3	3	45
16	3	3	3	3	2	3	1	3	3	3	41
17	3	3	3	3	3	3	1	3	3	3	42
18	3	3	3	3	3	3	1	3	3	3	42
19	3	3	3	3	3	3	3	3	3	3	45
20	3	3	3	3	3	3	3	3	3	3	45
21	3	3	3	3	3	3	3	3	3	3	44
22	3	3	3	3	3	3	3	3	3	3	43
23	3	3	3	3	3	3	3	3	3	3	43
24	3	3	3	3	3	3	1	3	3	3	43
25	3	3	3	3	3	3	3	3	3	3	45
26	3	3	3	3	3	3	3	3	3	3	42
27	3	3	3	3	3	3	3	3	3	3	45
28	3	3	3	3	3	3	3	2	1	3	35
29	3	3	3	3	3	3	3	3	3	3	45
30	3	3	3	3	3	3	3	3	3	3	45
31	3	3	3	3	3	3	3	3	3	3	45
32	3	3	3	3	3	3	3	3	3	3	45
33	3	3	3	3	3	3	3	3	3	3	45
34	3	3	3	3	3	3	3	3	3	3	45
35	3	3	3	3	3	3	3	3	3	3	45
36	3	3	3	3	3	3	3	3	3	3	45
											1560

Based on the resulting questionnaire of students vocabulary that students vocabulary of student second grade of MTs. Darul Huda is good enough.

Table 4
The score of students values of variable Y

No	1	2	3	4	5	6	7	8	9	10	Total Score Y
1	2	1	1	3	1	2	2	1	3	3	33
2	3	3	3	3	3	3	3	3	3	3	45
3	3	3	3	3	3	3	3	3	3	3	45
4	3	3	3	3	3	3	3	2	3	3	43
5	3	3	3	3	3	3	3	3	3	3	44
6	3	3	3	3	3	3	3	3	3	3	45
7	3	3	3	3	3	3	2	3	3	3	43
8	3	3	3	3	3	3	3	3	3	3	45
9	3	3	3	3	3	3	2	3	3	3	45
10	3	3	3	3	1	3	3	3	3	3	42
11	3	3	3	3	3	3	3	3	3	3	42
12	3	3	3	3	3	3	1	3	3	3	42

Based on the result of the questionnaire the researcher got the result of the effectiveness of Project-Based Learning in the English learning process. Further, the result of the questionnaire is good enough.

The table shows the result variable X and variable Y and in the experimental class. The total of students in second grade in MTs.

Darul Huda is 36. The total of the questionnaire in the experimental class is 30 and the total score of variable X is1366 and variable Y is 1560. The finding between variable X and variable Y is 460, and the next steps is finds X^2 and Y^2

Table 5
Result of variable X and Y

No. Student	Variable X	Variable Y
1	39	33
2	33	45
3	34	45
4	27	45
5	36	44
6	35	45
7	30	43
8	34	45
9	31	43
10	30	42
11	37	42
12	35	42
13	35	43
14	39	44
15	37	45
16	41	41
17	42	42
18	42	42
19	42	45
20	37	45
21	40	44
22	39	43
23	41	45
24	40	42
25	45	45
26	41	35
27	40	45
28	45	45
29	40	45
30	40	45
31	38	45
32	39	45
33	45	45
34	39	45
35	45	45
36	33	45
	1366	1560

Table 6
Result Product Moment

No	X	Y	X^2	Y^2	XY
1	39	33	1521	1089	1287
2	33	45	1089	2025	1485
3	34	45	1156	2025	1530
4	27	45	729	1849	1161
5	36	44	1296	1936	1584
6	35	45	1225	2025	1575
7	30	43	900	1849	1290
8	34	45	1156	2025	2530
9	31	43	9651	1849	1333
10	30	42	900	1764	1260
11	37	42	1369	1764	1554
12	35	42	1225	1764	1470
13	35	43	1225	1849	1505
14	39	44	1521	1936	1716
15	37	45	1369	2025	1665
16	41	41	1681	1681	1681
17	42	42	1764	1764	1764
18	42	42	1764	1764	1764
19	42	45	1764	2025	1890
20	37	45	1369	2025	1665
21	40	44	1600	1936	1760
22	39	43	1521	1849	1677

23	41	45	1681	1936	1804
24	40	42	1600	1849	1720
25	45	45	2025	2025	2025
26	41	35	1681	1764	1722
27	40	45	1600	2025	1800
28	45	45	2025	1225	1575
29	40	45	1600	2025	1800
30	40	45	1600	2025	1800
31	38	45	1444	2025	1710
32	39	45	1521	2025	1755
33	45	45	2025	2025	2025
34	39	45	1521	2025	1755
35	45	45	2025	2025	2025
36	33	45	1089	2025	1485
	1366	1560	60247	53542	67842

$$r_{xy} = \frac{2168892 - 2130960}{}$$

$$r_{xy} = \frac{37932}{73230858}$$

$$r_{xy} = 0,5179$$

After to know the total r_{xy} is 0, 5179 further, the last steps are testing r_{xy} that the questionnaire is significant or not significant as formula 5% and 1%.

Based on the score r_{xy} the researcher conduct 36 students of the second grade of MTs Darul Huda. A number of n is 36 respondents by table r_{xy} product moment is 0,5179. Score r-table is 0,304 for 5%, and the value of r above is 0,5179 from the result of the questionnaire the researcher include that questionnaire with 1% is 0, 424. A further result of calculating the table r more significant than the result of the product-moment.

Overal thus, the hypothesis in students' vocabulary is invalid and the result of the hypothesis of project-based learning is valid. The collection of values r is 0,579 located

N   = 36

ΣX = 1560

ΣY = 1366

ΣX^2 = 53542

ΣY^2 = 67842

ΣXY = 60247

To know the effectiveness of project based learning in students vocabulary, so the researcher conducts with the r_{xy} product moment as follows:

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

$$r_{xy} = \frac{38(60247) - (1366)(1560)}{\sqrt{(36(53542 - (1366^2))\}\{(36(67842) - (1560^2))\}}}$$

between 0, 40 – 0,599. So the researcher includes that method analysis can use with enough interpretation.

The r_{xy} result (0,5179) shows that there was a significant effect size for 5% and 1% in students' vocabulary. This means that the performance of the students improved significantly as they mastered the vocabulary. This means that students gained suitable abilities to start and finish the vocabularies as they developed their interest and motivation to share in the presentation of the project. Moreover, they evaluated each other's projects through vocabulary. Consequently, the null hypothesis was rejected.

V.   CONCLUSION

Based on the finding and discussion in the previous chapter, it could be concluded that the use of project-based learning to enrich students' vocabulary in the English learning process is very effective. The results of the data analysis are:

1. The average score of experimental (the students who were taught by project-based learning) was 2.100 for the pretest and 2.500 for the post-test. Moreover, the average score of questionnaires (between variable x and Y) was 1.366 for the variable X and 1.560 for the variable Y. The researcher includes that Project Based Learning is enriched students' vocabulary in students a second grade of junior high school MTs. Darul Huda Sugihwaras Bojonegoro.

2. Project-based learning is useful in enriching students' vocabulary at second grade of MTs. Darul Huda Sugihwaras Bojonegoro. The obtained score of the t-test proved it. The t-test showed that t-score 1.520 was higher than t-table 2,02 for significance 5%. It meant that Ha was accepted and Ho was rejected. Since the t-score was higher than the t-table, and the questionnaire score is there was a sign.

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