PROBLEM BASED LEARNING; AN EFFICIENT STRATEGY ON ENHANCING STUDENTS' GRAMMAR ABILITY

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Abstract

This research is aimed to investigate the effect of Problem Based Learning Strategy on Enhancing Students' Grammar Ability in Passive Voice. The research design was experiment research. The population in this research was by simple random sampling technique. The instrument used was grammar test. Test was given in pre-test and post-test. The data were analyzed by using quantitave method. Then, the researcher analyzed the research by using t-test formula. The findings indicated that score of students in post-test is highest compared post-test after Problem Based Learning Strategy on grammar ability in passive voice. The average score of students in pre-test experimental class are 62.91. and the average score of students in post-test experimental class are 74.16. the research showed that the value of t-count is 19.984 and the df (degree of freedom) is 22. The values in the table of significance of 5%, df = 22 is 2.0738. the hypothesis showed t-count is higher than t-table, namely 19.984 > 2.0738. it means that Problem Based Learning Strategy gives effect on enhancing students' grammar ability in passive voice. Based on the finding above, Problem Based Learning Strategy can be suggested as one of strategy to be implemented in teaching grammar.

Keywords: problem based learning , grammar ability , and passive voice

INTRODUCTION

Grammar is one of the important language components that must be mastered by students. According to Terrell (as citied in Mart, 1991) much of the effort spent arguing against the teaching of grammar might be better spent on convincing true believers in grammar instruction that grammar has a newly defined but useful role to play in language teaching and in showing them what it is, for a better language improvement, grammar plays a crucial role. Grammar has many aspects that should be learn, in the second grade of senior high school, students need to learn about passive voice. According to Tiwari (2007) define the passive voice is a grammatical voice in which the subject receives the action of a transitive verb.

The writer did the research in SMAN 3 Batam at eleven grade. The writer organized the research with one of the English teacher there. The writer has given a task in passive voice. However most of the students were confused to distinguish between active and passive voice rules. It happened because they have lack of confidence and motivation to learn about grammar passive voice. Another problem most appear some of teachers did not apply the good technique or strategy in teaching

learning of grammar in the class. Many of teacher still using the conventional teaching strategy so that the students did not find some qualified experiences in their learning chance.

The writer thought that the creative teachers role is needed to develop students grammar ability even for speaking roles or writing roles. With the use of appropriate technique or strategy in learning English can be overcame grammar problems. The teacher can use some technique or relevant strategy to enhance the students grammar ability. One of them by using Problem Based Learning Technique.

From the explanation above, the writer feeling important to conduct a research under the title Problem Based Learning Strategy; Is it Effective on Enhancing Students' Grammar Ability in Passive Voice at SMAN 3 Batam?.

Based on identification of the above problems, the researcher would like to limit only on the using of problem based learning strategy on students' enhancing grammar ability in passive voice at the XI grader of students SMA N 3 Batam.

This research has the main objective as the goal of conducting of this research. So, the objective of the study is to find out the effect on students' enhancing to the grammar ability especially in passive voice material using Problem Based Learning Strategy.

Grammar Ability

In the context of education especially in the learning and teaching of a foreign language, grammar is usually considered one of the language components beside the vocabulary and sound system which students should acquire. Knowing grammar means understanding what the text means correctly. Thornbury (1999) as citied in UIBU and Liver (2015:71) state grammar is a set of rules that explores the forms and structures of sentences that can be used in a language. The statement indicates that the students were taught about the rules of target language in their school. They learn about it because the teacher aware that as foreign language learners, students should know about the language rules that native speaker use as s communication tool. Students commonly do not realize that when they express themselves through writing

or speaking, what they write or speak have its patterns and they keep subconsciously applying the patterns in their communication.

According to Freeman (as cited in Mart, 2013) grammar is rules of a language. "grammar is a system of meaningful structures and patterns that are governed by particular pragmatic constrains. It means that, when people want to write something, they should know about grammar because it shows the meaning and relation with every single word that becomes a sentence.

According to Azar (2007) the significance of teaching grammar as: "One important aspect of grammar teaching is that it helps learners discover the nature of language, i.e., that language consists of predictable patterns that make what we say, read, hear and write intelligible. Without grammar, we would have only individual words or sounds, pictures, and body expressions to communicate meaning. Grammar is the weaving that creates the fabric".

According to Hartwell (as cited in Mohammed and Alduais, 2013) there are five types of grammar. Those are:

1) A set of formal patterns in which the words are arranged in order to convey larger meaning
2) Branch of linguistic science concerned with the description analysis and formulization of formal language patterns
3) Etiquette Grammar
4) Common schools of grammar, internalized grammar
5) Stylistic grammar

According to David (as cited in Rashidi and Safari, 2014) in testing grammar, there are some types that could be used by the teacher to measure students achievement in grammar subject.

1) Four-choice sentence-based items
2) Four-choice text-based items
3) Four-choice sentence-based items
4) A four-choice sentence-based item

According to Tiwari (2017) the passive voice is a grammatical voice in which the subject receives the action of a transitive verb. Emphasis in passive voice is on the

process rather than on the performer of the action. In English, a passive verb is periphrastic; that is, it does not have a one-word form, but consists of an auxiliary verb plus the past participle of the transitive verb.

According to Tiwari (2017) make rules in forming passive voice : Subject + finite form of to be + Past Participle (3rd column of irregular verbs.) According to Tiwari (2017) mention some of the usage of passive voice as follows:

1) When we wish to draw attention to the receiver, rather than the doer, of the action.
2) When the doer of the action is unimportant, is not known, or is too well known to require mention.
3) The passive construction occurs quite frequently in newspaper stories, since the emphasis in such stories is usually on the newsy event, on what happened to X rather than on what Y did.
4) The passive construction is fairly common in scientific/ technical writings in which the emphasis is on the event, the thing, or the process being described: The first thermonuclear weapon, or hydrogen bomb, as it is often called, was exploded in a test by the United States in 1952.

Problem Based Learning Strategy

As well as other problem based learning technique also have a syntax used to create learning scenarios. syntax or problem-based learning steps according to Barrow and Tamblyn (1980:1) as citied in Barrett (2016:56) as follows:

1) First students are presented with a problem
2) Students discuss the problem in a small group PBL tutorial.
3) They clarify the facts of the case. They define what the problem is. They brainstorm ideas based on the prior knowledge. They identify what they need to learn to work on the problem, what they do not know (learning issues). They reason through the problem. They specify an action plan for working on the problem.

4) Students engage in independent study on their learning issues outside the tutorial. The information sources they draw on include: library, databases, the web and resource people

5) They come back to the PBL tutorial sharing information, peer teaching and working together on the problem

6) They present and discuss their solution to the problem

7) They review what they have learnt from working on the problem. All who participated in the process engage in self, peer and tutor review of the PBL process and each person's contribution to that process.

According to Beringer (2007) problem based learning is a teaching technique that uses problem solving as the basis for student learning. The technique is student-centered with teachers taking the role of a facilitator. Its general aim are to construct a knowledge base, develop problem-solving skills, teach effective collaboration and provide the skills necessary to be a successful lifelong learner.

According to Doig (as cited in Beringer, 2007) suggests the main purpose of problem based learning is to develop problem-solving strategies, disclipnary knowledge bases and skills simultaneously by placing students in the active role of problem solvers. According to et al (as cited in Beringer, 2007) there are 5 steps in the PBL namely:

1) Observation or information gathering

2) Questions, ideas and hypothesis formulation

3) Learning issues or inquiry strategy

4) Action plan

5) Reflection

According to Hmelo and Ferrari (as cited in Beringer, 2007) there are several benefit of using problem based learning:

1) Construct an extensive and flexible knowledge base.

2) Develop effective problem-solving skills.

3) Become effective collaborators.

4) Become intrinsically motivated to learn.

According to Barret (2016:60), there are the benefit and limitations of problem-based learning:

1) Acquiring subject matter knowledge

2) Motivating students to learn

3) Helping student retention

4) Developing students thinking skills

5) Developing students key skills relevant to employment e.g. interpersonal communication skills, information seeking skills and presentation skills

6) Fostering professional competence and confidence together with professional identity

7) Mirroring the interdisciplinary team process graduates will be using in work and research

8) Facilitating students learning how to learn

9) Encouraging students to integrate knowledge from different subjects, disciplines and sources

10) Linking theory and practice

11) Having a sense of belonging and friendship

12) Having fun

13) Expressing in operational form a philosophy of learning that is student-centered and problem focused.

METHODOLOGY

The kind of this research was quasi experimental research. This research was conducted at SMAN 3 Batam. This research was conducted on January 2019. The subject of the research were students of SMAN 3 Batam. According to Sugiyono (2009:81), sampling technique defined as the technique that researcher used to choose the research sample. According to Frankel (2012:94) a simple random sampling is one in which each and every member of the population has an equal independent chance of being selected. If the sample is large, this method is the best way yet devised to obtain a sample representative of the population of interest. Thus this research used simple random sampling technique.

This research used two classes as the subject at eleventh grade of SMAN 3 Batam. The first class (A) treat used problem based learning technique and second, control class (B) which is lecturing method.

The researcher collected the data by giving instrumentation. In this test, the researcher prepared the test in the form of multiple choice questions. The researcher focused on passive voice. The instrumentation consist of two tests, that are pre-test that collected before applying the method and post-test that give after applying the method. The second was validity test to see whether the test is valid or not. The third was reliability test to see whether the student score is consistent or not.

After the data were collected by given pre-test and post-test, the researcher used the statistical calculation they were:

Normality

According to Sugiyono (2013:107) state that Chi Square (X2) was the aims of this test to find out whether the research population was normally distribution or not, the normal distribution means that the sample was draw from the same population. Normality test is used to determine whether students grammar ability in the class was normal distribution or not.

Here the formula as performed below:

Formula 1. Chi Square

$$\mathbf{X^2} = \sum \frac{(fo-fh)^2}{fh}$$

The criteria use is if x^2 count $<$ X table, so the data is normal.

Homogeneity

The homogeneity is the test to know whether each group have the same variance or not. It is t-test by using variance test (F test) . The formula is follow :

Formula 2. Homogeneity Testing

$$f = \frac{Bigger variance}{Smaller variance}$$

If calculation of f-$_{count}$ $<$f-$_{table}$ so, Ho is not accepted and Ha is accept. The data with significant level 5% Ha is accepted it means variance homogeneity.

Hypothesis Test

According to Sugiyono (2012:122), "to answer the formulation of the study and hypothesis above the hypothesis need to be the best and the test uses T –test". According to Best (2006) "a hypothesis test is to see whether the research gives an effect or not, whether the research supports or rejected in the process of research".

Formula 3. T –test

$$t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2} - 2r\left(\frac{S_1}{\sqrt{n_1}}\right)\left(\frac{S_2}{\sqrt{n_2}}\right)}}$$

If the value t-obtain is bigger than value of t-table, Ha is accepted. On the contrary, if the value t obtain is equal, smaller than the value t-table, Ho is not accepted (t-table).

RESULTS

As the result, the data for pre-test in experimental class was in normal distribution, because $x^2_{observed} {}^< x^2_{table,}$ 11 < 11.070. The summary can be seen to the table below.

Table 4.8 Summary of Normality Test

Variable	$X_{observed}$	X_{table}	Note
Pre-test Experimental class	8.33	11.070	$X_o < X_t$
Pre-test Control class	6.62	11.070	$X_o < X_t$
Post-test Experimental	7.39	11.070	$X_o < X_t$
Post-test Control class	11	11.070	$X_o < X_t$

While the summary of homogeneity testing can be seen as follow:

Table 4.9 Summary of Homogeneity Test

No	Variable	$F_{observed}$	F_{table}	Conclusion
1	Pre-test	1.210	4.30	$F_{count} < F_{table}$ Homogeneous

| 2 | Post-test | 1.188 | 4.30 | $F_{count} < F_{table}$ |
| | | | | Homogeneous |

The calculation of testing hypothesis used T-test formula with Null Hypothesis (Ho) and Alternative Hypothesis (Ha) it can be sum up that t-$_{count}$ (19.984) $\geq$ t-$_{table}$ (2.0738). Therefore, Ho is rejected and Ha is accepted. It means that Problem Based Learning Technique is gives an effect on student's grammar ability in passive voice.

DISCUSSION

The final conditions both of group in this research are known from post-test result. Researcher collected the data by using instrument multiple choice question. From the result, it can be concluded that the test scores in experimental class was increase.

The difference between the grammar ability of the experimental class is using Problem Based Learning Strategy, otherwise the control class did not use Problem Based Learning Strategy. The analyzing data used *t-test* formula. The data *t-test* in grammar ability of pre-test experimental and control class performed to determine whether there is a difference in grammar ability between two class. The result calculation shown that t-test > t-table with degree between experimental 5% and df = 22. The result of hypothesis test shows that Problem Based Learning Technique is more effective which help to develop student's grammar ability in passive voice.

CONCLUSION

This study was experimental research was aimed on enhancing the students' grammar ability in passive voice for second grade students at SMAN 3 Batam. This study involved the students from class XI Science 5 and XI Science 2 which is each class consisted of 24 students. The research was carried out in the first semester of the academic year of 2018/2019.

From the research, it found that there were some problems related to the second grade students grammar ability in passive voice. The focused problem was the poor ability of the students understanding about grammar. To overcome the problem, Problem Based Learning Strategy was implemented. The researcher found that Problem Based Learning Strategy could help the students to enhance their grammar ability.

The enhancing of students' grammar ability was supported by the students' scores. The mean score of the post test was higher than the pre-test. The result of this research showed that the implementation of Problem Based Learning Strategy was successful to enhance the students' grammar ability in passive voice. Through Problem Based Learning Strategy were able to develop their grammar ability more effectively.

Besides, the researcher concluded the following things:

1) From the normality test result that obtained from pre-test and post test scores of students' grammar ability in the experimental and control class were increases. The data are normally distributed. According the calculation of normality test, it could be explained that the data in pre-test of experimental class and control class were normal.

2) From the result statistic, hypothesis testing showed the use of Problem Based Learning Strategy can increase grammar ability in passive voice of second grade students' was accepted. It can be seen from t-count = 19.984 > t-table = 2.0738. So, the alternative hypothesis (Ha) is accepted and the null hypothesis is rejected. It means that Problem Based Learning Strategy is gives an effect to students' grammar ability in passive voice. In other words, there is significant difference by using Problem Based Learning Strategy.

The teachers response about the implementation of Problem Based Learning Strategy is positive. It implies that Problem Based Learning Strategy can be used by the teacher as alternative strategy in teaching grammar more effectively.

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