PROJECT-BASED LEARNING: EFFECTS ON THAI EFL STUDENTS' GRAMMATICAL COMPETENCE

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Abstract- The purpose of the study were to investigate the effects of Project-based learning on students' grammatical competence and to explore students' opinions towards Project-based learning in English language teaching with regards to teaching grammar at Watpakbueng School, Bangkok.The sample for this study were 42 secondary school students selected by using simple random sampling method. The sample was given 12-week course instruction with 4 projects to complete. In this stage, Project-based learning was the main teaching methodology in the classroom. Data collected from the Pre-test, Post-test and Follow-up test undertaken by the sample were compared and analyzed statistically using an ANOVA. At the end of the course, the sample had a chance to express their opinions towards Project-based learning in teaching grammar through semi-structure interview questions. The findings reveal that Project-based learning could enhance secondary school students' grammatical competence in learning grammar. In addition, the students presented their opinions positively towards Project-based learning as they said that they would like to learn through this teaching method again in learning English.

Index terms- English language teaching, Grammatical Competence, Opinions, Project-based learning

I. INTRODUCTION

Grammar is one component of communicative competence that includes the study of how to use grammar rules to achieve communicative purposes, and knowing how to use those in an appropriate way [5]. [3] claimed that knowledge of grammar is needed and should not be ignored in the language classroom, because grammar works as a tool to help students accomplish communication purpose of language learning [1]. [10] also asserted that the students who learn English as a foreign language could not succeed in language learning to meet communicative competence if they lack of the knowledge of grammar. Similarly in Thailand, English is learnt as a foreign language and grammar learning is crucial for Thai students because it is fundamental for English language learning. Students are likely unable both to form sentences and fail to understand sentences correctly if there is no understanding of grammar[11]. In [8], English language is included in the curriculum for Thai students and the goal in learning is for communication. Being able to use language to communicate, it means students have communicative competence that made up of four major strands: grammatical competence, sociolinguistic competence, discourse competence, and strategic competence. Grammatical competence is the knowledge of language code; for example, grammatical rules, vocabulary, pronunciation, spelling, etc. [6]. Being a competent user of a language, one needs to know both the rules of grammar, and how the rules are used in real communication [3]. Grammar teachinginvolves several instructional techniques drawing students' attention to some specific grammatical forms, and to help learners either understand it or process it in comprehension and production so that they can internalize it[9]. To increase grammatical competence of language students, the various strategies have been proposed to be used in the classroom. The goal for language learning in the classroom is for communication [8] with an increase of student-centered learning. This means that students should participate in learning activities and respond with their own learning rather than being a passive student. It is to say that methodology use in the classroom should promote both communicative competence and students' involvement in learning activities. Project-based learning is a model of instruction based upon the constructivist theory. It is not only an instructional method that involves students in the process of an inquiry process in learning but also in solving the problems that move from teacher-centered to student-centered lessons [7]. It focuses on practicing language forms in the technique of integrating and contextualizing to help students becomes more knowledgeable in the topic that they are interested in. Moreover; it can provide them with good inputs to be applied in their specialized lives [9]. With regards to Project-based learning, its prominent characteristics are seen as authentic learning with increasing motivation for learning [4] that engages students to learn and respond on their own. Students have a chance to work cooperatively to complete their end project. The value of the project appears both in the process of working and the final product. Students' self-confidence, self-esteem, autonomous learning capability, language skills and cognitive abilities are usually improved through the use of Project-based learning in the classroom. Considering in the role of teacher and student in process of Project-based learning activities, teacher works as a facilitator of learning [4] and provides the opportunities for in-

depth investigations of worthy topics [7] that allow learners to become more autonomous as they construct personally-meaningful artifacts. The role of student depends on the role of the teacher that creates the situation being learned for them. They will try to express meaning and learn to use language form correctly. To sum up the main characteristics of Project-based learning, it is the teaching methodology that concentrates on student-centered learning that promotes problem-solving skills and a cooperative learning environment. It helps students to become more independent in learning so that they can experience learning produced by their own actions, which will help to sustain their learning with self-confidence, self-efficacy and social and management skills.

II. OBJECTIVES OF THE STUDY

This study was conducted to investigate the effects of using Project-based learning in developing students' grammatical competence and to explore students' opinion towards using Project-based learning to teach grammar.

III. METHODOLOGY

This study comprised of both quantitative and qualitative data collection and analysis

A. Sample

The study was conducted with secondary school students at Watpakbueng School in Bangkok. They enrolled in the course of Fundamental English in the second semester of the academic year 2014. There were 42 students being selected using simple random sampling to be the samples for this study.

B. Instrument

The research instruments were Pre-test, Post-test and Follow-up test and semi-structure interviews using focused group technique for collecting the data for this study. There were two sets of data; quantitative data collected from Pre-test, Post-test and Follow-up test, and qualitative data collected from semi-structure interviews.

C. Data Collection

In the step of learning, the samples took the Pre-test before engaging in learning activities. After that, they were assigned with 4 English projects that utilized Project-based learning in learning activities. The duration of time lasted for 12 weeks, 2 hours a week with 60 minutes in a period. The total time was 24 hours. Then, the samples took the post-test. At the end of the experiment, the samples engaged in semi-structure interviews using focus-group technique to explore their opinions towards Project-based learning in teaching grammar. Finally, the sample took Follow-up test two weeks later after taking the Post-test.

D. Data Analysis

The quantitative data were analyzed by mean (M) and standard deviations (SD) with the help of the Social Scientific Statistics Package (SPSS). ANOVA is used to see whether the samples' grammatical competence from Pre-test, Post-test and Follow up test show the differences or not. Student's opinion towards Project-based learning were explored from students' semi-structure interviews and being analyzed using content analysis by the researcher

IV. FINDING

Table 1
The Means andStandard Deviationof Grammar test amongst Pre-test,Post-test and Follow-uptest of the sample group

Period of Testing	M	SD
Pre-Test	5.50	1.42
Post-Test	8.64	2.90
Follow up – Test	9.71	2.78

According to Table 1, the average score of Pre-test from the grammar test of the sample group was 5.50, with a standard deviation of 1.42. Besides, the average score of Post-test and Follow-up test were 8.64 and 9.71 with standard deviation of 2.90 and 2.78, respectively. It might be assumed that there were differences amongst the scores from Pre-test, Post-test and Follow-up test gained from the grammar test of the sample group. Before engaging in learning activities through Project-based learning in teaching grammar, the average score of Pre-test of the sample group was 5.50, with a standard deviation of 1.42. After the period of the experiment of the study, the mean score of Post-test was higher than the average of Pre-test that was at 8.64 with standard deviation of 2.90. In addition, the average score of Follow-up test was still higher than the mean of Pre-test and Post-test at 9.71, with a standard deviation of 2.78.

Table 2
The Repeated Analysis of Variance of Grammar test amongst Pre-test, Post-test and Follow-up

Source of Variance	df	SS	MS	F	p-Value	η^2
Time	2	403.00	201.50	49.13**	.00	.54
Error	82	336.33	4.10			
Total	84	739.33				

** $p < .01$

As shown in Table 2, the scores from grammar test of the sample group amongst Pre-test, Post-test and Follow-up test had statistical significance level at .01(F-test = 49.13, $p < .001$, $\eta^2 = .54$) with the effect size of .545.In order to compare how the differences amongst the scores of Pre-test, Post-test, and Follow-up test at each time are, the Multiple comparison test with the correction of Bonferroni is used as shown in Table 2.

Table 3
Multiple Comparison of the score of Grammar test amongst Pre-test, Post-test and Follow-up of the sample group

Comparison			Mean Difference	SE	p-Value	η^2
Post-test	-	Pre-test	3.14	.49	.000	.49
Follow-up	-	Pre-test	4.21	.47	.000	.65
Follow-up	-	Post-test	1.07	.33	.008	.20

Regarding to Table 2, the findings revealed that the scores of Post-test of the sample group was higher than those of Pre-test at 3.14 with statistically difference level at .01 ($p < .001$, $\eta^2 = .49$). Further, the follow-up test was used two weeks later at the end of the experiment and the findings revealed that the scores of the Follow-up test was higher than the scores of Pre-test at 4.21 with the statistical difference level at .01 ($p < .001$, $\eta^2 = .65$) and still higher than the scores of Post-test at 1.07 with statistical difference level at .01 ($p < .001$, $\eta^2 = .20$). As shown in the following graph for better understanding amongst the scores of Pre-test, Post-test and Follow-up test.

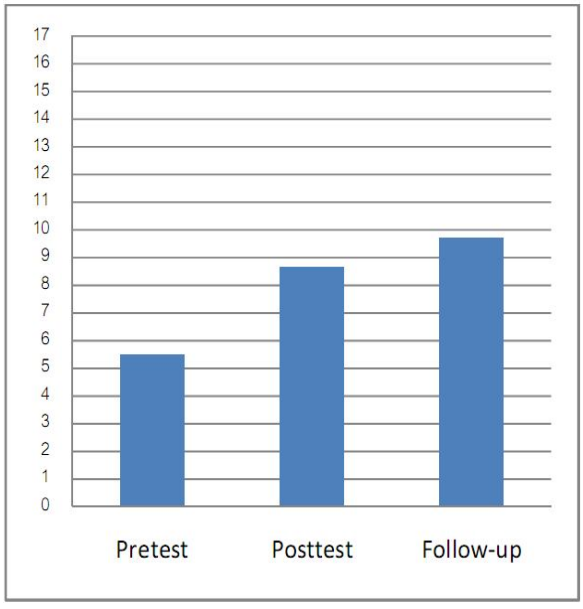


Figure 1. The Scores of Pre-test, Post-test and Follow-up for the Grammar test of the Sample Group

As shown in figure 1, the score of Follow-up test indicated that there were differences in scores amongst the results of Pre-test, Post-test and Follow-up of the sample group. It was found that the sample group obtained better scores after the training and still retains their understanding about the grammar they learnt from the lessons through Project-based learning in teaching grammar in the classroom. It is to say that, the results of quantitative data gained from the sample group of the study through Project-based learning in teaching English grammar indicate that this teaching method could enhance secondary school students' grammatical competence in learning grammar. The sample group received better scores in grammar test in Post-test and Follow-up tests when compared to the Pre-test scores.

Moreover, qualitative data was also collected through semi-structure interviews to explore students' opinions towards Project-based learning in teaching English grammar and the results were used to support the effectiveness of Project-based learning in grammar lessons of secondary school students. With regards to students' opinions toward Project-based learning in teaching grammar, the results reveal that they think positively towards Project-based learning as most of them said that they were fun with learning through this teaching methodology; it helps them understand the lessons. They also said that they would like to learn in this way again. Additionally, a chance for students to negotiate in learning with their friends in doing the project appears through working cooperatively with their friends. Project-based learning let them practice in authentic way. They could pursue for knowledge around them, being in a unity, think and do in different ways as they used to do, using the majority vote for making a conclusion in case their opinions were different and the self-confidence in speaking English was arisen as well. Nonetheless, there were some problems arose during the process of learning as students said that they could not hand-on the end produce on time. Since they have to learn and produce their production in group when they go through the conclusion in what they are going to do, which things the group members have to share and respond in their duties they got, but some of them were absent when the real project take place, it makes them could not reach the deadline in handing on their work to the teacher.

It is to say that Project-based learning let students think positively in learning as they got both academic and non-academic knowledge. For academic knowledge, they could comprehend the lessons and use it in producing their final product. Furthermore, they were fun in learning in authentic way to share the knowledge they got from learning with their

classmates with the increasing of confidence in speaking English in their project presentation. Even though there were some problems arise as stated above, they still said that they would like to learn through this teaching method in learning English in the future.

CONCLUSION

Both quantitative and qualitative data suggested that Project-based learning could be an effective teaching method in teaching grammar as it could improve students' grammatical competence. In term of students' opinions towards Project-based learning in teaching grammar, the results show that the students have positive views after they were educated in learning activities through Project-based learning.Although Project-based learning produces positive views in teaching grammar for the students, it also causes some problems during the process of learning. To implement Project-based learning in English lesson in the future, teacher needs to be careful in planning the lessons for the students and should try to observe the student's progress in learning in each group to stimulate them in learning and facilitate them to complete their end project on time as well.

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