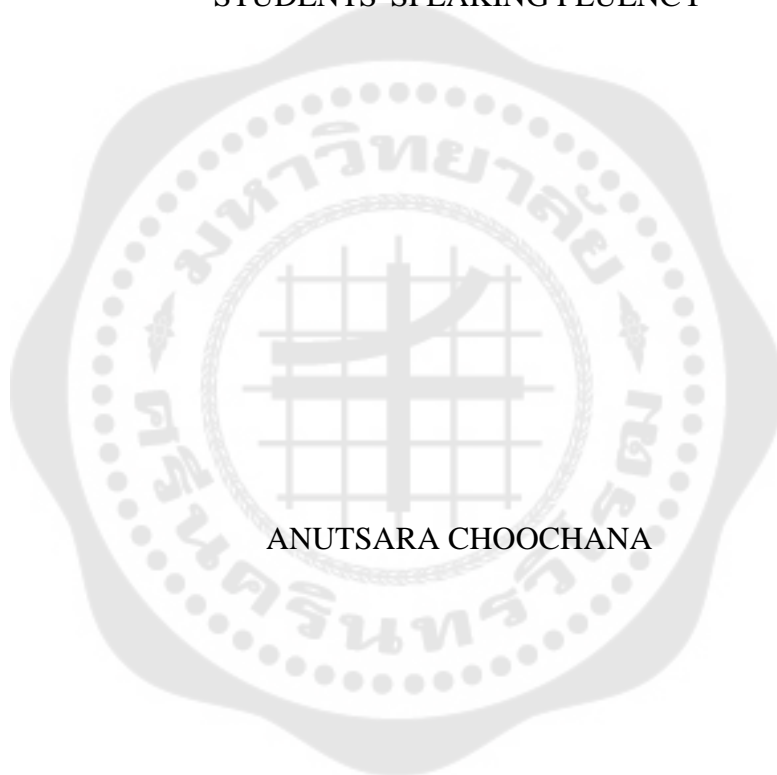




USING PROBLEM-BASED LEARNING STRATEGY TO ENHANCE EFL
STUDENTS' SPEAKING FLUENCY



ANUTSARA CHOOCHANA

การสอนแบบใช้ปัญหาเป็นฐานเพื่อพัฒนาทักษะการพูดภาษาอังกฤษอย่างคล่องแคล่ว
ของนักเรียนที่ใช้ภาษาอังกฤษเป็นภาษาต่างประเทศ



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A Thesis Submitted in Partial Fulfillment of the Requirements
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THE THESIS TITLED
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BY
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The objectives of this study are to investigate the effects of using a Problem-Based Learning (PBL) strategy to enhance English speaking fluency and to investigate the opinions of students towards the use of PBL in classroom learning. This study had quasi-experimental design and used quantitative data analysis. The 15 eleventh grade participants are English majors at Setthabutbamphen School and were selected by purposive sampling. The instruments of the study included lesson plans, pre-and-post speaking tests, interview questions, and student learning logs. The pre-test and post-test took place at the beginning and the end of the experimental period. The aim was to measure the speaking fluency of the students by comparing the total mean score of the pre-and-post speaking tests which analyzed four speaking components: speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR). During the ten weeks of the experiment, the participants were required to submit learning logs twice a week after class. At the end of the study, the students were interviewed individually. The interview included ten questions and the design was based of 3 aspects: acceptance, usefulness, and suggestion. The comparison of the average mean scores between the pre-and-post speaking tests showed that the speaking fluency of the students had developed after the use of PBL activity at a level of .05. The students also had positive opinions toward PBL activities: they were satisfied with PBL classroom activities and wanted to join in on the activities in the future.

Keyword : Speaking fluency, Problem-Based Learning strategy, EFL students

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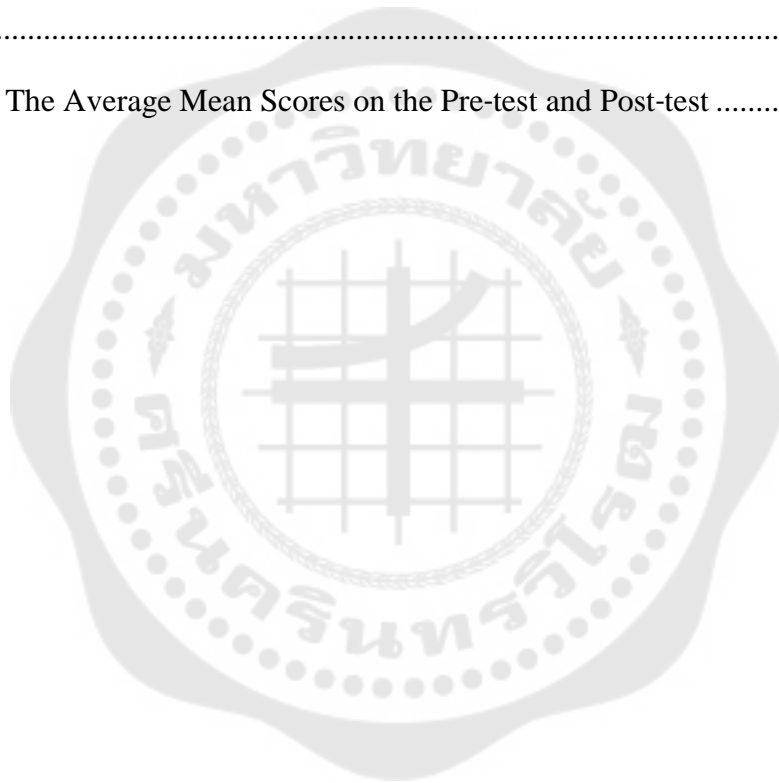
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CHAPTER I

INTRODUCTION

Background of the Study

English language is a global lingua franca with international use across cultures (Michaud, 2015; Inkaew, 2018). This indicates that the expanding circle of English speaking countries such as China, Denmark, Indonesia, Iran, Korea, Sweden, including Thailand is growing up (Nordquist, 2019). In Thailand, people use English for different purposes such as studying, working, advertising, communicating on social media, talking with foreigners, giving information, giving directions, and traveling. Because of these reasons, all Thai students are required to study English at schools to get basic skills as stated in the Basic Education Core Curriculum 2008. However, many high school students are not able to communicate in English fluently even in simple topics despite studying this language for many years (Miao, 2011).

For speaking, several factors make it difficult for Thai EFL learners. Juhana (2012) found that shyness, anxiety and lack of confidence and motivation strongly contribute to difficulty in speaking English. Initially, the difficulty level for each student is different. It depends on their background knowledge and experience of using English. As supported by Noom-ura (2013), there are some plausible explanations for this issue. First, many Thai students do not have enough exposure with the English language. Second, they lack opportunities to practice and use English outside their classrooms. Third, they do not have enough skills in English as they

often translate from Thai to English. All of these make them afraid of making mistakes and it is not easy to develop speaking fluency.

Fear of making mistakes when speaking English is one of the problems that Thai students are facing (Boonyaparakob, 2015). It is a part of language anxiety occurring when students have to perform a task in a target language which they are not yet proficient (Gardner and MacIntyre (1993). This is the result from insufficient of English exposure which decreases speaking confidence. Chinpakdee (2015) revealed that Thai students experienced apprehension when they had to speak English without preparation. They concerned about failure of their performance and classroom expectation. As supported by Akkakoson (2016), a feeling of test anxiety and fear of negative evaluation significantly affect Thai students' speaking performance. Similarly, Bangkok Post (2017) reported that many English major students from a provincial university had good records in reading and writing; nevertheless, they were shy and tried to avoid speaking in English because they feared of making mistakes (Bunyamanee, 2017). Therefore, many Thai students prefer to be quiet whenever their teachers ask them something in English.

To help students develop their English speaking ability, teaching techniques and classroom activities play important roles (Khamprated, 2012). When a teacher knows what factors affect negatively on students' speaking achievement, it is the teacher's job to decrease those factors and help the students develop their English speaking fluently. However, the teaching techniques and classroom activities that the

teacher brings to a class should support the students' background and their English proficiency level. If the English proficiency is lower than a task, the students will have more anxiety. On the other hand, if the students' English proficiency is higher than the task, it is not a good challenge. The students will be bored and do not want to participate the task. The best way is to provide a fine balance between the challenge of task and the student ability. On this way, (Csikszentmihalyi, 1990).

At present, speaking activities for high school students should be meaningful and useful for real life as the essence of teaching 21st century skills. Hanover Research (2011) examined a crosswalk of 21st century skills from six different frameworks and found that there are four certain core competencies for development: (1) collaboration and teamwork, (2) creativity and imagination, (3) critical thinking, and (4) problem solving. These four competencies are required on the Basic Education Core Curriculum of Thailand (The Ministry of Education, 2008) and also lead to the main focus of teaching in 21st century that encourages students to “learn to develop their own ideas, test and share those ideas, and take input from teachers and peers to further develop their ideas (Prettyman, Ward, Jauk, & Awad, 2012)”. This type of teaching and learning is reflected in Problem-Based Learning.

Problem-Based Learning (PBL) is a student-centered strategy that constructs new knowledge by creating an environment with authentic problems to drive learning process (Barrell, 2007; Klegeris & Hurren, 2011). This strategy was created by John Dewey, an American scholar, and was officially introduced in the 1960s at McMaster

University Medical School, Canada. It is a strategy that involves collaborative, constructivist, and contextualized learning and employing real life problems to set up, motivate and boost on knowledge construction (Ribeiro, 2011). Initially, it was mainly used in medical education and subsequently expanded to other fields (Hallinger & Bridges, 2007). PBL strategy has many benefits for classroom teaching: (1) giving students an active role, (2) minimizing an over-dominant role of teachers, (3) promoting self and peer assessment, (4) promoting students' critical and creative thinking, (5) associating learning to real world problems, (6) developing knowledge in the long term, (7) enhancing students' motivation and interpersonal skills, and (8) increasing opportunities to communicate and work freely in group (Li, 2013; Savery, 2006). All of these are strong reasons for teachers to apply PLB strategy in classrooms and discover how it work with students.

PBL has been widely used across different subjects and disciplines since it was introduced (McConnell & al, 2013). Duch, Groh, and Allen (2001) explained that PBL strategy can be adapted to any subject area. Nevertheless, the implications of this strategy in the area of English as a foreign language teaching is insufficient (Aryanti & Artini, 2017). Most research on PBL in Thai educational context focused on mathematics, computer, nursing and science subjects (Phumee, 2012; Chidnayee, 2018). It is quite limited in the field of English language teaching. Therefore, it will be beneficial to conduct a study to investigate how PBL strategy affects English speaking fluency of Thai EFL students.

Research Objectives

The aims of this research is as follows:

1. To investigate the effect of using PBL strategy to enhance English speaking fluency.
2. To investigate the students' views toward the use of PBL in classroom learning.

Research Questions

1. What is the impact of PBL on the students' English speaking fluency?
2. What are the students' opinions toward PBL with regard to its usefulness in improving their English proficiency?

Significance of the Study

This study aims to investigate the effect of using PBL strategy in English language classroom to promote Thai students' speaking fluency. If the result of the study shows that the participants can increase their speaking fluency after using PBL strategy, it could be useful for English teachers to consider this strategy as an alternative teaching technique in helping their students build up their speaking fluency and naturally add up to body of knowledge in English language teaching. In addition, in Thai educational context, using PBL strategy to develop high school students' speaking fluency has been rarely studied (Sahatsathatsana, 2014; Watthanapatkitti, 2016). Thus, this study aims to fill gaps in previous research. Moreover, the students'

views toward PBL strategy will help teachers adapt their teaching technique to meet the students' learning preferences.

Scope of the study

This is a mixed method research with a single group pretest-posttest design. The participants of this study are 15 eleventh grade English major students at Setthabutbamphen School. The students will be selected through purposive sampling method. All of them study in the same class and have similar English knowledge and skills based on the result of the English tests from two previous semesters. The length of the study was ten weeks.

Definition of Terms

1. **PBL strategy** refers to an active learning method which providing students learning opportunities to experience through real-world issues or problems in order to increase knowledge and understanding. In this research, PBL strategy is integrated on six steps: (a) warming up, (b) presentation, (c) individual problem solving, (d) group brainstorming, (e) communication, and (f) application (Uarattanakaksa, 2007). Every student has to work in small group for four lessons during eight weeks. The group members can be changed after they finish each lesson.

2. In this study, **speaking fluency** refers to the development of speech rate from the second week to the last week of the study. According to Fillmore (1979), talking at length with few pauses to express idea coherently and deal with lexical and

syntactic items at a fast speed is the ability to have fluency. Speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR) are the main factors to measure speaking fluency (Ginther, Dimova, & Yang, 2010; Petrie, 1987; Riggensbach, 1991; Stockdale, 2009). Therefore, the researcher focuses mainly on quantity of students' speech rate, pausing rate, number of hesitations, and mean length of run as a measure of fluency.



CHAPTER II

LITERATURE REVIEW

The main purposes of this study are: (a) to examine the effect of using PBL strategy to enhance English speaking fluency and (b) to investigate the students' opinions toward the use of PBL in the classroom. This chapter is divided into four parts. In the first section, it conceptualizes speaking ability which mainly focuses on speaking fluency. Secondly, it presents a review of evaluating and assessing speaking fluency. Next, it will be followed by the use of PBL strategy in language teaching, PBL and 21st century skills and advantages of using it for language learning. In the last section, related studies on the use of PBL strategy in a language classroom and related disciplines.

English Speaking Fluency

A good command of English speaking requires a mastery in five components: pronunciation, grammar, vocabulary, fluency, and comprehension (Harris, 1974). Teaching English speaking requires more than grammatical practices or vocabulary building. According to Brumfit (1984) and Mairi (2016), one of the important components which helps language learners achieve competency in oral communication is fluency.

The term '*fluency*' is widely used in language teaching, language testing and assessment. Hartmann and Stork (1976) state that fluency is a speaker's ability to produce correct structures of a language at a normal speed. That means the speaker

speaks the language naturally meanwhile concentrating on the content delivery rather than the form or structure of a language. (Bailey, 2005) adds that fluency is the ability to use language quickly and confidently. The speaker is able to communicate with limited hesitations and unnatural pauses. Similarly, Jone (2007 as cited in Buitrago, 2017) points out that speaking fluency occurs when speakers speak with appropriate pauses to make the listeners follow their ideas smoothly. In addition, Harmer (2015) defines fluency as a focus on the content of speech to communicate as smoothly as possible.

From the above discussion, the definition of fluency can be categorized into two main groups (Lennon, 2000). The first one is the narrow approach which refers to the speaking speed and smoothness of the language delivery. Another one is called the broad approach which considers a wider area including semantic density, appropriateness of expression, the speaker's creative ability and some further issues in sociolinguistics (Kopenen & Riggenbach, 2000). According to Fillmore (1979), there are four abilities of speaking fluently: 1) the ability to produce speech at length with few pauses, 2) the ability to produce messages coherently, reasonably and semantically, 3) the ability to use appropriate expressions in a wide range of contexts, and 4) the ability to be creative and imaginative in language use. These four factors are the main focus of this study.

Furthermore, speaking fluency often involves three aspects. Firstly, it is the speed and flow of language production. The second aspect is the degree of control of

language items which are pausing, rhythm, pronunciation and stress. Lastly, it is the way of content interrupting (Nation, 1989). All of these elements, however, make speaking fluency subjective and lead the difficulty in assessment (O'Sullivan, 2012). In the following section, the researcher will focus on ways to evaluate and assess speaking proficiency, especially speaking fluency.

Evaluating and Assessing Speaking

Harris (1974) states that speaking components include comprehension, grammar, vocabulary, pronunciation and fluency, the methods used for assessing speaking abilities depend on the objective. To assess speaking ability, Clark (1979) classifies the assessment methods as indirect, semi-direct, and direct. The indirect method can be applied to evaluate both skills and abilities by eliciting performance from a conversational cloze test and a phoneme identifying test (Bailey, 2005). However, Ginther (2013) points out that this method is not quite effective, if at all, to the speaking assessment. The semi-direct method does not require an interlocutor to administer the conversation during the test. Learners are under laboratory conditions with a set of tasks, topics for discussion, or prerecorded questions. All responses are recorded by computer-based system to be examined. An obvious advantage of this method is high reliability because the learners' performance is not influenced by any interviewers. For the direct method, it is defined as a procedure which requires the learners to communicate in face-to-face situations with one or more human interlocutors (Clark, 1979). Harmer (2001) proposes that an interview, a conversation,

and an unscripted role play are included in this method. The learners are engaged in structured or semi-structured interaction with an interviewer, an interlocutor, or a rater. Then, the learners' response might be rated simultaneously during the test or recorded to be rated later. An advantage of this method is the perception of speaking proficiency and manners from real situations. However, the learners' performance can be effected by the partner or rater.

In addition, Luoma (2004) proposes two approaches for speaking assessment. The first one is observational approach which is the way to assess by observing learners' behavior and performance unobtrusively. The other one is structured approach. Learners are required to perform one or more specific oral communication tasks which can be administered for individual or group work. Then the assessor evaluates speaking ability through the performances. All in all, speaking ability can be evaluated in many ways depending on the focus of the assessment.

To select an appropriate method in assessing the students' speaking fluency, the researcher is aware of the test appropriateness and its practicality in the context of learners' background. For this study, the researcher applies the direct method and the structured approach which include an oral interview and oral communication tasks in assessing the learners' speaking fluency in the classroom. The main reason is because the researcher can evaluate the learners' actual performance in two different contexts.

However, O'Sullivan (2012) states that it is not easy to assess speaking fluency because it can be subjective. Nevertheless, using rating criteria with speaking fluency

scales in the form of descriptors can help the assessors solve this problem because it includes validity and reliability (Ur, 2012). There are two methods to evaluate speaking fluency: holistic and analytic scoring scales (Al-Amri, 2010; Goh & Burns, 2012; Xi, 2007). The holistic scale is used to evaluate overall learners' performance, without analyzing each criteria separately (Mertler, 2001). It provides a single score based on a series of descriptors. The advantage of this scale is that it is quick and easy to score learners' performance by minimizing the number of decisions. However, there are some disadvantages of this scale. The assessors cannot give specific feedback or detailed information for improvement because they give only one score that might depend on their impression of the learners. According to O'Sullivan (2012), an example of the holistic scoring is presented into nine scales as follow:

Table 1 The Holistic Rating Scale (Carroll, 1980 as cited in O'Sullivan, 2012)

Scores	Band
9	Expert speaker. Speak with authority on a variety of topics. Can initiate, expand and develop a theme.
8	Very good non-native speaker. Maintains effectively his own part of a discussion. Initiates, maintains and elaborates as necessary.
7	Good speaker. Present case clearly and logically and can develop the dialogue coherently and constructively. Rather less flexible than band 8 performer but can respond to main changes of tone or topic. Some hesitation and repetition due to a measure of language restriction but interacts effectively.
6	Competent speaker. Is able to maintain theme of dialogue, to follow topic switches and to use and appreciate main attitude markers. Stumbles and hesitates at times but is reasonably fluent otherwise. Some errors and inappropriate language but these will not impede exchange of views. Show some independence in discussion with ability to initiate.

Table 1 (continued) 1

Scores	Band
5	Modest speaker. Although gist of dialogue is relevant and can be basically understood, there are noticeable deficiencies in mastery of language patterns and style. Needs to ask for repetition or clarification and similarly be asked for them. Lacks flexibility and initiative. The interviewer often has to speak rather deliberately. Cope but not with great style or interest.
4	Marginal speaker. Can maintain a dialogue but in a rather passive manner, rarely taking the initiative or guiding the discussion. Has difficulty in following English at normal speed; lacks fluency and probably accuracy in speaking. The dialogue is therefore neither easy nor flowing. Nevertheless gives the impression that he is in touch with the gist of the dialogue even if not wholly master of it. Marked L2 accent.
3	Extremely limited speaker. Dialogue is a drawn out affair punctuated with hesitations and misunderstandings. Only catches part of normal speech and unable to produce continuous and accurate discourse. Basic merit is just hanging on to discussion gist, without making major contribution to it.
2	Intermittent. No working facility; occasional, sporadic communication.
1	Non-speaker. Not able to understand and/or speak.

In 2018, Council of Europe or COE proposes a 7-scale-holistic rubric for speaking assessment. The example is shown below:

Table 2 CEFR-based Holistic Speaking Assessments (COE, 2018)

Scores	Band
5	Handles communication in everyday situations, despite hesitation. Constructs longer utterances but is not able to use complex language except in well-rehearsed utterances. (if student performs better than the above, still give 5)
4.5	Performance shares features of bands 4 and 5.
4	Conveys basic meaning in very familiar everyday situations. Produces utterances which tend to be very short – words or phrases – with frequent hesitation
3.5	Performance shares features of bands 3 and 4.
3	Has difficulty conveying basic meaning even in very familiar everyday situations. Responses are limited to short phrases or isolated words with frequent hesitation and pauses.

Scores	Band
2	Unable to produce the language to complete the tasks.
1	Does not attempt the task.

For the analytic scale, speaking performance has been broken down into many parts, and each part is scored independently (Tuan, 2012). This procedure is used to avoid subjectivity or the assessors' bias towards the whole rating scale. The result is evaluated from the total score of the rating for all parts. O'Sullivan (2012) mentions that the scale is preferred over the holistic scale because it is more reliable. Depending on the particularity of the scale, it expresses more meaningful and specific feedback across multi-dimensions. Similarly, Tuan (2012) states that the analytic scale presents more effective diagnostic information on speaking performance assessment.

To evaluate English speaking fluency, many researchers have developed rubric scales as follow:

Brown (2001) presents an example of speaking fluency criteria below:

Table 3 The Analytic Rating Scale of Speaking Fluency (Brown, 2001)

Category	Level	Description
Fluency	1	No specific fluency description. Refer to other to four language areas for implied level of fluency.
	2	Speaker can handle with confidence, but not with facility most social situations, including introductions and casual conversations about current events, as well as work, family, and autobiographical information.
	3	Speaker can discuss particular interests of competence with reasonable ease. Rarely has to grope for words.
	4	Speaker is able to use language fluently on all levels normally pertinent to professional needs. Speaker can participate in any conversation within the range of experience with a high degree of fluency.
	5	Speaker has complete fluency in the language such as his/her speech is fully accepted by educated native speakers.

Nakatsuhara (2007) develops six levels of rating scale to assess English speaking fluency for students in upper-secondary school. The scale is presented below:

Table 4 The Rating Scale for Assessing English Speaking Fluency (Nakatsuhara, 2007)

Category	Level	Description
Fluency	0	Speech is so halting and fragmentary that conversation is impossible.
	1	Speech is very slow and disconnected. Almost impossible to follow, except for short or routine phrases.
	2	Speech is very slow and hesitant. It frequently demands unreasonable patience of the listener and occasionally impedes communication.
	3	Speech is slow and hesitant (e.g. with some unevenness and long pauses caused by rephrasing and searching for language). It occasionally demands unreasonable patience of the listener, but does not really impede communication.
	4	Hesitation while searching for language may be noticeable and speech may be slow, which, however, does not demand unreasonable patience of the listener.
	5	Has comfortable, nearly natural speed in most everyday contexts. There may be some natural hesitation while searching for language.

Spratt, Pulverness, and William (2008) construct the analytic criteria for speaking fluency assessment into five levels. The example is presented below:

Table 5 Scale for English Speaking Fluency Assessment (Spratt et al., 2008)

Category	Level	Description
Fluency	1	Almost unable to communicate.
	2	Extremely hesitant; very limited range of language available.
	3	Quite hesitant; limited range of vocabulary and structures.
	4	Some hesitation and sometimes has to search for words.
	5	Speaks fluently without hesitation or searching for words.

Moreover, Jong and Hulstjin (2009) develop six-level scale to assess speaking fluency for non-native speakers. The scale is presented below:

Table 6 Fluency Scale Ordinate Corporation in Jong and Hulstjin (2009)

Category	Level	Description
Fluency	0	DISFLUENT Candidate speech is very slow and seems labored and very poor, with many discernable phrase grouping and with multiple hesitations, pauses, false starts and/or major phonological simplifications. In an utterance, most words are isolated and there are many long pauses.
	1	LIMITED Fluency. Candidate speech is slow and has irregular phrasing or sentence rhythm. Poor phrasing, staccato or syllabic timing, multiple hesitations, many repetitions or false starts render the spoken performance notably uneven or discontinuous. Long utterances have several long pauses.
	2	INTERMEDIATE Fluency. Candidate speech may be uneven or somewhat staccato. Utterance (if ≥ 6 words) has at least one smooth 3-word run, and there are several hesitations, repetitions or false starts. Speech may have several long pauses, but not unlimited.

Table 6 (continued)

Category	Level	Description
Fluency	3	GOOD Fluency Candidate speech has acceptable speed, but may be somewhat uneven. Long utterances may exhibit some hesitations; but most words are spoken in continuous phrases. There are several repetitions or false starts per utterance. Speech has no too many long pauses, and does not sound staccato.
	4	ADVANCED Fluency. Candidate utterance has acceptable rhythm, with appropriate phrasing and word emphasis. Utterances have no more five hesitations, repetitions or false starts. There is only one to five significantly non-native phonological hesitations.
	5	NATIVE-LIKE Fluency. Candidate utterance exhibits smooth native-like rhythm and phrasing, with no more than one hesitation, repetitions, false start, or non-native phonological simplification. The overall speech sounds natural.

O'Sullivan (2012) also suggests five levels of scale for assessing learners' speaking fluency. The scale is presented below:

Table 7 Rating Scale for Speaking Fluency Assessment (O'Sullivan, 2012)

Category	Level	Description
Fluency	1	Speech is so halting and fragmentary, the conversation is virtually impossible.
	2	Speech is very slow and uneven except for short or routine sentences.
	3	Speech is frequently hesitant and jerky; sentences may be left uncompleted.
	4	Speech is occasionally hesitant, with some unevenness caused by rephrasing and groping for words.
	5	Speech on all topics is as effortless and smooth as a native speaker.

Lastly, Council of Europe (2020) presents six levels of Common European Framework of Reference (CEFR) scale for assessing learners' speaking fluency. The scale is presented below:

Table 8 Rating Scale for Speaking Fluency Assessment (Council of Europe, 2020)

Category	Level	Description
Fluency	1	A speaker can manage very short, isolated, mainly pre-packaged utterances, with much pausing to search for expressions, to articulate less familiar words, and to repair communication.
	2	A speaker can make him/herself understood in very short utterances, even though pauses, false starts and reformulation are very evident.
	3	A speaker can keep going comprehensibly, even though pausing for grammatical and lexical planning and repair is very evident, especially in longer stretches of free production.
	4	A speaker can produce stretches of language with a fairly even tempo; although he/she can be hesitant as he or she searches for patterns and expressions, there are few noticeably long pauses.
	5	A speaker can express him/herself fluently and spontaneously, almost effortlessly. Only a conceptually difficult subject can hinder a natural, smooth flow of language.

Category	Level	Description
	6	A speaker can express him/herself spontaneously at length with a natural colloquial flow, avoiding or backtracking around any difficulty so smoothly that the interlocutor is hardly aware of it.

It clearly shows that most of these analytic scales contain five levels of speaking fluency assessment. All of them have been developed on the same way. The lowest level is level 1 and the highest level is level 5. However, the description for each level from each rubric is quite different in detail.

In this study, the researcher adopts the rubric for speaking fluency assessment from Jong and Hulstjin (2009) as shown in Table 6 to assess the participants' performance because of two reasons. First, this criteria consists of six different levels which is easy to use. It has a clear-cut descriptive criteria in each scale. In addition, it has been widely used in studies that share similarities with this study in terms of context of the study.

Problem-Based Learning in Language Teaching

There is a move from teacher-centered to student-centered which changes students from passive learners to be active learners. PBL is a pedagogical approach which mainly focuses on students by making them think and solve real world problems by relating to their background knowledge and new knowledge. It gives students autonomy and responsibility and allow them to take an active role in learning, with teachers becoming a facilitator. Presently, language learning focuses on

communication and PBL can promote this aspect. It encourages students to interact and collaborate with their peers.

PBL or Problem-based learning is firstly presented by John Dewey, an American scholar, in the 1960s at McMaster University Medical School, Canada. It is defined as a student-centered approach by many researchers. Shortly after, some other medical schools including the University of Limburg at Maastricht (the Netherlands), the University of Newcastle (Australia), and the University of New Mexico (the United States) applied this strategy into classrooms (Boud & Feletti, 1997; Barrows, 1996). Barrows (1989) states that PBL consists of creating real-life problems for students to work on. The chosen problems need to have relation to their lives or at least be close to real life as possible. Torp and Sage (2002) defines PBL as a learning process which involves the students as the participants in a given problem and facilitates them to learn in relevant ways. This process also forms a learning situation that teacher becomes the guide for the students to think and inquire in deeper levels of understanding (Larsson, 2001, p. 3). Therefore, the students become more autonomous learners (Mathews & Aydinli, 2007). In a similar vein, Kumar and Natarajan (2007) define PBL as a learning approach that promotes the students to learn critically from the problems provided by instructors. This instructional design increases students learning interaction, understanding, and developing knowledge in the contextual settings (Brown, Lawless, & Boyer, 2012).

In addition, Tarhan and Acar-Sesan (2013) explain that PBL is an active learning strategy in group development. This strategy aims to develop the students as problem-solvers in real world situations. The students in PBL context have the main responsibility for their own learning in small groups; whereas, teachers become facilitators or guides. The given problems relate to possible real world situations that encourage the students to develop their problem-solving skills and acquire new information through self-directed learning. Meanwhile, Keiziah (2010: 126) points out that the students in PBL context are encouraged to solve the learning problems in small group, but later they work independently. On the same way, Simone (2014: 18) explains that the students have an opportunity to work collaboratively in the step of analyzing complex problems. Then they have independent work in resuming the problem solving.

According to Krajcik (1999), the main characteristics of PBL include five elements. First, it is driving questions or problems that are both socially important and personally meaningful to students. Second, it is interdisciplinary focus. Even though PBL activities may be centered in particular subjects, the problems are provided because their solutions require students to delve into many subjects. The third is authentic investigation that students have to seek real solutions for realistic problems. Next is the construction of knowledge. PBL activities lead students to construct knowledge or solutions and require them to present their solutions. The last thing is collaboration in which PBL is characterized by students working with a partner or

small groups. Working together enhances opportunities and motivation to share inquiry and dialogue. At the same time, students develop language and social skills.

Watson (2004) states that the key fundamental characteristic of PBL is the use of authentic problems as a learning context leading the students to develop critical thinking and problem solving skills in order to acquire knowledge. Neville and Britt (2007) also state that realistic problems are used as the tools to develop problem-solving schema in a PBL classroom. The problems also encourage students to learn how-to-learn while they learn language and content (Mathews-Aydinli, 2007). Similarly, Emnovsky (2015) points out that complicated and authentic problems from real-life situations help students develop knowledge, problem-solving skill, reasoning communication skills, and self-assessment skills.

To have good and appropriate PBL problems, Barrows and Kelson (1995) mention that the problems must be complex, ill-structured and open-ended to encourage students' critical thinking. Good problems must also be realistic and able to connect with students' experiences in order to lead intrinsic learning motivation. During learning process, the good problems automatically provide feedback which stimulates students to evaluate the value of knowledge and the effectiveness of this learning process. Meanwhile, practical problem solutions should be complex enough to encourage students' knowledge construction and collaboration. In summary, using PBL in a classroom will be effective because of two main factors. The problem is

provided appropriately and the students are guided enough to be ready for the implementation.

Problem-Based Learning and 21st Century Skills

In language teaching, PBL environment can promote 21st century skills which are necessary for the real life situations (Christiansen et al, 2013). The main focuses for this section are critical thinking and problem solving, collaboration and teamwork, and communication.

The most important idea of PBL is to teach students to learn “how to think” critically. This idea is a concept of student-centered strategy which aims to push students develop their own knowledge and skills (Vega & Brown, 2013). This concept is deeper and more sustainable that students can transfer to new situations in their lives. According to Morrison (2015), PBL has been developed to “emphasize on higher skills like critical thinking, creativity, and problem solving which necessary for everyday life more than lower level skills like memorizing facts and repeating procedures” (p.245). This is similar to the goal of the current educational reformer. Therefore, applying PBL as a learning environment has the ability to lead students to reach that goal.

Through the implementation of PBL, collaborative learning and teamwork play a great role. Students have to work in small groups of five to fifteen and new knowledge is acquired through cooperative learning (Wilkerson, 1996). Students are assigned to learn from the world's situations by helping each other. Each one has responsibility in team which they can be active and autonomous. On this way, Hill

(1990) and Cooper (1997) states that collaborative learning has a strong positive effect on learning outcomes and subject matter such as deeper understanding of subject, enjoyable learning, leadership skills and positive self-esteem.

Moreover, PBL also promotes communication skill. Collaborative learning and problem solving in team automatically foster better communication, especially in speaking. To construct knowledge or problem solution, students need their group discussion and brainstorming (Nadarajah, et al., 2016). After self-directed session, each group member joins a discussion. They have a chance to share, review, negotiate, and debate among themselves on what they discover from individual problem solving. During the interaction that students take turn to deliver information, they also develop speaking and listening skill and get new vocabulary (Wilkerson, 1996: Abraham, et al, 2014).

All in all, the implementation of PBL to classroom gives an opportunity for students to develop these practical skills altogether. During the learning process, each skill are related and supports each other. Students need to activate all of them as a medium to generate new knowledge.

The Implementation of Problem-Based Learning in Classroom

With regard to the nature of PBL, applying this strategy to a language classroom can promote students to learn actively and participate meaningfully in every activity. This section presents different stages to create a practical lesson based on PBL strategy.

Tan (2003) and Wee (2004) generate a conceptual framework to illustrate how PBL strategy works in a language classroom. At first, teacher has to present an ill-structured real-life problem to students as trigger. Next, the students form into small groups and become stakeholders who own the problem. The teacher acts as a facilitator and guides the whole process to solve the problem without giving possible answers or solutions. By planning to solve the problem, the students work in self-directed and collaborative learning environment. They have an opportunity to generate possible solutions, identify available resources and assign tasks to each group members. Then, each one gathers and shares related information in their groups. After that, all group members choose the most possible and reliable solution together. Finally, each group presents their solutions to the class. The whole process of this conceptual framework is presented below:

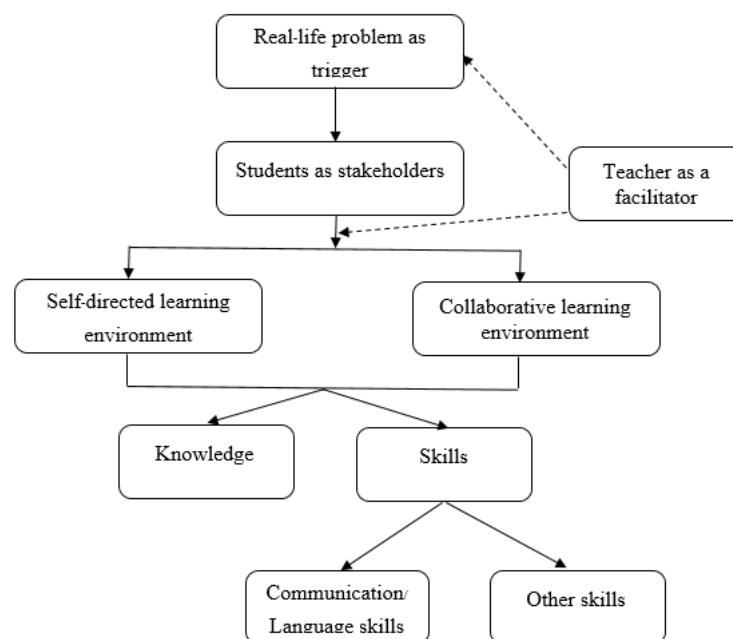


Figure 1 PBL Conceptual Framework (Tan, 2003 & Wee, 2004)

According to Uarattanakarsa (2007), PBL strategy is applied into six steps of teaching as a part of Experiential Activities Planner or EAP in Thai educational context. The first step is warming up which aims to prepare students with different activities before starting the class. Second is presentation which mainly focuses on the explanation of a conclusion to think and solve the problem. These two steps are the teacher's main responsibility. The third step is individual problem solving. This step aims to allow students to think about the ways to solve the problem individually in their group. The fourth step is group brainstorming which promotes students to share and discuss possible answers in their groups before making a decision to choose the best solution together. The next step is communication. Each group must present their ideas on how they solved the given problem to the whole class. The last one is application which helps students to implement their solutions with real situations in daily life in the context of their communities.

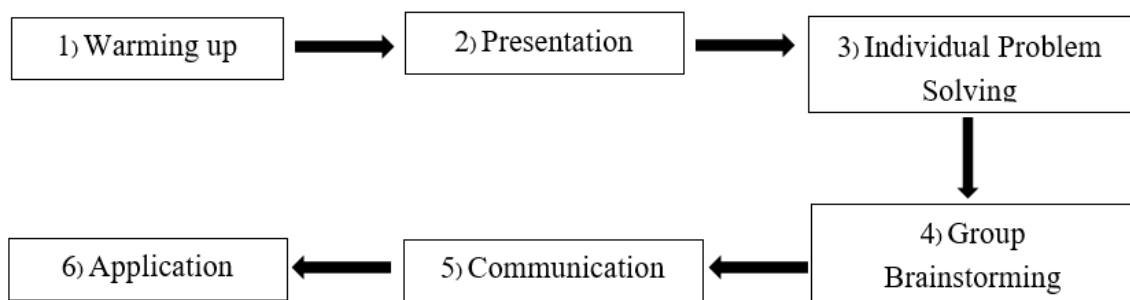


Figure 2 Six Steps of PBL Teaching (Uarattanakarsa, 2007)

Moreover, Hmelo-Silver and Eberbach (2012) concludes PBL tutorial session with seven steps into a cycle. The session starts by presenting students a complex problem with minimal information; meanwhile, students have to get in small groups

(Barrows, 2000). The second step is identifying facts in which students engage in questioning to gain additional problem information and may also gather facts (Torp & Sage, 2002). In the third step, students generate questions about that information and hypothesize the solution including the causes of the problem that may help them explain the solutions. The next step, students identify the main points (concepts) that they need to investigate more. After that, students engages in self-directed learning process. Each one works independently to search the possible solutions for the issues they have identified. The sixth step is applying new knowledge to the problem. Each group member returns to their groups to share what they found and consider the best solution or new knowledge. Finally, students evaluate their knowledge by reflecting on the problem about their understanding and their progress towards the solution. The

learning cycle is shown below:

In this study, the researcher adopts the six steps of learning process from Uarattanakarsa (2007) as illustrated in Figure 2 to engage the participants' knowledge and English speaking skill because this particular model has been used in Thai educational context. In addition, the model is suitable for language learning and it provides a clear explanation on the role of teachers and students is provided.

Advantages of Using Problem-Based Learning for Language Learning

PBL offers many benefits for language learning achievement (Azman, 2012; Larsson, 2001). First of all, PBL highly promotes collaborative, constructivist, and contextualized learning. Students work in groups and employ real-life problems to set up, motivate and boost on knowledge construction together (Tan, 2003; Ribeiro,

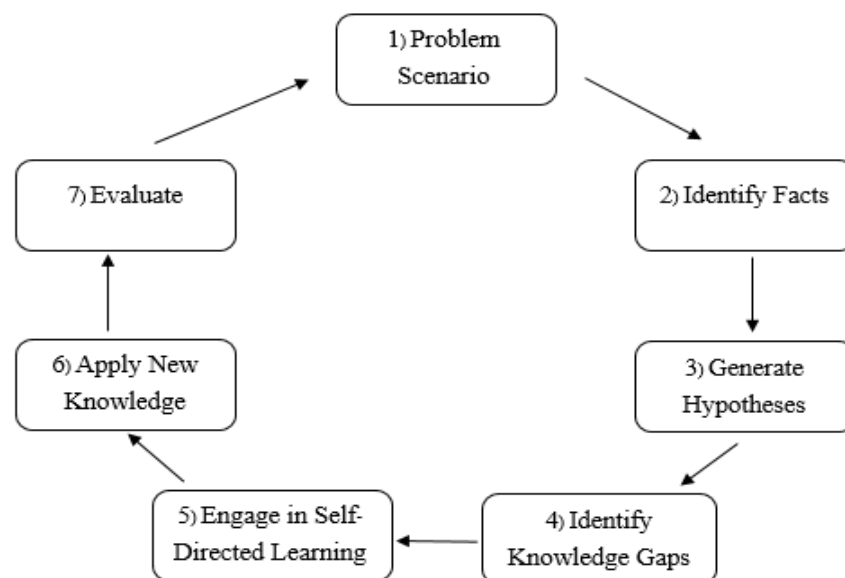


Figure 3 Seven Steps of PBL Process in One Cycle (Hmelo-Silver & Eberbach, 2012)

2011). According to Larsson (2001) and Mathews-Aydinli (2007), PBL learning process gives opportunities to have meaningful interaction as students are focusing on real-world issues and problems. Second, a PBL classroom activates self-directed learning atmosphere among students in which each one works individually to get possible solutions before sharing the ideas to their groups. PBL also supports self-regulating learning cognitive processes for example planning and analyzing the problem, examining the solutions, modifying and reflecting the solutions (Malan, Ndlovu, Engelbrecht, & 2014). In addition, PBL also improves language skills even though it is implemented in content-based courses (Ali & Abu Kader, 2005; Larsson, 2001; Tan, 2003). Students may improve their speaking skill when they have a reason for communicating their ideas freely to solve the problem or give other classmates some information they need (Mathews-Aydinli, 2007). Similarly, Karyuatry (2014) observes a significant improvement in fluency and accuracy of students in Malaysia which are ESL learners. They are not afraid to make mistakes and they finally reach the required level for their grade. Therefore, PBL becomes one of the useful teaching strategies to facilitate the students to speak the target language and gradually have skills of life-long learning because they are naturally pushed to involve in the real life situation.

Related Research

Using PBL in an English language teaching has been proven effective by researchers at various levels of education.

For secondary level, Karyuatry (2014) used PBL to enhance speaking ability of seventh grade EFL students of SMP NEGERI 21 Malang, Indonesia. There were 36 participants and most of them had low English proficiency. The participants were chosen purposively. The research was done in one cycle which consisted of planning the strategy, implementing or acting out the plan, observing the data, and reflecting the data. The participants were required to do a pre-speaking test and participate in an interview at the beginning of the experiment. During the experiment, there was an observer sitting in the back of the class to fill an observation checklist and taking notes. After applying PBL to classroom for five weeks, the participants were asked to do a post-speaking test, questionnaires and the interview. The result of the tests showed that the students' speaking ability was enhanced at a significant level. The average score of the post-speaking test in pronunciation, fluency, grammar, and content was at 80% which was above the criteria of success (75%). The results from the interview, the observation checklist, the field notes and the questionnaires revealed that the students had positive views toward PBL and they were active in class participation. The researcher stated that the students' involvement during the lesson was better each week.

In a similar vein, Khotimah (2014) found that his students' speaking abilities were significantly improved after they had learned through PBL. The study was conducted with 32 Indonesian EFL tenth graders. Initially, their speaking ability was very low. During the study, the researcher applied PBL with three cycles including

planning, acting, observing, and reflecting in each cycle. The researcher collected the following data: observation sheets, questionnaire, interview, self and peer assessment, pre-test and post-test. The results showed that students got higher scores in the post-test in term of grammar, vocabulary, comprehension, fluency, pronunciation, and intonation. The students also stated that they enjoyed PBL activities.

Aryanti and Artini (2017) also did a study to analyze the impact of PBL on students' productive skills (writing and speaking) and the attitude toward English language learning. The population of the research was eighth grade students which consists of 412 students and 36 students were randomly chosen to be the sample. The research involved both quantitative and qualitative data. The researcher collected data via an interview, an observation checklist, pre-test and post-test, and a questionnaire. The results indicated that there were significant impact of PBL on students' productive skills. The average score of students' writing performance in the post-test was 80.67% which was higher than that of the pre-test (72.19%). For the students' speaking performance, the post-test mean score was 81.19% which was significantly higher than that of the pre-tests (76.56%). At the end of the experiment, the researcher found that the students had positive attitude forward the English language learning.

At a tertiary level, Bakhshizsdeh and Alaie (2017) did a study on the effect of PBL activities on the Iranian intermediate EFL learners' speaking skill. The participants were 42 intermediate EFL learners in English language institute of Chabahar Maritime university of Iran. They were selected with purposive sampling

method. The study was a quantitative study with an experimental group and a control group. A pre-speaking test was administered to both groups at the first week of the study. This study lasted two months with two different teaching methods. The experimental group was taught by using PBL activities; meanwhile, the control group was taught by using audio-lingual method. The participants were asked to do a post-speaking test at the end of the study. To compare the participants' speaking skill from both groups, an independent samples t-test was conducted with the aid of SPSS software. The standard probability of $p < .05$ was used to determine the significance of the study. The result showed that there was a significant difference in the post-speaking test scores for the control group ($M = 14.09$, $SD = 1.51$) and the experimental group ($M = 16.95$, $SD = 1.11$). The researchers concluded that utilization of PBL activities has a significant effect on improvement of learners' speaking proficiency.

Sahatsathatsana (2014) did a study on an interaction of PBL into English language teaching for undergraduate students at Rajamangala University of Technology. In this research, 72 non-English major students who were studying English Conversation for Daily Life course were participants. All of them were selected randomly and they were divided into two groups: experimental and control. The participants from the experimental group were asked to complete an English conversation pre-test. This group of students were taught through PBL activities, but the control group studied through a traditional method which focuses grammar translation. At the end of the semester, all participants from both groups were required

to do a post-test. In addition, the students in the experimental group were asked to complete a questionnaire. The researcher compared the scores of pre and post-tests from the experimental group and found that the mean score of the pre-test was 6.95 and the mean score of the post-test was 24.21. The result indicated that the students had significantly better score after learning through PBL, at the level of .05. To compare the learning achievement, the researcher revealed that the mean score of students from the experimental group was 70.46/80 which was higher than the mean score of students from the control group (62.12/80). Moreover, the students responded positively toward learning through PBL method. The researcher concluded that PBL teaching strategy is more effective than the traditional method.

From all of the studies related to the implementation of PBL in a language classroom, the results highlight the effectiveness of this pedagogical practice. Teaching English through PBL activities provide benefits not only in improving speaking ability but also in promoting a student-centered classroom, creating collaborative learning environment, promoting problem-solving skills and accommodating knowledge as a social relation, increasing confidence in English speaking, and promoting a positive attitude towards English learning. Therefore, PBL can be one of the effective pedagogical practices to develop students' speaking ability.

CHAPTER III

RESEARCH METHODOLOGY

The main objective of the study is to examine the effectiveness of using PBL strategy in developing students' speaking fluency. It also explores the students' views towards the teacher's use of PBL in the classroom. This chapter describes the research methodology, population and participants, research instruments, data collection, and data analysis.

Research Design

The study is conducted in the EFL public secondary school context. It aims to investigate the students' speaking fluency and students' views after using PBL strategy in the classroom. This study has two research questions; 1) What is the impact of PBL on the students' English speaking fluency? and 2) What are the students' opinions toward PBL with regard to its usefulness in improving their English proficiency?

In order to answer the first research question, the number of speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR) in the pre and post speaking tests will be compared and statistically analyzed by the matched pair T-test. In order to answer the second research question, the students' views toward PBL strategy were gathered from the interview (See Appendix E) and student learning log (See Appendix F). These data were analyzed qualitatively.

Population and Participants

The population of this study was 150 eleventh grade English major students at Setthabutbamphe School. The participants were 15 eleventh grade English major students in the first semester of academic year 2020. All of them were selected via a purposive sampling method. They are relatively at the same English proficiency level. All of them passed the Foundation English and the English for Communication courses from the seventh to tenth grade.

Research Instruments

The following instruments will be used in this study.

1. Lesson plans

The researcher selects language functions from the Basic Educational Core English Curriculum 2008 (Ministry of Education, 2008) that are relevant to course objectives. Four lessons plans will be based on the following topics: *Living in the City*, *What do I need to do?*, *Going shopping* and *Different Jobs*. In each lesson plan, PBL activities were integrated to suit each topic. Experts in English language teaching and learning were invited to examine the lesson plans in terms of the content correctness, and the content relevancy to the course objectives. Each lesson plan covered 2 periods (50 minutes in each period). The teaching process was based on six steps: (a) warming up, (b) presentation, (c) individual problem solving, (d) group brainstorming, (e) communication, and (f) application (Uarattanaraksa, 2007). The

classroom activities correlated teaching speaking principles: pre-speaking, while speaking, and post speaking. The following are the topics for the lessons.

Table 9 Lesson plan outline

Lesson Plan	Length	Topics	Objectives	PBL Activities
1	2 weeks (200 minutes)	Living in the City	1. Students will be able to ask and give direction. 2. Students will be able to describe cities and introduce their hometowns using appropriate adjectives.	1. Warming up 2. Presentation 3. Individual Problem Solving 4. Group Brainstorming 5. Communication 6. Application
2	2 weeks (200 minutes)	What do I need to do?	1. Students will be able to describe simple processes and give advice/suggestion in daily life situations. 2. Students will be able to ask and give instructions, advice and suggestion.	1. Warming up 2. Presentation 3. Individual Problem Solving 4. Group Brainstorming 5. Communication 6. Application
3	2 weeks (200 minutes)	Going Shopping	1. Students will be able to use sentence structures and	1. Warming up

Lesson Plan	Length	Topics	Objectives	PBL Activities
	minutes)		expressions for shopping.	2. Presentation
			2. Students will be able to	3. Individual Problem
			describe things.	Solving
				4. Group Brainstorming
				5. Communication
				6. Application
4	2 weeks (200 minutes)	Different Jobs	1. Students will be able to describe job descriptions. 2. Students will be able to ask and give opinion. 2. Students will be able to talk about future plans.	1. Warming up 2. Presentation 3. Individual Problem Solving 4. Group Brainstorming 5. Communication 6. Application

2. Speaking Tests

The speaking tests include a pre-test and a post-test. They were designed to assess students' English speaking fluency. The focus is on the number of speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR). The pre-test took place in the first week of the course and the post-test will be given at the end of the study. The tests were based on concepts adapted from Mairi (2016). Each test

consists of five optional topics (See Appendix B). Three experts in English language teaching examined the content validity of the tests using the Index of Item-Objective Congruence (IOC). The topics were revised based on their comments. All speeches were recorded. The students did the tests individually. They were not allowed to talk to their friends, use a dictionary, a mobile phone, or a textbook. The students' speeches in the pre-test and the post-test were analyzed with the wave form by using three computer softwares which are Cool Edit Pro Version2 (free trial), Syllable & Disfluency Counter (free application), and Microsoft Excel. Then the result from the pre-test and the post-test were scored base on the criteria (See Appendix D). Three qualified English teachers rechecked the scores before analyzing statistically by using matched pair T-test. The qualified teachers were selected based on English teaching experience in EFL context at least five years and certificate of English education or English major.

3. Interview

At the final week of the study, all participants were interviewed with ten questions provided by the researcher in order to obtain information regarding students' opinions toward the use of PBL strategy in the classroom. The questions involves both positive and negative way (See Appendix E). Content validity and the correctness of language use were assessed by three experts using the Index of Item-Objective Congruence (IOC). The experts rated each question individually to evaluate whether the questions do or do not measure specific objectives by giving the question

a rating of 1 (for clearly measuring), -1 (for clearly not measuring), or 0 (for unclear measuring) for each objective (Turner, Mulvenon, & Thomas, 2002). The acceptable questions must have a value of .50 or higher as seen below:

$$IOC = \frac{\Sigma R}{N}$$

ΣR means the total score for each question given by all the experts.

N means the number of experts reviewing the question validity.

4. Student Learning Logs

Daily after class, the participants were required to reflect their personal feelings independently on what they learned and how they learned. The learning log includes six questions and it has been adapted from ESOL Online (2018) (See Appendix F).

Data Collection

At the first week of the study, each participant will take a pre-test. They were given 5 optional topics based on the Basic Educational Core English Curriculum 2008 (Ministry of Education, 2008). They were asked to choose only one topic. They had approximately 10 minutes of preparation before delivering a short talk for two minutes. Their performance were recorded. After that, the recordings were analyzed on four components; the number of speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR).

During the second week until the ninth week, the participants were assigned to write down their feelings and other information they wanted to express on the learning logs. They were required to submit their reflection daily after class.

At the final week of the study, the participants were asked to take a post-speaking test. They followed the same procedures as in the pretest. Then they were interviewed individually to get their opinions after learning through PBL. The participants' opinions were recorded to analyze qualitatively.

Table 10 Data collection timeline

Data	Time	
1. pre-speaking test	First week (week 1)	Three raters rated the students' speaking performance.
2. post-speaking test	Final week (week 10)	Three raters rated the students' speaking performance.
3. Student Learning Log	Daily after class	The participants were required to write the learning log and submit to the researcher daily
4. Interview	Final week (week 10)	The students responded the interview questions individually to express their opinions toward the use of PBL strategy in the classroom.

Data Analysis

In order to investigate whether the students' speaking fluency has been developed after eight weeks of learning through PBL strategy, the data was analyzed as follows:

1. Speaking Tests

To evaluate the speaking fluency, the researcher analyzed data in three main steps. At first, the speeches in the pre-test and the post-test were analyzed with the wave form by using three computer softwares which are Cool Edit Pro Version2 (free trial), Syllable & Disfluency Counter (free application), and Microsoft Excel. The main focus of this step is to measure the number of speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR). The researcher adopted the method from Stockdale (2009) and Sawyer (2010) as follow:

a) Speech Rate (SR)

The researcher divided the number of all syllables by the total time of speech in seconds and multiplied the result by 60 to calculate speech rate in syllables per minute. At the normal state, an adolescent or adult can produce 162–230 syllables per minute. It's a standard fixed by Tennessee Department of Education Fluency Resource Packet (2009:24). In this case, the pruned syllables and all disfluencies are not included. The calculation formulas are as follow:

$$SR = \frac{NS}{TS} \times 60$$

$$SRS = \frac{SR}{230} \times 100$$

NS means the number of all fluent syllables

TS means the total time in seconds

SRS means speech rate score

b) Pause Rate (PR)

To calculate pause rate, the researcher included all corrections, repetitions, pauses and filled pauses with non-lexical utterances such as emm, uhm, err, and eeee. All of them were divided by the number of seconds, and then multiplied by 100. The calculation formulas are as follow:

$$PR = \frac{NP}{TS} \times 100 \qquad PRS = 100 - \left(\frac{NP}{TS} \times 100 \right)$$

NP means the number of pruned syllables

TS means the total time in seconds

PRS means pause rate score

c) Disfluent Syllable (DS)

Disfluent syllables include fillers, errors, and repetitions. To calculate disfluent syllables per minute, the total disfluencies is divided by the total number of syllables. Then multiplied by the total time in seconds. The calculation formulas are as follow:

$$DS = \frac{ND}{230} \times TS \qquad DSS = 100 - \left(\frac{ND}{230} \times TS \right)$$

ND means the number of disfluent syllables

TS means the total time in seconds

DSS means disfluent syllable score

d) Mean Length of Run (MLR)

The purpose to measure mean length of run between pauses and other disfluencies is to estimate the average length of speech without interruption. The

researcher subtracted the total number of syllables by the number of pauses longer than 0.3 seconds and other disfluencies. Then the result was divided by the normal amount of syllables per minutes. For this study, the total time of speech sample is 2 minutes. The calculation formula is as follow:

$$MLR = \frac{NS - NP}{460}$$

$$MLRS = MRL \times 100$$

NS means the number of total syllables

NP means the number of pauses above 0.3 seconds

460 means normal amount of syllables / 2 minutes

MLRS means mean length of run score

Then, the researcher used the following formula to calculate mean score of four speaking fluency components which the maximum score is 100.

$$M = \frac{\sum X}{N} = \frac{SRS + PRS + DSS + MLRS}{4}$$

M means mean score

Then, the results from both tests were rechecked by three qualified teachers. The pre-test and post-test scores were categorized into different levels of speaking fluency based on score rating scale adopted from Jong and Hulstjin (2009) as shown below.

Table 11 Score Rating Scale

Score	Level	Description
1-10	0	Disfluent
11-30	1	Limited
31-50	2	Intermediate

51-70	3	Good
71-90	4	Advanced
91-100	5	Native-Like

Finally, the scores were statistically analyzed and compared by using matched pair T-test in order to obtain descriptive statistics; mean and standard deviations.

2. The interview

After each participant responds the interview individually, their answers will be recorded and analyzed by using qualitative content analysis in order to obtain the participants' opinions toward PBL activity.

3. Student Learning Log

At the final week of the study, all of learning logs will be analyzed by using qualitative content analysis in order to gain students' reflections or feelings to support the strength information from the interview result.

CHAPTER IV

RESULT

This chapter presents the results related to the research objectives. The objectives of the research were as follow: 1) to investigate the effect of using PBL strategy to enhance English speaking fluency, and 2) to investigate the students' opinions toward the use of PBL in classroom learning. The results were separated into two parts according to the two research questions.

Research Question 1: *What is the impact of PBL on the students' English speaking fluency?*

Table 12 and Table 13 show descriptive statistics of pre-post tests which analyzed by SPSS program on four speaking components; the number of speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR). These tables provide the answer for the first research question about the impact of PBL activity impact on the students' English speaking fluency.

Table 12 Descriptive Statistics of the Pre-test and Post-test Scores of Four Components

Component		N	Mean	Std. Deviation
SR	Pre-test	15	50.58	15.38
	Post-test	15	53.29	16.02
PR	Pre-test	15	58.39	9.29
	Post-test	15	61.83	7.51

Component		N	Mean	Std. Deviation
DS	Pre-test	15	84.24	8.09
	Post-test	15	84.97	7.76
MLR	Pre-test	15	64.38	13.25
	Post-test	15	66.45	13.90

Table 12 shows that the average mean score of the post-test on each component has increased. The highest mean score was disfluent syllable (DS) which was 84.97 (S.D. = 7.76). The second was mean length of run (MLR) which was 66.45 (S.D. = 13.90). It is follow by the pause rate (PR) which was 61.83 (S.D. = 7.51) and the last one was speech rate (SR) which was 53.29 (S.D. = 16.02). Below is the Table 12 which presents the overall scores of the students' pre-test and post-test.

Table 13 Descriptive Statistics of the Pre-test and Post-test Scores (Overall)

	N	Mean	Std. Deviation
Pre-test	15	64.40	9.85
Post-test	15	66.64	9.90

As shown in Table 13, the average mean score of the pre-test was 64.40 (S.D. = 9.85) and the post-test was 66.64 (S.D. = 9.90). The result presents that the average mean score of the students' speaking fluency has increased. Figure 4 shows that the average score of students' speaking post-test was relatively higher than the pre-test mean score.

It implies that the implementation of PBL activity could positively increase the eleventh grade students' speaking fluency.

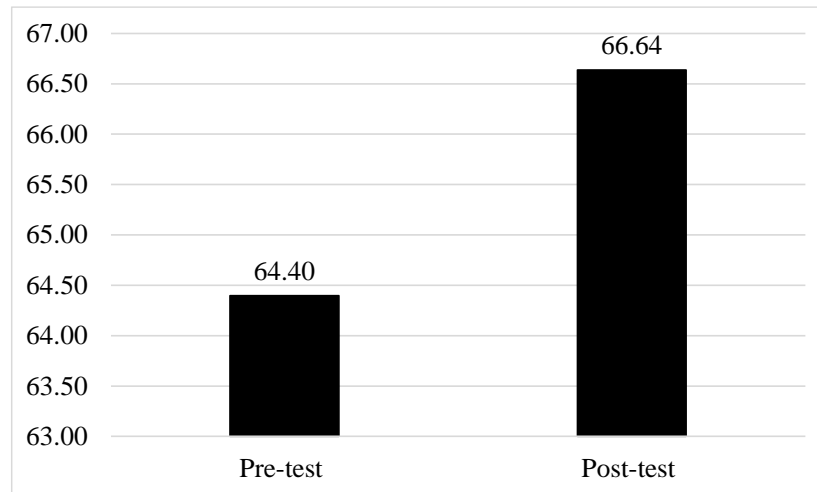


Figure 4 The Average Mean Scores on the Pre-test and Post-test

The average mean score of pre-test and post-test were statistically compared by using the match paired t-test. Below is the Table of the comparison of paired differences via T-test.

Table 14 The Comparison of Paired Differences via t-test

Paired Differences					df.	Sig.
Test	Mean	Std.	95% Confidence			(2-tailed)
		Deviation	Interval of the			
			Difference			
			Lower	Upper		
Post-test –						
Pre-test	2.24	1.64	1.33	3.15	14	<.001

As presented in Table 14, the analysis aimed to examine the effect of before and after the implementation of PBL strategy to enhance students' speaking fluency. The results showed that the students' speaking fluency was significantly improved after using PBL activity at the p value of $<.001$.

Research Question 2: What are the students' opinions toward PBL with regard to its usefulness in improving their English proficiency?

In order to answer the second research question, the results from the interview and the student learning log were analyzed by using qualitative content analysis. The individual interview was conducted at the last week of the research. To avoid bias on students' opinions, the researcher invited another English teacher who teaches the same group of students to interview the participants and record their responses (See Appendix H). The learning log was assigned from the second week to the ninth week and the students had to submit the log twice a week.

This section presents the analysis of the results in drawing the students' opinions on the usefulness of PBL on their English proficiency. The data regarding the benefits of PBL as reported by the students covered five aspects: 1) providing opportunities for English communication, 2) improving speaking fluency, 3) promoting collaborative learning environment, 4) decreasing language anxiety and boosting self-confidence, and 5) acquiring new knowledge and skills.

Providing opportunities for English communication

With regard to the results of the interview, all students revealed that they had more opportunities to speak English in class compared to the previous semester. The students' responses suggested that the learning process and class activities encouraged them to interact with their classmates in English which in turn gave them opportunities to adjust their roles to be more communicative and more active. Below are some examples of statements in relation to the student's opinions.

The Interview Question 6

T: Do you have more opportunities to speak English in class?

S2: *"I speak more English."*

S4: *"Yes, I have more opportunities to speak with teacher and friends."*

S5: *"Sometimes, yes."*

S6: *"Yes, speaking and listening also."*

S8: *"Yes, a lot of speak English in class."*

S9: *"Yes, I can speak English many times in class."*

S11: *"Uhm...I think yes, have more."*

The students' use of words such as *more*, *a lot of* and *many times* implied that they had more chances to practice speaking in English. In addition, the results from the learning log were in line with the interview responses. The students stated that they felt that they got involved and participated more (See Appendix I, question2).

Improving Speaking Fluency

The interview data revealed that the majority of students felt that they spoke English more fluently compared to their performances in the previous semester. It is important to note that when the students considered such improvement, they did not compare their performance with their friends' or connect to any standard or criteria. Therefore, it was relatively subjective. In the interview, they used the words 'yes', 'of course', 'sure', 'better', 'maybe', 'a little bit', and 'not too much' to express their opinions.

The Interview Question 7

T: Do you think you can speak English more fluently compared to the previous semester?

S1: *"I can already speak fluent English but if you ask...uhm...if it improves my English, I must say that is a big YES."*

S3: *"I think not too much, but it's better."*

S4: *"Uhm...for me I think...I think speak English more fluently than the previous semester."*

S6: *"A little bit."*

S8: *"Maybe, but I need to improve err... in the future."*

S11: *"Yes, of course."*

S12: *"It's better, but I need to improve it more."*

S13: *"Yes, sure. I dare to speak more than the last semester."*

Based on the above statements, it implies that the students were aware of their speaking proficiency level and they wanted to be more fluent and improve their speaking abilities. As supported by the results from the learning log (Question 3), the majority of students found that speaking practice was quite interesting and they did not mention any activities that they do not like (The Interview Question 2). However, they realized that they had to learn more vocabulary and practice their pronunciation (Learning log, Question 4-5).

Promoting Collaborative Learning Environment

According to the interview results, it is plausible that classroom activities facilitated the students' learning process because the majority of students revealed positive responses on the activities in term of learning environment. The students were satisfied with group activities. Below are some examples of their responses.

The Interview Question 1

T: What do you like most about the class activities?

S1: *"Group activities because I can work with my friends."*

S4: *"I like the presentation one, because I get to practice my speaking skill."*

S6: *"I can practice English speaking. I like classroom market."*

S8: *"For me, I very feel nice about the activities ..."*

S12: *"I can ask and communication with everyone."*

The Interview Question 4

T: Do you prefer working in group with friends or just working alone? Why?

S4: *“Well, I prefer working in group with friends because it so happy and share many idea.”*

S6: *“Working in group with friends. It helps to find information.”*

S11: *“Like to work in groups because they can consult with each other. I get high score with friends. (Laughing)”*

S12: *“Group because they helped each other.”*

In addition, the students reported many benefits of working in a group during the learning process. The benefits could be divided into three aspects. The most important aspect is the support that they got from their teammates including having some new ideas, and gaining more information. Some students said that the group members could help them with some parts of the activities that they could not do well. Second, working in a group could increase the level of their confidence. Third, group work facilitated decision making process. There are some examples of students' responses below.

The Interview Question 5

T: How does your group help you in the class activities?

S4: *“Uhm...I think my group can search information for me. It saves time.”*

S6: *“Share opinions and...errr...help work together to create unity.”*

S7: *“I feel normal to work with friends, but sometimes I'm excited in front of the class.”*

S8: *“It helps in parts that we cannot do.”*

S14: *"I think I feel good with friends."*

S15: *"Help solve problems."*

This information suggested that group activities offered meaningful learning experiences for students. As supported by the information from the learning logs, some students revealed that they had to think critically with group members before making a decision.

Decreasing Language Anxiety and Boosting Self-Confidence

In relation to the affective aspect, the students' views on how they felt about the learning process were revealed through the interview. To be clear, this part is analyzed in order to find out the students' feelings. Based on the students' responses, below are some significant statements.

The Interview Question 1

S8: *"For me, I very feel nice about the activities I hate writing but activities feel fun."*

S10: *"Relax and sometimes have fun activities."*

By saying the words 'nice' and 'relax', the students expressed positive feelings.

The Interview Question 4

S4: *"Well, I prefer working in group with friends because it so happy and share many idea."*

S9: *"With friends. I'm happy. They helped on translating English vocab."*

By saying the words ‘*nice*’, ‘*relax*’, and ‘*happy*’, the students expressed positive feelings.

The Interview Question 5

S2: *“I have no confident in my accent and we just just...understand.”*

S5: *“Everyone don’t shy to speak.”*

S7: *“I feel normal to work with friends, but sometimes I’m excited in front of the class.”*

S9: *“Confident and fun”*

For this question, many students revealed that working with friends could encourage them to be confident.

The Interview Question 7

S13: *“Yes, sure. I dare to speak more than the last semester.”*

This students expressed positive reaction on speaking practice by using the word ‘*dare to speak more*’. It can be interpreted that previously this student did not have confidence in speaking as same as the period of the study.

The Interview Question 8

S2: *“I feel like and have fun even though the grammar is wrong.”*

S3: *“Not confident in myself.”*

S4: *“Well, I feel good to speak English because... I need to improve more and more.”*

S6: "I am very excited when I have to speak in front to people, but with friends it's ok."

S7: "I feel like I can practice and feel happy to use my knowledge."

S12: "Exciting and shy"

S13: "I'm shy and fun and I know my grammar is not good."

Based on the responses, the students had different feelings. However, it can be concluded that a majority of students thought that PBL could help them increase their confidence in developing English proficiency even though some of them might have language anxiety such as excitement and shyness.

Acquiring new knowledge and skill

Based on the results from the learning log (Question 1 and 6), many students pointed out that they could learn new vocabulary, new knowledge related to lessons, grammar in terms of sentence structure and part of speech, communication skills, planning and working in team which they could connect to their previous experiences. In addition, the interview responses showed that most of the students achieved more than one thing as revealed in the statements below:

The Interview Question 9

T: What do you actually get from speaking practice in the class?

S2: *"I learned about vocabulary and conversations."*

S5: *"Have practiced vocabulary, practice speaking and communicating correctly."*

S7: *“I’m more confident in speaking and get new vocabulary.”*

S13: *“I speak better and have more knowledge and... some vocabulary.”*

S15: *“I speak active with friends...err...and know new word.”*

To analyze the above statements, the main concept that appeared in all responses is vocabulary. It can be considered that PBL activities gave the students opportunities to discover many new words.

The results of the interview and the learning did log support each other. It could be interpreted that the students had positive opinions and meaningful experiences toward PBL class activity. They showed the acceptance of PBL with regard to its usefulness in improving their English proficiency and some even suggested the teacher used this kind of classroom activity in the future.

In summary, the data analysis suggests that students’ speaking fluency had significantly increased after using PBL activity ($p < 0.05$). The students had positive views toward PBL activity. Nevertheless, to further understand the results of the research, the discussion of major results is presented in the next chapter.

CHAPTER V

SUMMARY DISCUSSION AND SUGGESTION

This chapter presents the summary of this research study which investigated the effect of using PBL strategy to enhance English speaking fluency and the students' opinions toward the use of PBL in classroom learning. It discusses how the two research questions have been answered and offers the implications of the results. Based on the research results, limitations of the research and suggestions for further studies are offered.

Summary Discussion

The answers for the two research questions are presented below.

Research Question 1: *What is the impact of PBL on the students' English speaking fluency?*

According to the previous chapter, the study has revealed that the students' English speaking fluency has increased after the use of PBL activity. The results demonstrate that the mean scores and standard deviation of the students' post-test which evaluated on four speaking components; the number of speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR) were higher than those of the pre-test. Additionally, t-test dependent indicates that the students' mean scores have increased from 64.40 at the beginning to 66.64 at the end of the study. The result presents that the students' speaking fluency is significantly increased at the level of .05.

Hence, the quantitative evidence suggests that the use of PBL activity has some positive impact on the students' speaking fluency. Such finding appears to resemble the study of Karyuatry (2014) which also found that applying PBL activity in English teaching had a positive influence on the students' speaking abilities in terms of speaking fluency. Students were more active to speak in class because they had something to offer. In similar vein, Khotimah (2014) claims that the use of PBL activities in an EFL classroom helped students to improve speaking proficiency because the students are engaged in problem solving. This in turn helps them improve their speaking skills.

Based on the researcher's experience, to encourage the students to be active learners in collaborative learning environment, it is highly important that the problem that the teacher chooses be authentic. When the students have some background knowledge and can relatively relate to the problem, they can work effectively both on individual problem-solving task and group brainstorming. It helps with the flow of ideas. As a facilitator, the researcher noticed that the students did not express shyness, anxiety, or excitement when working with friends.

Overall, based on the results of this study, it can be argued that PBL has positive impact on the students' speaking fluency on four aspects; the number of speech rate (SR), pause rate (PR), disfluent syllable (DS) and mean length of run (MLR). However, it is also found shows that the effectiveness of using PBL to enhance speaking fluency on each student differed dependent on their background.

Research Question 2: What are the students' opinions toward PBL with regard to its usefulness in improving their English proficiency?

According to their responses on the interview and their learning log, the students had positive opinions toward PBL strategy in terms of its usefulness in improving their English proficiency. Such 'usefulness' could be categorized into five aspects as follow: 1) providing opportunities for English communication, 2) improving speaking fluency, 3) promoting collaborative learning environment, 4) decreasing language anxiety and increasing self-confidence, and 5) acquiring new knowledge and skills.

To further elaborate, based on the interview content analysis, the majority of students positively reported that PBL activities really benefit them. The activities provided them many opportunities to communicate in English. A group activity is what they are most satisfied with and the assignments are manageable for them. By turning to be in active role, the students clearly suggest that they enjoy working in group more than working alone. When they are engaged in collaborative learning environment, group members support each other, boost up their confidence, work harmoniously in forming a decision, give positive feeling to each other, and solve problems which is the main focus of PBL. For speaking practice, all of the students strongly emphasize that they have more opportunities to speak English and they felt that they were more fluent than the previous semester which makes them feel positive when they speak English in class. Furthermore, the students reveal that they get

speaking improvement, new vocabulary, new knowledge and more confident in themselves.

As PBL has been claimed to support 21st century skills in terms of critical thinking and problem solving, collaborative learning and teamwork, and communication skill, the results of this study highly support this claim. Based on the student's learning log analysis, in terms of the usefulness of PBL implementation, it was found that the log supports the results on the interview. Students can develop communication skill especially on speaking and listening, get new vocabulary and grammar, acquire new knowledge during the class, and also relate to their previous experiences. PBL activity gives them opportunities to practice their communication skills, computer skills, and critical thinking ability in collaborative learning environment. In addition, in term of acceptance, many students ensure that PBL activity includes group activities, group presentations, individual tasks, knowledge, and speaking practice are interesting for them. With regard to the results of this study, it can be argued that the students have positive opinions toward the use of PBL activity in terms of its usefulness in improving their English proficiency.

These results appear to reflect the statement made by Vega and Brown (2013), who state that PBL is the idea to teach students to learn "how to think" critically and aims to encourage students develop their own knowledge and skills. Through PBL learning process, collaborative learning and teamwork play a great role. Students have to work in small groups of five to fifteen and acquire new knowledge through cooperative learning (Wilkerson, 1996). Based on this learning environment, Hill

(1990) and Cooper (1997) state that collaborative learning like a group activity has a strong positive effect on learning outcomes and subject matter such as deeper understanding of subject, enjoyable learning, and positive self-esteem. In addition, it is also supported by Nadarajah, et al. (2016) who mention that collaborative learning and problem solving in team automatically foster better communication, especially in speaking. Building on the evidence, a study conducted by Khotimah (2014) found that students enjoyed PBL activities. The finding of this study is similar to those of Karyuatry (2014), Aryanti and Artini (2017). The researchers did the studies on high school students' speaking ability and students' views toward PBL. They found that the students had positive views because PBL activities could help them to create collaborative learning environment to develop speaking skill and acquire knowledge.

In relation to the results of this current study, they are similar to those of previous related research. However, the researcher gained some important information in the analysis of the interview responses and the learning log. First, it is about the students' learning ability. Although the whole group of students were engaged in the same collaborative learning environment and they were relatively at the similar level of English proficiency, their learning ability somehow differed with regard to their personal feeling at that time or their personal experiences about the problems which teacher brings to the class. Another factor which could affect their learning ability is level of anxiety. The content analysis demonstrates that group role played a significant role in decreasing anxiety and increasing self-confidence. However, it cannot be concluded that it will definitely be effective for all students in

the EFL context. The role of teacher in PBL learning process could also affect students' speaking skills to some extent. For the students who were the participants in this study, most of them felt positive and were less anxious when they discussed in group with friends and the teacher was a facilitator. Through the observation, the researcher found that many students felt free to speak English when they did not worry about making grammatical mistakes and pronunciation accuracy.

All in all, grounded on the analysis of this study, it can be concluded that PBL has positive impact in a speaking classroom. Students are able to develop their speaking fluency during the learning process. Furthermore, the students have positive opinions toward the use of PBL activity with regard to its usefulness in improving their English proficiency.

Limitations of the Research and Suggestions for Further Studies

Similar to all other research, this study is open for the improvement in several ways. Here are some of those considerable aspects;

1. This study mainly aims to investigate the effect of using PBL strategy to enhance English speaking fluency and students' opinions toward PBL. It is limited only one component of speaking ability. During the qualitative content analysis, the researcher noticed from the learning logs that some students need to develop their speaking proficiency in terms of pronunciation accuracy. Further studies might consider analyzing this aspect.

2. The participants of the study were limited to 15 eleventh graders and there was only one group because the researcher designed to analyze results from three instruments which are pre-and post-tests, in-depth interview, and the student learning log. It is quite complex and time consuming. Due to the small number of the participants involved in the study, it might be inaccurate to claim the results in order to generalize other populations outside. The results of this study still need to be substantiated with a wider range of participants. Further studies could possibly involve more than one group of participants at the same level, they are from different majors. On the other hand, the studies can be conducted to compare the results on different levels of participants such as primary, secondary, or college level to confirm the effect of PBL activity.

3. The descriptive data analysis focuses on the comparison of pre-test and post-test scores. Instead of focusing only at the beginning and the end of data collection, the ongoing process of measurement including classroom participation, unit quiz or classroom activities should be taken into account for further studies to evaluate the students' development during the semester.

4. The length of the data collection was only 10 weeks. Further studies should consider extending the length of data collection to thirty weeks (the period of an academic year), or more to confirm the result of the study.

5. For future studies that consider applying PBL strategy in language teaching, it is helpful for a researcher to make a class survey in order to gather important

information regarding the participants' background experiences, and interests. It will be useful in designing target problems for classroom discussions.



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APPENDIXES



APPENDIX A

Lesson Plan

Chapter 2

Subject: English for Communication

Topic: What do I need to do?

Background

Context:	Responsive Speaking “What do I need to do?”
Course/Level:	Eleventh Grade Students (English Program), 50-minute class
Students:	15 students, age 16 to 17 years old, EFL learners
Overall course goals:	To use sentence structures, phrases, and sequencing in appropriate situations
Texts/materials:	PowerPoint presentation, video clip, group discussion, speaking test, Facebook page for the course.
Lesson aim (s):	<p>1) Students are be able to describe simple processes and give advice or suggestion in daily life situations.</p> <p>2) Students are be able to ask and give instructions, advice and suggestion.</p> <p>3) Students are able to apply PBL to do the assignments.</p>
PBL integration:	<p>1) Introduction ➤ Warming up</p> <p>2) Leading ➤ Presentation</p> <p>3) Practicing ➤ Individual problem solving,</p> <p>➤ Group brainstorming</p> <p>➤ Communication</p> <p>4) Summary ➤ Application</p>

Procedures: Period 1

Number of hour: 50 mins./hour

Objective (s): 1) Students understand the difference between advice and suggestion.
 2) Students understand sentence structures to ask and give advice.
 3) Students apply sentence structures and phrases to give short advice in speaking reasonably.

Activity/ Timing	Materials/ equipment	Step-by-step details	Interaction/ seating	Assessment
Introduction (5 mins.)	- Q&A - A short video clip about a wallet lost	- Teacher greets students in the classroom - Teacher shows a short video, and then ask the students some questions such as; a) What happens on the video? b) Have you ever had this problem? c) If you were the person, what do you need to do? - Students may give some possible answers.	T-Ss	
Leading (10 mins.)	- PowerPoint Presentation	- Teacher explains structures and phrases using for asking and giving advice. - Give an example in authentic situation related to the previous video.	T-Ss	
Practicing (25 mins.)	- PowerPoint Presentation	- Students get in group of three. - Teacher gives a problematic situation to the class. The situation is about garbage in the school area.	Ss-Ss T-Ss Ss-Ss	

Activity/ Timing	Materials/ equipment	Step-by-step details	Interaction/ seating	Assessment
		<p>- Each student can search information freely and prepare possible advice for their group.</p> <p>- After ten mins, students get in their group again and discuss to find out the most useful advice.</p> <p>- A volunteer from each group presents possible advice to the class.</p>		Group work assessment
Summary (10 mins.)	Mobile phone	<p>- After listening the whole class, teacher asks each student to choose or apply some information they like to the most possible advice for themselves and deliver on a video record. Then upload on course Facebook page.</p>	T-Ss	Speaking practice 1

APPENDIX B

Topics for Speaking Tests

Instructions: You are required to choose only one topic and deliver a short talk for about two minutes. You have approximately five minutes to prepare.

Pre-test

1. My hero
2. My dream job
3. How to be a good friend
4. My strength and weakness
5. Advantages and disadvantages of smartphone

Post-test

1. Future plan
2. Interesting part-time job
3. How to be a healthy person
4. The best experience in my life
5. Changes in my hometown

IOC Ratings (The Ratings of Each Topic by the Three Experts)

Topic No.	Expert 1 Rating	Expert 2 Rating	Expert 3 Rating	Total	IOC	Remarks
Pre-test						
1	1	1	1	3	1	Accepted
2	1	1	1	3	1	Accepted
3	1	1	1	3	1	Accepted
4	1	1	1	3	1	Accepted
5	1	0	1	2	0.67	Accepted
Post-test						
1	1	1	1	3	1	Accepted
2	1	1	1	3	1	Accepted
3	1	1	1	3	1	Accepted
4	1	1	1	3	1	Accepted
5	1	1	1	3	1	Accepted

Average IOC = 0.97

Description = Accepted

APPENDIX C

Speaking Fluency Rating Form

☐ Pre-speaking test

☐ Post-speaking test

No.	Participant name	Speaking Fluency Components (syllables/minute)			Mean length of run (MLR)	Score	Level
		speech rate (SR)	pause rate (PR)	disfluent syllable (DS)			
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
Total							
Average							

APPENDIX D

Speaking Fluency Scale

Score	Level	Description
1-10	0	DISFLUENT Candidate speech is very slow and seems labored and very poor, with many discernable phrase grouping and with multiple hesitations, pauses, false starts and/or major phonological simplifications. In an utterance, most words are isolated and there are many long pauses.
11-30	1	LIMITED Fluency. Candidate speech is slow and has irregular phrasing or sentence rhythm. Poor phrasing, staccato or syllabic timing, multiple hesitations, many repetitions or false starts render the spoken performance notably uneven or discontinuous. Long utterances have several long pauses.
31-50	2	INTERMEDIATE Fluency. Candidate speech may be uneven or somewhat staccato. Utterance (if ≥ 6 words) has at least one smooth 3-word run, and there are several hesitations, repetitions or false starts. Speech may have several long pauses, but not unlimited.

Score	Level	Description
51-70	3	<p>GOOD Fluency Candidate speech has acceptable speed, but may be somewhat uneven. Long utterances may exhibit some hesitations; but most words are spoken in continuous phrases.</p> <p>There are several repetitions or false starts per utterance. Speech has no too many long pauses, and does not sound staccato.</p>
71-90	4	<p>ADVANCED Fluency. Candidate utterance has acceptable rhythm, with appropriate phrasing and word emphasis. Utterances have no more five hesitations, repetitions or false starts. There is only one to five significantly non-native phonological hesitations.</p>
91-100	5	<p>NATIVE-LIKE Fluency. Candidate utterance exhibits smooth native-like rhythm and phrasing, with no more than one hesitation, repetitions, false start, or non-native phonological simplification.</p> <p>The overall speech sounds natural.</p>

Jong and Hulstjin (2009)

APPENDIX E

Interview Questions

1. What do you like most about the class activities?
2. What don't you like about the class activities?
3. Do you think the assignment is too difficult for you? How?
4. Do you prefer working in group with friends or just working alone? Why?
5. How does your group help you in the class activities?
6. Do you have more opportunities to speak English in class?
7. Do you think you can speak English more fluently compared to the previous semester?
8. How do you feel when you speak English in class?
9. What do you get from speaking practice in the class?
10. Have you got any suggestions on Problem-based learning?

IOC Ratings for Interview Question (The Ratings of Each Topic by the Three Experts)

Question No.	Expert 1 Rating	Expert 2 Rating	Expert 3 Rating	Total	IOC	Remarks
1. What do you like most about the class activities?	1	1	1	3	1	Accepted
2. What don't you like about the class activities?	1	1	1	3	1	Accepted

Question No.	Expert 1 Rating	Expert 2 Rating	Expert 3 Rating	Total	IOC	Remarks
3. Do you think the assignment is too difficult for you? How?	1	1	1	3	1	Accepted
4. Do you prefer working in group with friends or just working alone? Why?	1	1	1	3	1	Accepted
5. How does your group help you in the class activities?	1	1	1	3	1	Accepted
6. Do you have more opportunities to speak English in class?	1	1	1	3	1	Accepted
7. Do you think you can speak English more fluently compared to the previous semester?	1	1	1	3	1	Accepted
8. How do you feel when you speak English in class?	1	1	1	3	1	Accepted


Question No.	Expert 1 Rating	Expert 2 Rating	Expert 3 Rating	Total	IOC	Remarks
9. What do you actually get from speaking practice in the class?	1	1	1	3	1	Accepted
10. Have you got any suggestions on Problem-based learning?	1	1	1	3	1	Accepted

Average IOC = 1.00

Description = Accepted

APPENDIX F**Student Learning Log**

Instructions: You can reflect your feelings or any information you want to express about the class activities freely. Your answer will not be revealed in the class.

		Nickname: _____
		Date ____/____/2020
<p>What did I learn in class today?</p> <div></div>	<p>What skills did I practice today?</p> <div></div>	
<p>What did I find interesting?</p> <div></div>	<p>What questions do I have about what I learned?</p> <div></div>	
<p>What do I need help with?</p> <div></div>	<p>What connections did I make to previous ideas of lessons?</p> <div></div>	

APPENDIX G

Pre-test and Post-test Result

Evaluation of Speaking Pre-Test Records

No.	Fluent	Only pauses above				Fillers&
	syllables	Pauses	0.3 seconds	Repetitions	Corrections	Errors
S1	308	28	5	10	4	32
S2	204	39	8	11	9	15
S3	151	35	12	18	0	43
S4	316	26	0	7	1	6
S5	267	33	10	4	0	22
S6	273	18	4	7	4	9
S7	335	21	5	15	0	20
S8	130	32	11	11	1	45
S9	279	27	12	2	1	4
S10	284	34	5	13	3	19
S11	105	42	15	7	0	26
S12	197	40	7	8	2	36
S13	252	35	8	5	0	15
S14	211	25	9	3	0	21
S15	178	37	12	6	2	13
Sum	3490	472	123	127	27	326
Mean	232.67	31.47	8.20	8.47	1.80	21.73

Speaking Pre-Test Scoring

No.	SR	PR		DS		Score	MLR	Score	Average	Level	Description
	(s/m)	Score	(s/m)	Score	(s/m)				score		
S1	154	66.96	39.17	60.83	21.91	78.09	0.83	83.04	72.23	4	Advance
S2	102	44.35	55.83	44.17	13.57	86.43	0.60	60.43	58.85	3	Good
S3	75.5	32.83	54.17	45.83	31.83	68.17	0.54	53.70	50.13	2	Intermediate
S4	158	68.70	28.33	71.67	6.78	93.22	0.77	77.39	77.74	4	Advance
S5	133.5	58.04	39.17	60.83	13.57	86.43	0.71	70.87	69.05	3	Good
S6	136.5	59.35	27.50	72.50	8.35	91.65	0.68	67.61	72.78	4	Advance
S7	167.5	72.83	34.17	65.83	18.26	81.74	0.85	85.00	76.35	4	Advance
S8	65	28.26	45.83	54.17	29.22	70.78	0.48	47.61	50.20	2	Intermediate
S9	139.5	60.65	35.00	65.00	3.13	96.87	0.68	68.04	72.64	4	Advance
S10	142	61.74	45.83	54.17	16.70	83.30	0.77	76.74	68.99	3	Good
S11	52.5	22.83	53.33	46.67	17.22	82.78	0.39	39.13	47.85	2	Intermediate
S12	98.5	42.83	47.50	52.50	22.96	77.04	0.62	61.52	58.47	3	Good
S13	126	54.78	40.00	60.00	10.43	89.57	0.67	66.74	67.77	3	Good
S14	105.5	45.87	30.83	69.17	12.52	87.48	0.57	56.52	64.76	3	Good
S15	89	38.70	47.50	52.50	9.91	90.09	0.51	51.30	58.15	3	Good
Sum	1745	758.70	624.17	875.83	236.35	1263.65	9.66	965.65	965.96	47	
Mean	116.33	50.58	41.61	58.39	15.76	84.24	0.64	64.38	64.40	3.13	

Evaluation of Speaking Post-Test Records

No.	Fluent	Only pauses above				Fillers&
	syllables	Pauses	0.3 seconds	Repetitions	Corrections	Errors
S1	319	35	2	7	0	29
S2	205	30	5	12	3	11
S3	154	37	8	17	2	39
S4	321	22	2	4	0	8
S5	324	28	5	10	2	18
S6	295	23	5	5	5	6
S7	339	18	3	13	2	20
S8	132	30	9	12	2	43
S9	281	31	4	5	0	5
S10	315	28	5	15	1	22
S11	136	39	6	9	3	25
S12	200	31	4	9	2	33
S13	254	29	7	5	3	10
S14	217	30	6	4	0	16
S15	185	40	8	5	0	15
Sum	3677	451	79	132	25	300
Mean	245.13	30.07	5.27	8.8	1.67	20.00

Speaking Post-Test Scoring

No.	SR	PR		DS		Average					
	(s/m)	Score	(s/m)	Score	(s/m)	Score	MLR	Score	score	Level	Description
S1	159.5	69.35	36.67	63.33	18.78	81.22	0.85	84.78	74.67	4	Advance
S2	102.5	44.57	41.67	58.33	12.00	88.00	0.57	56.74	61.91	3	Good
S3	77	33.48	53.33	46.67	29.22	70.78	0.54	54.13	51.26	3	Good
S4	160.5	69.78	23.33	76.67	6.26	93.74	0.77	77.17	79.34	4	Advance
S5	162	70.43	37.50	62.50	14.61	85.39	0.83	83.04	75.34	4	Advance
S6	147.5	64.13	31.67	68.33	5.74	94.26	0.73	72.61	74.83	4	Advance
S7	169.5	73.70	30.00	70.00	17.22	82.78	0.85	85.22	77.92	4	Advance
S8	66	28.70	44.17	55.83	28.70	71.30	0.48	47.61	50.86	2	Intermediate
S9	140.5	61.09	33.33	66.67	5.22	94.78	0.70	70.00	73.13	4	Advance
S10	157.5	68.48	40.83	59.17	19.30	80.70	0.83	82.83	72.79	4	Advance
S11	68	29.57	47.50	52.50	17.74	82.26	0.46	46.09	52.60	3	Good
S12	100	43.48	38.33	61.67	21.91	78.09	0.60	59.78	60.75	3	Good
S13	127	55.22	36.67	63.33	7.83	92.17	0.65	65.43	69.04	3	Good
S14	108.5	47.17	33.33	66.67	10.43	89.57	0.58	58.04	65.36	3	Good
S15	92.5	40.22	44.17	55.83	10.43	89.57	0.53	53.26	59.72	3	Good
Sum	1838.5	799.35	572.50	927.50	225.39	1274.61	9.97	996.74	999.55	51	
Mean	122.57	53.29	38.17	61.83	15.03	84.97	0.66	66.45	66.64	3.4	

Comparison of Pre-Test and Post-Test Score

No.	Post-test	Pre-test	Difference
	Average score	Average score	
S1	74.67	72.23	2.44
S2	61.91	58.85	3.06
S3	51.26	50.13	1.13
S4	79.34	77.74	1.60
S5	75.34	69.05	6.30
S6	74.83	72.78	2.06
S7	77.92	76.35	1.57
S8	50.86	50.20	0.66
S9	73.13	72.64	0.49
S10	72.79	68.99	3.80
S11	52.60	47.85	4.75
S12	60.75	58.47	2.28
S13	69.04	67.77	1.27
S14	65.36	64.76	0.60
S15	59.72	58.15	1.57
Sum	999.55	965.96	33.59
Mean	66.64	64.40	2.24

APPENDIX H

Interview Responses

Interview Question 1: What do you like most about the class activities?

	Answer	Activity type
S1	Group activities because I can work with my friends.	Group activity
S2	Work in groups and I like all the class activities.	Group activity
S3	It's a fun activity. Err...That's it.	Fun activity
S4	I like the presentation one, because I get to practice my speaking skill.	Presentation
S5	I can sell with friends when we do market and shopping.	Group activity
S6	I can practice English speaking. I like classroom market.	Group activity
S7	I like all the class activities such as one day trip and shopping because I don't want to have a test.	Class activity
S8	For me, I very feel nice about the activities I hate writing but activities feel fun.	Class activity
S9	I like group activity with a tourist in Bangkok.	Group activity
S10	Relax and sometimes have fun activities.	Fun activities
S11	I think I enjoy group activities.	Group activity
S12	I can ask and communication with everyone.	Group activity
S13	I like a conversation activities.	Conversation activities

S14	Working with friends.	Group activity
S15	I can use my phone to do activities.	Activities

Interview Question 2: What don't you like about the class activities?

	Answer	Activity type
S1	I like all activities.	-
S2	No because I like all the class activities.	-
S3	Don't have	-
S4	I don't have because everything is going well anyway.	-
S5	I like almost activities, but some friends don't work.	-
S6	Don't have	-
S7	Honestly, I don't have it too.	-
S8	No, nothing.	-
S9	No I like all of it.	-
S10	It's better if teacher don't give homework.	Homework
S11	Don't have.	-
S12	No, my speaking is wrong.	-
S13	I don't have.	-
S14	Nothing.	-
S15	Nope	-

Interview Question 3: Do you think the assignment is too difficult for you? How?

	Answer	Yes/No
S1	It's fine for me.	No
S2	The work is a little difficult because...uhm...sometimes I'm not very good at English.	Yes
S3	For me, nope, but I have one thing that sometimes so hard it is my lazy.	No
S4	For me, it's not that difficult, because I know English quite well.	No
S5	Not too difficult.	No
S6	No, because suitable for high school students.	No
S7	The work is not difficult, but the exam is difficult.	No
S8	No, because I think every activities are practice the communication.	No
S9	Not too difficult	No
S10	Not much for me.	No
S11	Uhm...maybe some work.	Maybe
S12	Not very difficult, I just don't understand sometimes.	No
S13	Uhm...middle hard	No
S14	Some of it hard, but overall I can do, but sometimes it's wrong.	Yes (Some)
S15	Yes, difficult sometimes...yes, like that.	Yes

Interview Question 4: Do you prefer working in group with friends or just working alone? Why?

	Answer	Type
S1	Err...actually, I prefer both because sometimes it's easy to do, but sometimes friends can help.	Both
S2	Like the same because they have different experiences.	Both
S3	Working in group with friends because...err... it will have a good job goal to divide the work together.	Group
S4	Well, I prefer working in group with friends because it so happy and share many idea.	Group
S5	I prefer working in group because we can make anything easier.	Group
S6	Working in group with friends. It helps to find information.	Group
S7	I prefer to work alone, because some of my friends are addicted to play games.	Alone
S8	I like prefer group. We help friends.	Group
S9	With friends. I'm happy. They helped on translating English vocab.	Group
S10	Group. Someone teach me and I teach someone.	Group
S11	Like to work in groups because they can consult with each other. I get high score with friends. (Laughing)	Group
S12	Group because they helped each other.	Group
S13	We help and do activities as a team. I don't want to do it alone.	Group

S14	Working in group because it will work together.	Group
S15	With friends because help together.	Group

Interview Question 5: How does your group help you in the class activities?

	Answer	Description
S1	Sometimes they share idea. And...err...sometimes they prepare group presentation with me.	Work together
S2	I have no confident in my accent and we just just...understand.	Increase confidence
S3	Help each other in things the other person cannot do.	Support
S4	Uhm...I think my group can search information for me. It saves time.	Support
S5	Everyone don't shy to speak.	Increase confidence
S6	Share opinions and...errr...help work together to create unity.	Work together
S7	I feel normal to work with friends, but sometimes I'm excited in front of the class.	Increase confidence
S8	It helps in parts that we cannot do.	Support
S9	Confident and fun	Increase confidence
S10	They usually find information for the activities.	Support
S11	Help with pronunciation.	Support

S12	There are separate functions in the work.	Work together
S13	They change many ideas.	Make decision
S14	I think I feel good with friends.	Give positive feeling
S15	Help solve problems.	Solve problems

Interview Question 6: Do you have more opportunities to speak English in class?

	Answer	Yes/No
S1	Yes, I do.	Yes
S2	I speak more English.	Yes
S3	Yes, I do.	Yes
S4	Yes, I have more opportunities to speak with teacher and friends.	Yes
S5	Sometimes, yes.	Yes
S6	Yes, speaking and listening also.	Yes
S7	For me, I think yes, a little bit.	Yes
S8	Yes, a lot of speak English in class.	Yes
S9	Yes, I can speak English many times in class.	Yes
S10	Sure. I think I can speak more than last semester.	Yes
S11	Uhm...I think yes, have more.	Yes
S12	Yes, Sometimes, but I don't like grammar.	Yes
S13	Yes, I have. I get a lot of suggestions.	Yes

S14	Yes, a lot.	Yes
S15	Yes, I have.	Yes

Interview Question 7: Do you think you can speak English more fluently compared to the previous semester?

	Answer	Yes/No
S1	I can already speak fluent English but if you ask...uhm... if it improves my English, I must say that is a big YES.	Yes
S2	Yes. I think.	Yes
S3	I think not too much, but it's better.	Yes
S4	Uhm...for me I think... I think speak English more fluently than the previous semester.	Yes
S5	Yes, I have the opportunity to...to... speak more fluently... than before. And...I...I can still use it to communicate in the game with the country. Eee eee.	Yes
S6	A little bit.	Yes
S7	Maybe yes teacher.	Yes
S8	Maybe, but I need to improve err... in the future.	Yes
S9	A little bit.	Yes
S10	Yes.	Yes
S11	Yes, of course.	Yes

S12	It's better, but I need to improve it more.	Yes
S13	Yes, sure I dare to speak more than the last semester.	Yes
S14	More fluent than the last term, yes, teacher.	Yes
S15	A little better.	Yes

Interview Question 8: How do you feel when you speak English in class?

	Answer	Feeling	
S1	I feel well	Well	P
S2	I feel like and have fun even though the grammar is wrong.	Like, Fun	P
S3	Not confident in myself	Not confident	N
S4	Well, I feel good to speak English because...I need to improve more and more.	Good	P
S5	Good, I like.	Good	P
S6	I am very excited when I have to speak in front to people, but with friends it's ok.	Excited	P
S7	I feel like I can practice and feel happy to use my knowledge.	Like, Happy	P
S8	Shy, but fun sometimes. I...I worry a bit.	Shy, fun, worried	B
S9	Excited that... I was right or not when people listen me.	Excited	P
S10	Actually, I'm not shy, but I can't speak so much	Not shy	P
S11	Exciting. Sometimes I like it, sometimes it's not okay because	Excited	P

there may be many friends in the room.

S12	Exciting and shy	Excited, shy	B
S13	I'm shy and fun and I know my grammar is not good.	Shy, fun	B
S14	Exciting.	Excited	P
S15	Excited and afraid...and...shy.	Excited, shy	B

P	=	Positive feelings
N	=	Negative feelings
B	=	Both positive and negative feelings

Interview Question 9: What do you actually get from speaking practice in the class?

	Answer	Point
S1	Speaking skill and share idea with others.	S, K
S2	I learned about vocabulary and conversations.	V, S
S3	Learn more new word.	V
S4	Gain confidence and more vocabulary	C, V
S5	Have practiced vocabulary, practice speaking and communicating correctly.	S, V
S6	I can get speaking skill and a few words that I never know.	S, V
S7	I'm more confident in speaking and get new vocabulary.	C, V
S8	Speaking skill and vocabulary.	S, V
S9	Speaking skills and fluency.	S

S10	Assertive. I speak better when teacher don't check grammar. It's funny. Eee eee.	C, S
S11	Correct pronunciation. I listen when friends speak and...err...finish.	S
S12	Known my speak skills	S
S13	I speak better and have more knowledge and... some vocabulary.	S, K, V
S14	Better pronunciation.	S
S15	I speak active with friends...err...and know new word.	S, V

S	=	Speaking skill
V	=	Vocabulary
C	=	Confidence
K	=	Knowledge and idea

Interview Question 10: Have you got any suggestions on Problem-based learning?

	Answer	Yes/No
S1	I think I don't suggest anything. It's good enough, teacher.	No
S2	I want to have group work again later.	Yes
S3	Well, I want teacher teaches to read and... translate as well. Thank you. 😊	Yes
S4	I want to play vocabulary game next time. Thank you. 😊	Yes
S5	No, nothing. Like this it's good. Thank you.	No
S6	I think teacher teaches well. But sometimes my friends don't listen	Yes

because they like...think that the teacher is kind. She should punish them a bit.

- S7 My opinion...uhm...I know that teacher's trying to talk English more so students can get use to English, I can understand it, but some of my friends don't. Also the fact that she have to talk twice, first for English and second for Thai, I think she doesn't need. Thank you. ☺ Yes
- S8 No, nothing. Eee eee... thank you. No
- S9 I feel good with the activities. I hope to have more next semester. ☺ Yes
- S10 I want more fun activities. Thank you. Yes
- S11 Honestly, I want to have a private teaching. lol Yes
- S12 I want teacher to help me translate more difficult words. That's all. Thank you. Yes
- S13 No, thank you. No
- S14 For me, uhm...no, it is good with how it is. Thank you teacher. ☺ No
- S15 I think I don't have. Thank you. No

APPENDIX I

The List of Experts

1. Dr. Virin Danraj

Bachelor of English Education, Major of English

Master of Secondary Education, Major of Teaching English, Srinakharinwirot University

Doctor of Philosophy in Organization Development and Transformation

35 years working experience as an English teacher,

Foreign Language Department, Setthabutbamphen School
2. Miss Worawan Supat

Bachelor of English Education, Major of English

Master of English Education, Major of Linguistics

Srinakharinwirot University

34 years working experience as an English teacher,

Foreign Language Department, Setthabutbamphen School
3. Mr. Aidan Francis O'Flynn

Bachelor of Arts in Literature and Drama

Teaching English as a Foreign Language Certificate

6 years working experience as an EFL teacher

English program coordinator (Foreign teacher),

Foreign Language Department, Setthabutbamphen School

VITA

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