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**EFFECTS OF PROJECT-BASED APPROACH ON
ENGLISH LANGUAGE SKILLS IMPROVEMENT**



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the Degree of Master of Arts in English Language Studies**

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EFFECTS OF PROJECT-BASED APPROACH ON ENGLISH LANGUAGE SKILLS IMPROVEMENT

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การสอนแบบโครงการ (Project-Based Learning: PBL) ได้รับการยอมรับว่าเป็นวิธีการสอนที่มีประสิทธิภาพในการส่งเสริมการเรียนรู้ภาษาแบบมีจุดมุ่งหมายมานานกว่าสองทศวรรษ อย่างไรก็ตามวิธีการสอนนี้ยังไม่มีโครงสร้างที่ชัดเจนในการนำไปใช้ร่วมกับการเรียนการสอนในห้องเรียนปกติ งานวิจัยนี้ได้พัฒนาบทเรียน PBL ขึ้นมาเพื่อศึกษาว่าบทเรียนเหล่านี้ช่วยปรับปรุงทักษะทางด้านภาษาโดยรวม ซึ่งประกอบไปด้วยทักษะทางการฟัง พูด อ่าน เขียน ไวยากรณ์ และคำศัพท์ของนักศึกษาระดับมหาวิทยาลัยหรือไม่ นอกจากนี้งานวิจัยนี้ยังได้สำรวจความคิดเห็นของนักศึกษาและครูผู้สอนต่อการใช้วิธีการสอนแบบโครงการในการเรียนและการสอนภาษาอังกฤษ รวมไปถึงอุปสรรคที่พบระหว่างดำเนินการทำโครงการอีกด้วย ผู้เข้าร่วมงานวิจัยนี้ประกอบด้วยนักศึกษาระดับชั้นปีที่ 1 ซึ่งลงทะเบียนเรียนหลักสูตรภาษาอังกฤษ 1 ของมหาวิทยาลัยเทคโนโลยีสุรนารี เครื่องมือที่ใช้ในการวิจัยนี้ประกอบด้วย บทเรียน PBL แบบทดสอบข้อเขียน และการพูด บันทึกของนักศึกษา บันทึกของครูผู้สอน แฟ้มสะสมผลงานของนักศึกษา และการสัมภาษณ์แบบกึ่งมีโครงสร้าง ผลการศึกษาพบว่าทักษะทางด้านภาษาโดยรวมของผู้เข้าร่วมงานวิจัยพัฒนาอย่างมีนัยยะสำคัญหลังจากที่ได้เข้าร่วมการเรียนการสอนผ่านบทเรียน PBL และยังพบอีกว่าบทเรียน PBL ส่งผลเชิงบวกต่อทักษะการเรียนรู้และการทำงานด้านอื่นๆ นอกจากนี้นักเรียนส่วนใหญ่รวมไปถึงครูผู้สอนได้แสดงความคิดเห็นเชิงบวกต่อกระบวนการของบทเรียน PBL ที่ถูกนำมาใช้ ถึงแม้ว่าพวกเขาจะพบอุปสรรคระหว่างดำเนินการทำโครงการก็ตาม จากผลการศึกษานี้ผู้วิจัยได้เสนอแนวทางในการสอน รวมไปถึงหัวข้อในการต่อยอดงานวิจัยในอนาคตไว้อีกด้วย

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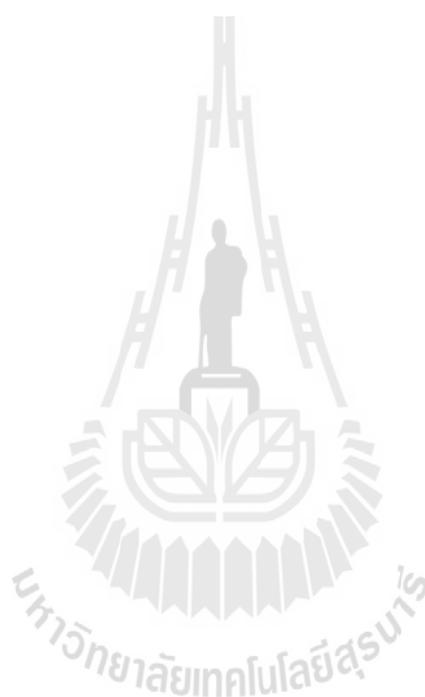
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PROJECT-BASED LEARNING/PBL APPROACH/ENGLISH LANGUAGE
SKILLS IMPROVEMENT

Project-Based Learning (PBL) has been accepted as an effective approach for promoting purposeful language learning for more than two decades. However, there is no clear structure for integrating it with regular classroom lessons. Therefore, in this study, PBL lessons were developed to investigate whether they help improve overall language skills, including listening, speaking, reading, writing, grammar and vocabulary, of students at university level. In addition, the study explored the opinions of the students and the teacher on the use of the PBL approach in the learning and teaching of English as well as the problems they encountered while engaging in the PBL approach. The participants in this study were 47 first-year students who were taking an English I course at Suranaree University of Technology. The research instruments included PBL lessons, written and speaking tests, student diaries, the teacher's diary, student portfolios, and semi-structured interviews. The results revealed that the overall English language skills of the participants improved significantly after participation in the PBL lessons and it also had positive effects on other learning and working skills. Furthermore, the majority of students as well as the teacher expressed positive opinions on the procedures used in the PBL lessons, even though they

encountered some obstacles during the projects. Based on the findings of this study, the pedagogical implications were discussed and some future research was recommended.



School of Foreign Languages

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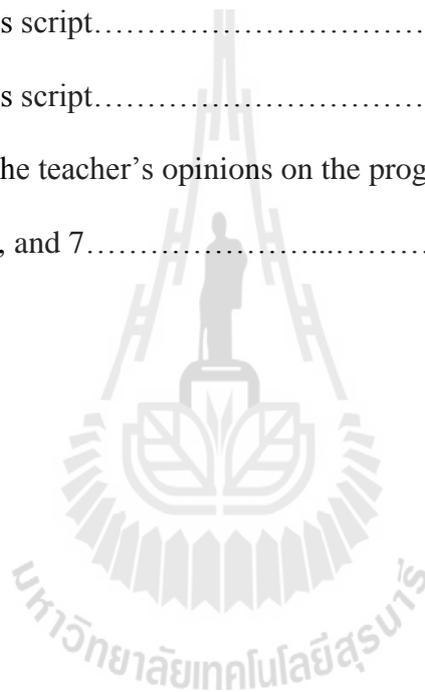
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CHAPTER 1

INTRODUCTION

The present study attempts to examine the effects of the Project-Based Learning (PBL) approach on the development of Thai first-year university students' overall language skills and to investigate the students' and teacher's opinions on the implementation of the PBL approach in the language classroom. This chapter provides background information which includes a statement of the problems, the rationale of the study, research objectives, research questions, the significance of the study, and the key terms used in the present study. The limitations of the study are also discussed. Finally, an outline of the thesis is presented.

1.1 Statement of the Problems

In today's globalized world, the importance of English is widely recognized since it is a means of international communication and used throughout the world. In other words, without the English language, contact and communication between countries all over the world would be impossible. Furthermore, with the advances in modern technology, particularly the use of the Internet for global communication and searching for information, English has become even more important. In short, English is the common medium for communication and discussion both online and offline. For these reasons, most countries have attempted to raise the English language standard of their people, including Thailand. Apart from being the first foreign language learned by

most Thai students, English has plays a crucial role in Thailand as a means of communicating with foreigners.

The role of English in Thailand will increase further in importance, especially in 2015 when the ASEAN Economic Community (AEC) will be launched. This will be an economic organization of ten nations located in Southeast Asia, including Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Singapore, Thailand, the Philippines and Vietnam (Association of Southeast Asia Nations, 2008), for which English has been declared the official language. According to Marukatat (2012), professionals and skilled workers of the ten member countries will be free to work anywhere in the region once the community is formed. As a result, Thai professionals, skilled workers, and also Thai university students who will graduate after the launch of AEC, will inevitably compete with other people from Southeast Asian countries for work. In order to become potential candidates for the jobs they want, one of the necessary skills that Thai students should possess is the ability to communicate effectively in English.

However, according to the report of the Office of the Permanent Secretary, Ministry of Education (2006), one obvious weakness of most Thai students is inadequate English language skills. Although Thai students study English for more than ten years, most of them are unable to communicate in English effectively, even after graduation (Marukatat, 2012). Many English language assessments and evaluations of the average level of Thai students reveal unsatisfactory results. For instance, the results of TOEIC (Test of English for International Communication) examinations between the year 2004-2005 found that among ASEAN countries the candidates from Thailand ranked 4th, below the Philippines, Singapore and Cambodia

(Punthumasen, 2007). Additionally, the results of the TOEFL Internet-based test (iBT) in 2010 showed that the scores of Thai students were undeniably poor compared with the scores of students from other countries in Asia. For example, the average score of the students in Asia was 78.20, while the average score of the Thai students was 75.00 (Educational Testing Service, 2010). According to a recent survey conducted by Education First (2012), an international language school, the results showed that the English language skills of Thai students ranked below those of students in at least three other member countries of ASEAN. Thailand ranked 53rd out of 54 countries surveyed for adult English proficiency, which was below Malaysia (13th), Indonesia (27th) and Vietnam (31st), and Thailand was classified into the group of very low proficiency countries. However, the data regarding some of the ASEAN member countries, such as Cambodia, Laos, Myanmar, or Philippines were unavailable.

The main causes of low English proficiency among Thai students, as discussed by many research studies involving English language instruction in the Thai context, are as follows: firstly, English teaching methods in Thailand are inefficient (Sudrung, 2004; Ministry of Education, 2006; Punthumasen, 2007; Khamkhien, 2010; Simpson, 2011). Most English teachers employ rote memorization and grammar translation methods (Sudrung, 2004; Simpson, 2011) which only emphasize reading and writing skills, not listening and speaking skills (Punthumasen, 2007). With grammar translation methods, students learn English through detailed analysis of grammar rules, followed by practicing the rules in new sentences or structures, and translating sentences and texts into and out of the target language (Richards & Rodgers, 2001). In other words, this approach pays attention to forms and structures, not the use of language for communication. As a result, the majority of students cannot use the

English language functionally (Darasawang, 2007), although they have been taught English since they were in elementary and secondary school (Simpson, 2011). Furthermore, Puthumases (2007) found that rote learning and grammar translation methods are not attractive to the students. Most students have low motivation in learning because they find the subject matter boring and uninteresting. Consequently, the students have a negative attitude towards studying the English language. With similar conclusions to those of Sudrung (2004), Punthumasen (2007), Simpson (2011) and Khamkhien (2010) also reported that teachers that focus too heavily on grammar have limited success with English instruction in Thailand.

Secondly, Thai students have limited opportunities to use English with native English speakers outside the classroom (Poonpon, 2011). This is mainly because English in Thailand is not one of the primary languages for communicating with other people in the society on a daily basis, unlike in other countries where English is taught and used as a Second Language (ESL), in real-life situations.

Finally, the majority of English language teachers are not qualified to teach English (Yunibandhu, 2004). The Ministry of Education (2006) reported that eighty percent of primary school English teachers did not major in English and most of them had a low achievement level in English language proficiency. According to the results of an English competency test conducted by the Office of the Basic Education Commission (OBEC) and Ramkhamhaeng University in 2004, it was found that seventy-five percent of English teachers in Thailand were at beginners level, fifteen percent at intermediate level and ten percent at advanced level (Simpson, 2011). Furthermore, the teaching methods employed by teachers are not interesting enough to gain the students' attention. Most teachers merely follow textbooks and seldom

develop interesting activities to encourage and motivate the students to learn (Punthumasen, 2007). To conclude, it can be seen that there are many factors causing the failure of English language teaching in Thailand. Some problems are issues at a national level which cannot be solved by a few people or teachers themselves, for instance, the problem of unqualified language teachers in Thailand.

However, in order to alleviate these problems, there are some remedies that can be carried out at the classroom level. As we can see from many studies, educators and language teachers in Thailand have employed various learning and teaching approaches such as Task-Based Learning (TBL), Content-based Instruction (CBI), and Communicative Language Teaching (CLT), all of which help students to learn the English language more effectively. Among several approaches that language teachers and researchers have sought and experimented with, Project-Based Learning (PBL) is one of the teaching approaches that might be effective and appropriate for Thai students as evidenced by a number of studies worldwide (e.g. Tomei, Glick & Holst, 1999; Hutchinson, 2001; Stoller, 2006; Foss et al., 2007; Siritararath, 2007; Shokri, 2010; Lui, 2011; Musa et al., 2011; Simpson, 2011; and Fujioka, 2012). It was found that PBL was a powerful approach for involving students in a real world experience with language used for real communication purposes. Moreover, PBL is student-centered and has a tangible final outcome (Fried-Booth, 2002). Hence, the present study employs the PBL approach to develop the overall language skills of a group of first-year university students in Thailand as well as to find out their opinions on the use of the PBL approach in the language classroom.

1.2 Rationale of the Study

In the field of second language and foreign language education, Project-Based Learning (PBL) has been considered as an effective approach for promoting purposeful language learning for more than two decades (Beckett, 2006a; Stoller, 2006; CELL, 2009). Practitioners who have tried the PBL approach from every part of the world have reported benefits resulting from student engagement with PBL, including those from Thailand (e.g. Sudrung, 2004; Siritarath, 2007; Intraprawat, 2010; and Simpson, 2011). With positive outcomes reported by researchers and practitioners, PBL seems to be a dynamic approach that matches the objectives of the present study. Furthermore, the researcher decided to employ PBL as an instructional approach to teach the first-year university students participating in this study because its features provide students with appropriate learning conditions for optimal learning, as briefly described below.

Firstly, the PBL approach is employed in this study to help the students develop their overall language skills in real world tasks for real world purposes. In other words, their reading, writing, speaking, listening, vocabulary and grammar skills can be improved simultaneously while engaging in project work, unlike the traditional approach which tends to teach each language skill separately (Akram & Malik, 2010). In real situations people simultaneously use more than one language skill while communicating. It is, therefore, ideal to develop communicative competence of students, by providing them with opportunities to practice their overall language skills and recycle vocabulary and grammar forms in real world tasks, as well as to establish a positive environment for them.

Secondly, the PBL approach can help increase students' motivation because it allows them to make choices about the topic that they want to learn, identify their

learning goals, and find their own methods to accomplish them (Stanley, 2000). Hence, in order to accomplish their learning goals in an English language classroom, they need to use the English language as a means to complete each task resulting in higher motivation to learn the target language. Furthermore, by employing the PBL approach, the teacher provides a number of options for the students to choose and involves them in making decisions, for example, decisions about allocating resources and assessing the projects. Consequently, the students can feel motivated and they are engaged in what they are doing since they have a degree of control over their own learning, not only in terms of the goals, but also the processes they employ to accomplish them (Stanley, 2000).

Thirdly, project work requires students to be active. In other words, instead of passively receiving knowledge from the teacher, students need to actively take a major role in learning as well as to be responsible for planning, managing and presenting their work. In the PBL approach, the students are actively engaged in the inquiry process from the beginning to the end of the project. In this way, they are allowed to make their own decisions throughout the process of working on the project. Meanwhile, the teacher acts as a coach, a facilitator, and a resource for the students during the inquiry process. By this approach, the students become more autonomous and independent in planning and organizing their own learning (Stoller, 2006).

Fourthly, PBL improves students' abilities to work collaboratively in a group. Collaboration is one useful feature of the PBL approach which can help the students improve communication, negotiation, and problem-solving skills (Stanley, 2000). Collaboration through project work provides opportunities for acquiring target language naturally and developing successful learning and communication strategies.

In addition, collaboration among group members reduces the students' stress and anxiety and creates a positive and affective classroom environment (Richards & Rodgers, 2001).

Finally, by engaging in project work, students can develop skills, such as decision making, problem solving and critical thinking skills which are necessary in the workplace and for future careers (Stoller, 2006). Recently, companies have been seeking workers who acquire not only basic academic skills, such as listening, speaking, reading and writing, but also higher order thinking skills, such as reasoning, creative thinking, decision making and problem solving (Musa, Mufti, Latiff and Amin, 2011). Therefore, university students should acquire these workplace related skills in order to meet these future needs.

1.3 Objectives of the Study

This study aims to investigate the effects of the project-based learning approach on the overall language skills of first-year students at Suranaree University of Technology (SUT), Nakhonratchasima, Thailand. Thus, the objectives of this study are listed as follows:

- 1.3.1 To examine the effects of the PBL lessons on the improvement of the overall language skills of first-year students at SUT in terms of language ability and learning process.
- 1.3.2 To explore the students' opinions on the implementation of the PBL approach in learning English and problems while engaging in the PBL approach.

- 1.3.3 To investigate the teacher's opinions on the implementation of the PBL approach in teaching the English language and the problems encountered while using the PBL approach.

1.4 Research Questions

In order to achieve the objectives mentioned earlier, the following research questions are formulated:

- 1.4.1 Do the PBL lessons help improve the overall language skills of first-year students at SUT in terms of language ability and learning process? If so, how?
- 1.4.2 What are the students' opinions on the implementation of the PBL approach in learning English and what are the problems they encounter while engaging in the PBL approach?
- 1.4.3 What are the teacher's opinions on the implementation of the PBL approach in teaching the English language and the problems she encounters while using the PBL approach?

1.5 Significance of the Study

The results of the present study are beneficial for second and foreign language education in various aspects. Firstly, it is valuable for English language teachers who are trying to improve their instructional methods to be more effective and to achieve the goals of instruction. Since PBL is a flexible approach which can be adapted to fit in with a variety of teaching methods, the PBL concept can be applied for the design of other language courses or curriculum. Although there are a number of research studies

reporting the positive effects of the PBL approach, they do not give information about the steps in integrating PBL into language classrooms. Therefore, the steps of the PBL implementation provided in this study will present a clearer picture to language teachers about how PBL can be applied to real language courses, even though the courses contain fixed content which has to be covered.

Secondly, besides examining the effects of the PBL approach on the development of students' overall language skills, this study investigates the opinions of students and the teacher on the PBL approach. Therefore, the students' opinions after learning the English language through PBL are revealed. The teachers can use this information for improving their language instruction to serve the students' needs and to foster their motivation in learning, particularly the needs of the students at university level.

Thirdly, to the best of my knowledge, there is no research study in Thailand which has investigated the teacher's opinions on the use of the PBL approach to develop the overall language skills of students at university level. Thus, this study provides useful information for teachers who are trying to integrate the PBL approach into their classroom teaching since this study reveals not only the teacher's opinions on the use of PBL, but also the problems that may occur during its implementation and the possible solutions employed.

Finally, the present study is useful not only for researchers in the field of language instruction, but also for those in other fields who are interested in the PBL approach. The data from the present study provides step-by-step guidelines concerning how to integrate projects into real classrooms, some valuable results and some suggestions for further research studies.

1.6 Definitions of Key Terms

The operational key terms used in the present study that need clarification are defined below.

1.6.1 Project-Based Learning (PBL) Approach

Project-based learning in the context of this study refers to an instructional approach to teaching English language through working collaboratively on a group project. In doing this, students are involved in the project for a certain period of time to create final tangible products while at the same time developing their overall language skills.

1.6.2 A Project

A project in this study is defined as a piece of work requiring a group of six to seven students to complete it. The topic of each project is based on and related to the lessons of the English I course at Suranaree University of Technology (SUT) and the steps followed by the students doing the project are guided by the researcher. In the process of accomplishing the project, the students are involved in several tasks over the course of the entire project. The final outcome of a project is a tangible and realistic product resulting from group's own decisions.

1.7 Limitations of the Study

There are two limitations in this study: the pre-experimental research design and the participants. Firstly, by using a pre-experimental design, the researcher cannot control threats to its internal validity, so any changes observed cannot be fully claimed to be the results of the treatment because possible alternative explanations have not been removed from consideration (Jackson, 2008; Krysik & Finn, 2013). However, a

pre-experimental design was employed in this study because it was impossible to control the teaching methods of the other English I groups. The English I teachers are allowed to use any teaching methods in their teaching as long as they can help students achieve the goals of the lessons specified in the English I course book. In other words, we cannot control the variables (e.g. teaching methods) for the purpose of making comparisons. Secondly, apart from the research design, the sampling method of this study can also be a limitation. The participants of this study were selected by means of a convenient sampling method which is one of the non-probability sampling methods. Therefore, they may not be a good representation of students at SUT.

1.8 Outline of the Thesis

This thesis contains five chapters. Chapter one provides an overview of the study, including a statement of the problems, rationale of the study, objectives of the study, research questions, the significance of the study, the limitations of the study and definitions of the key terms.

Chapter two presents the literature review on the PBL approach, including background, terms and definitions, and the theoretical background. It describes PBL in second and foreign language education, including the characteristics roles of teachers and students in the PBL approach, procedures, assessment, positive outcomes and challenges in implementing PBL. Towards the end of this chapter, the previous research studies on PBL are also discussed.

Chapter three illustrates an overview of the methodological design of the study including the description of the research context and the participants, the research design, variables, instruments, procedures, and the data analysis.

Chapter four presents quantitative and qualitative analyses of the data which were obtained through the tests, assessment portfolios, and semi-structured interviews.

Chapter five discusses the research findings, including a summary of the main findings in response to the research questions. The pedagogical implications, limitations and some recommendations for further research in this field are presented at the end.

1.9 Summary

The present study aims to examine the effects of the PBL approach on the overall English language skills of a group of first-year students at Suranaree University of Technology. In addition, it investigates the students' and teacher's opinions on the implementation of the PBL approach in learning and teaching English language and the problems they face during the PBL implementation. This study is motivated by the desire to improve the inadequate English language skills of Thai students. Based on the findings of previous research studies, the PBL approach is selected to alleviate this problem since it may help develop Thai university students' overall English language skills, increase their motivation, encourage them to be active and creative, improve their ability to work collaboratively, and develop their thinking and planning skills which are necessary for the workplace and their future careers. However, due to the limitations in terms of the research design and the participants, the results of this study may not be applicable and generalizable to other contexts. In the next chapter, the PBL approach and its underlying theoretical framework are reviewed.

CHAPTER 2

LITERATURE REVIEW

This chapter presents the existing literature concerning the major areas of the present study. It starts with an overview of the project-based learning (PBL) approach, including its background, related terms and definitions, and then the theoretical background. It also includes different aspects of PBL in second and foreign language education, including its characteristics, the roles of teachers and students, procedures, assessment methods, positive outcomes, and the challenges of PBL are discussed. Towards the end, some of the previous research studies of PBL are explored and analyzed.

2.1 Project-Based Learning (PBL)

2.1.1 Background

Project-based learning has been supported and promoted as an effective approach for language teaching for more than 20 years (Stoller, 2006). Holt (1994) indicated that David Snedden first conceived project-based instruction to teach science in American vocational agriculture classes. Later, William Heard Kilpatrick, John Dewey's student, developed and made it popular among educators (Beckett, 2002; Beckett, 2006a) mainly through a pamphlet called *The Project Method*. The focus of Kilpatrick's project method is a *wholehearted purposeful activity* on the part of the learners. That is, the activities or tasks assigned to learners should gain their interest.

Kilpatrick (1918) believed that learners are able to construct knowledge while generating group projects based on their interests.

PBL has been widely recognized in many fields of education, such as science, geography, and history, for many years because of its various benefits (Hutchinson, 2001). As a result, PBL has become one of the teaching approaches that has gained attention from many educators and scholars.

2.1.2 Terms and Definitions of PBL

Several terms used in both general education and second language education can be referred to PBL, such as the project method (e.g. Kilpatrick, 1918), project work (e.g. Fried-Booth, 2002; Stoller, 2002; Case, 2006; Doherty & Eyring, 2006; Fujioka, 2012), project-based instruction (e.g. Beckett, 2002) and project-based learning (e.g. Thomas, 2000 & Stoller, 2006). These labels show many of the features commonly represented in PBL.

Besides a variety of terms, the definition of PBL also varies to a certain degree. Some selective definitions include:

A project is defined as a long-term (several weeks) activity that involves a variety of individual or cooperative tasks such as developing a research plan and questions, and implementing the plan through empirical or document research that includes collecting, analyzing, and reporting data orally and/or in writing. (Beckett, 2002, p.54)

A systematic teaching method that engages students in learning essential knowledge and life-enhancing skills through an extended, student-influenced inquiry process structured around complex, authentic questions and carefully designed products and tasks. (Buck Institute for Education, 2012, para.6)

Project-based learning is a comprehensive approach to classroom teaching and learning that is designed to engage students in investigation of authentic problems. (Blumenfeld, Soloway, Marx, Krajcik, Guzdial, & Palincsar, 1991, p.369)

Project work is student-centered and driven by the need to create an end-product. However, it is the route to achieving this end-product that makes

project work so worthwhile. The route to the end-product brings opportunities for students to develop their confidence and independence and to work together in a real-world environment by collaborating on a task. (Fried-Booth, 2002, p.6)

A project lasts over an extended period, allows students to select their topics and locate their own source materials, and provides them with opportunities to conduct an independent piece of work either individually or in groups under the guidance of their teacher and to present an end product including written reports and oral presentations. (Kobayashi, 2006, p.71)

Project-based learning is an approach in which learners investigate a question, solve a problem, plan an event, or develop a product (Weinstein, 2006, p.161).

Although there is no single definition of the term “project”, most scholars seem to agree that project-based learning is an instructional approach engaging learners in inquiry activities in which they work actively, independently as well as collaboratively, under the guidance of their teacher around authentic tasks and problems over a period of time, resulting in final tangible realistic products.

In order to have a clearer picture about the PBL approach, the theoretical background of PBL is reviewed in the next section.

2.1.3 Theoretical Background

From the review of previous literature (e.g. Lutz & Huitt, 2004; Beckett, 2006a), it can be seen that the PBL approach had been developed under the theoretical framework of constructivist theory. The concept of constructivism has been regarded as the dominant learning theory since the 1980s (Mayer, 1996). Constructivism assumes that knowledge is constructed by learners as they attempt to make sense of their experiences based on their existing knowledge (Hein, 1991; Cholewinski, 2009; Simpson, 2011). In other words, learners do not passively wait for the teacher to impart knowledge, instead, they learn through an active process where knowledge is

constructed by themselves (Gray, 1997; Baker, McGaw, & Peterson, 2007; Cholewinski, 2009). This is in contrast with behaviorists who believe that knowledge is transferred directly from teachers to students and learning happens through repetition, imitation and practice.

Within the field of education, many scholars have proposed several themes of constructivism, such as, *cognitive constructivism* and *social constructivism* (Baker et al., 2007). However, the constructivist principles underlying the PBL approach are mainly derived from the work of John Dewey, and three influential psychologists: Jean Piaget, Lev Vygotsky and Jerome Bruner (Lutz & Huitt, 2004).

John Dewey was a significant American philosopher who was well-known as an educational reformer in the early twentieth century (Westbrook, 1993; Lutz & Huitt, 2004). He promoted the value of personal experience in learning since he believed that children learn best in this way. His view was that learners should have opportunities to learn theory and practice simultaneously through experiential education. Participating in meaningful tasks or projects not only facilitates the acquisition and retention of knowledge, but also fosters their interpersonal skills, such as unselfishness and helpfulness (Warde, 1960). Being a leader in the progressive education movement, he contributed some valuable work for later researchers in the educational field (Lutz & Huitt, 2004).

Another famous theorist who was deeply involved in developing cognitive constructivism in learning theories was Jean Piaget. His work in the field of cognitive development became widely accepted during the 1960s and 1970s (Lutz & Huitt, 2004). According to Piaget, a learners' mental world is constructed through various processes and structures. Piaget's model of cognitive development describes a mental framework

comprising knowledge of the world based on experience, technically known as *schema*. Initially, humans have only a limited number of schema which are inborn, but they gradually develop a rich variety through life experiences. He explained that cognitive development can proceed in one of two ways, either by *assimilation* or *accommodation*. Assimilation is the process in which learners encounter new information and try to understand it by connecting or extending the information within their existing knowledge. Meanwhile, accommodation occurs when learners find that the new knowledge does not fit within their preexisting framework. As a result, they experience *a state of disequilibrium*. Therefore, learners attempt to restore equilibrium by altering or adapting the new knowledge to their present knowledge (Simpson, 2011). During this process, learners have to adopt a more sophisticated mode of thought or higher level of thinking to expand and reorganize their preexisting schema (Gray, 1997; Lutz & Huitt, 2004, Simpson, 2011). This process enables them to gain deeper and broader understanding.

In contrast to cognitive constructivist theory, in which learning is considered as an internal process within an individual cognition, Lev Vygotsky (1978), a Russian psychologist, placed considerably more emphasis on social factors contributing to cognitive development. He believed that learning is a situated, social, and collaborative activity in which learners are responsible for constructing their own knowledge (Cholewinski, 2009). According to Vygotsky's popular concept known as *Zone of Proximal Development (ZPD)*, each learner has an individual range for potential cognitive development. Vygotsky (1978) defined the term *ZPD*, as follows:

It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (p.86)

According to this concept, there are three possible levels of ability indicating the point of individual development. First is *the level of actual development* in which a learner can do without guidance. Second is *the level that a learner cannot do even if he/she is guided* and the last level, which is considered the most important in this concept, is *the level of potential development* in which a learner can benefit from guidance (Lutz & Huitt, 2004). In other words, ZPD is the distance between individual achievement and guided achievement and it is the area where cognitive development can occur. When learners encounter a task that is more complex than they can handle on their own, appropriate assistance provided by a more knowledgeable person will facilitate them in achieving their task.

As an extension of the ZPD concept, the term *scaffolding* was used by Wood, Bruner, and Ross (1976) to refer to the instructionally supportive activities and social interactions that occur between the learner and other individuals as they guide effective learning. Wood, Bruner, and Ross (1976) described scaffolding as a “process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts” (p.90). They further explained that instructional scaffolding may include modeling, initializing and maintaining interest, and simplifying problems to a level that the learner can understand.

Stemming from many ideas proposed by previous constructivist theorists, Jerome Bruner, an American psychologist and cognitive learning theorist, introduced the approach of *discovery learning* (Cooperstein & Weidinger, 2004; Brown & Abell,

2007) where learners have an opportunity to interact with their environment to discover new ideas (Brown & Abell, 2007). In other words, new information and skills are discovered by using their prior knowledge and past experiences to solve problems.

Reyes and Vallone (2008) proposed four guiding principles for constructivist classrooms. Firstly, learning is constructed upon prior knowledge. This means that learners build their knowledge according to what they already know and what they learn facilitates their intellectual development. According to this principle, Reyes and Vallone (2008) suggested that teachers should respect the cultural backgrounds of the students since they play a role in how students acquire new knowledge. Secondly, social interaction mediates learning. Both culture and language play an important role in the learning process. Halliday and Vygotsky agreed that language is “a cultural tool that has been developed and refined in the service of social action and interaction” (Wells, 1994, p.49). Similarly, Hein (1991) indicated that learning is a social activity associated with other human beings, including teachers, peers, family and casual acquaintances. In language classrooms, while students discuss and share their experiences, they are encouraged to bring their culture into the discussion. Furthermore, social interaction provides them with scaffolds when they process the selected content. Thirdly, problem solving is a part of learning. Reyes and Vallone (2008) related this principle to concepts of disequilibrium and ZPD as mentioned earlier. They suggest that the level of the tasks that students are to complete must be appropriate to students’ ability levels. If the levels are too difficult or too easy, their new cognitive structure cannot be formed. Lastly, teachers are facilitators in the learning process. Unlike the role of the teachers in a traditional classroom in which they dominate and control the direction and pace of the learning, constructivist teachers develop or shape students’ thinking through

constructivist pedagogies. Teacher's responsibilities include planning, creating structured tasks, dividing students into groups, assigning roles, and selecting materials.

In conclusion, the work of Dewey, Piaget, Vygotsky, and Bruner suggests that individuals seek meaningful interactions with the environment and construct knowledge by themselves. This idea is considered as an appropriate framework for supporting the implementation of project-based learning instruction as reflected in many research studies (e.g. Beckett, 2006a; Case, 2006; Kobayashi, 2006; Weinstein, 2006; Intraprawat, 2010; Simpson, 2011).

It can be seen that the principles of the PBL approach under the constructivist theory provide good conditions for learning (Case, 2006). Therefore, it has been adopted in educational programs in a variety of disciplines, and also in second and foreign language classrooms (Beckett, 2002). The next section discusses the PBL approach in the context of second and foreign language education. The discussion covers its characteristics, the roles of teachers and students, procedures, assessments, positive outcomes, and the challenges in implementing PBL.

2.2 Project-Based Learning in Second and Foreign Language Education

The early literature reported that the main reasons for integrating PBL into the language classroom were: (1) to provide opportunities for learners to receive comprehensible input and produce comprehensible output; (2) to provide opportunities to recycle knowledge in a natural context; and (3) to develop analytical and time management skills (Beckett, 2006a). Furthermore, since the PBL approach can be adapted to fit with a variety of teaching situations, it has, in recent years, also been considered an appropriate approach to content-based instruction, for example, in

English for specific purposes, project-based computer-assisted English as a foreign language, community-based instruction, and teaching critical and higher-order thinking and problem-solving skills (Beckett, 2006a).

Projects may range from highly structured to highly unstructured. Some projects are planned and determined by both teacher and learners (i.e. semi-structured projects) whereas some projects may give learners freedom in defining their own goals and directions (i.e. unstructured projects). Although there are a wide variety of projects, each project shares similar characteristics which are discussed in the next section.

2.2.1 Characteristics of PBL

The PBL characteristics that contribute to the positive outcomes proposed by many educators and researchers are consistent throughout (e.g. Thomas, 2000; Hutchinson, 2001; Stoller, 2002; Stoller, 2006; Intraprawat, 2010; Poonpon, 2011; Simpson, 2011; Fujioka, 2012). Some of these key characteristics include:

a) Student-centered learning

Projects focus on the needs of the students rather than the teacher. Students are encouraged to set their own learning goals and determine resources in order to actively construct their own knowledge. Student-centered learning emphasizes each student's needs, abilities, interests, and learning styles while assigning the teacher as a facilitator of the learning process. Thomas (2000) asserted that the PBL approach does not predetermine paths, instead, it allows students to make their own choices, use unsupervised work time, and assume more responsibilities than a traditional approach. Nikitina (2011) assigned students structured parameters for producing a short video project. However, students were able to select the topics that they were interested in

from the course syllabus. Additionally, they were given the freedom to make their own decisions for completing the project.

b) Authenticity

PBL focuses on the real world and its complex problems; this approach allows teachers to engage students with real world tasks and allows students to explore and discuss problems in ways that are relevant to them. Furthermore, students have opportunities to use language for real communication purposes through project work. For instance, Fried-Booth (2002) suggested *a school magazine project* which engaged students in finding out what issues were of concern to local people by interviewing them and then writing about them in the school magazine. This activity motivated students by providing them with authentic experiences.

Another example is a project designed by Hunt, Kershaw and Seddon (2002) involving students exploring the university campus as they transitioned from high school. This project allowed high school students to find out about university life through the production of their own multimedia clips. Unlike the traditional orientation activities, by creating video clips, high school pupils and university students had opportunities to engage in a series of authentic learning experiences.

c) Integration of skills

Since the use of skills integration is unavoidable in everyday life, teachers should therefore integrate the four language skills in their second and foreign language classrooms in order to provide a more purposeful and meaningful learning environment for students (Deneme & Ada, 2010). One way to create such an environment is to assign students to do a project as Stoller (2002) claims that projects lead to authentic integration of skills. In other words, students are provided with multiple opportunities

to use overall language skills (i.e. reading, speaking, listening, writing, grammar and vocabulary) while working on the projects. In addition to the four language skills, the process of investigation in project work also develops other necessary skills for real life, such as interpersonal skills, critical thinking, collaborative skills, and leadership skills. This is because the activities in project work normally incorporate analysis, synthesis and evaluation of information which requires learners to use high-level and critical thinking skills (Grant, 2002). Stoller (2002) reported that students improved their listening and note-taking skills, reading proficiency, accuracy and fluency in speaking, writing ability, study skills, and critical thinking skills while doing a project. All these skills are claimed to be important for a student's learning process and for their future careers.

d) Content-driven

Project work focuses on content learning rather than on specific language targets. Learners engage in activities organized around content or themes that provide them with language learning opportunities (Fujioka, 2012). For instance, Musa, Mufti, Latiff and Amin (2011) integrated project work into a Workplace Communication course. This project required students to investigate a workplace problem in a real workplace setting. At the end of the course, each group had to effectively present the report and produce a report on the solution of a problem as the final product. In a recent study, Simpson (2011) integrated PBL into an English language tourism class. She created a project engaging students in development of media, such as a travel brochure or a digital presentation that can promote tourist attractions in Phitsanulok province. These projects both had content as the driving influence.

e) Collaboration

Projects encourage student collaboration, either through pair work or small group work, in order to create mutual understanding, find solutions, construct meanings, or produce products. In collaborative project work, learners not only take in but also create new information and ideas. Johnson, Johnson and Smith (1991) identified five conditions for successful collaborative group work which are as follows:

1. Group members are aware of the importance of positive interdependence. Learners realize that “what helps one member helps all and what hurts one member hurts all” (Richards & Rodgers, 2001, p.196). Students work together to accomplish shared goals and seek outcomes that are valuable for themselves as well as for the group.
2. Group members work face-to-face and support each other to produce joint products. They also encourage and facilitate each other throughout the project.
3. Group members clearly perceive individual accountability and personal responsibility to produce high quality work and achieve goals. Individual accountability involves both group and individual performance (Richards & Rodgers, 2001).
4. Social skills are necessary since they reflect the way that students interact with each other as teammates. Students should be taught social skills and are expected to use them to work together to achieve their goals (Johnson et. al, 1991).

5. Group processing of current functioning is required. In other words, group members need to analyze how effectively they are working together to achieve their goals.

Ellis (2008) suggests that teachers may teach students some strategies needed in collaborative work, for example, how to disagree and how to negotiate with teammates. Consequently, students are able to employ these strategies to build effective collaboration within a group.

f) Learner autonomy

PBL requires learners to take responsibility for their own learning through the collecting, processing, and reporting of data from various sources (Stoller, 2006). Benson (2001) described the term *autonomy* as “the capacity to take control of one’s own learning” (p.47). However, the meaning of the word *autonomy* has been used in at least five ways in language education.

1. for *situations* in which learners study entirely on their own;
2. for a set of *skills* which can be learned and applied in self-directed learning;
3. for an inborn *capacity* which is suppressed by institutional education;
4. for the exercise of *learners’ responsibility* for their own learning;
5. for the *right* of learners to determine the direction of their own learning. (Benson & Voller, 1997, p.1)

Omaggio (1978, as cited in Thanasoulas, 2000) includes seven main characteristics of autonomous learners. First, they understand their own learning styles and strategies. Second, they actively handle the task at hand. Third, they are willing to take risks when they communicate in the target language. Fourth, they are good guessers. Fifth, they focus on both form and content. In other words, they place importance on both accuracy and appropriacy. Sixth, they are willing to revise and

reject hypotheses and rules that do not match. Last, they employ a tolerant and outgoing method to learn the target language.

By completing a project, learners use various processes including selecting topics, searching for and collecting data, interpreting and reporting the project. To do this, they need to have responsibility for their own learning which shows that PBL promotes learners to be autonomous and life-long learners (Stoller, 2006).

g) Reflection

Activities in projects such as in-class discussions, journal entries, and follow-up questions provide opportunities for students to reflect on their thinking, feedback and opinions (Grant, 2002). By allowing learners to think about what they are doing and why they are doing it is one way in which to turn their experiences into meaningful learning. Also, reflection plays a crucial role in the learning process and project work incorporates this feature. For instance, Leung (2005) and Simpson (2011) included student diaries as their research instrument, allowing students to reflect their opinions on the PBL approach. The diary was used not only to access the development of students' language proficiency, learning skills and self-confidence, but also to be a medium of communication between students and teachers (Simpson, 2011).

With the key characteristics of PBL mentioned above, the PBL approach requires teachers and students to take very different roles from teachers and students in a traditional teacher-fronted classroom. The next section will discuss this issue in order to give a clearer picture about their respective roles and responsibilities.

2.2.2 Roles of Teachers and Students in the PBL Approach

The roles of teachers in PBL differ considerably from those in traditional teaching. In PBL, teachers serve not only as a knowledge transmitter, but also as a

facilitator, a designer and an advisor who instigates, organizes and stimulates the learning process. This does not necessarily mean that teachers have to be an expert on every topic that the students select; they can just be a facilitator to help direct students (Guo, 2006). On the contrary, the main role of the teacher in a traditional classroom is to give a lecture that covers the subject matter.

Blumenfeld et al. (1991) mentioned five necessary roles of teachers in project-based education. Firstly, they need to provide learners with opportunities to access information. Secondly, they need to support learners by modeling and guiding them in order to make the project more manageable. Thirdly, they need to encourage learners to plan, monitor and evaluate their own learning processes. Fourthly, they need to assess the progress of the students' projects, diagnose their problems, give them feedback and evaluate their overall outcomes. Finally, they need to create an environment that helps facilitate the students in accomplishing their projects.

The change in the roles of the teachers, of course, results in changes in the roles of the students. Instead of sitting passively to obtain input from the teachers, a student's primary role in PBL is as a member of a group who needs to work collaboratively on projects with other group members. Apart from being a good teammate, they need to be a director of their own learning. In other words, they are encouraged to plan, monitor, and evaluate their process of learning (Moss and Van Duzer, 1998). In sum, PBL requires students' active involvement and participation in completing their projects.

PBL has been gaining in popularity and it has now been integrated into many classrooms worldwide, which also includes language classrooms. Useful step-by-step guidelines for implementing PBL have been proposed by many scholars (e.g. Moss & Van Duzer, 1998; Donnelly & Fitzmaurice, 2005; Stoller, 2002). Some of the

procedures which are often cited and employed by many researchers are discussed in the next section.

2.2.3 Procedures of Project-Based Learning

Integrating PBL into the language classroom requires multiple steps of development. Although several procedures have been proposed, the procedure suggested by Moss and Van Duzer (1998) has been selected as an example in this section because it is quite clear and concise. Moreover, they believe in the importance of establishing a trusting and cooperative relationship among learners at the very beginning of the project. Thus, learners need to acquire basic skills in how to interact with others. Activities, such as learner-to-learner interviews, role plays, and field trips can engage learners in communication tasks and help to create a positive classroom environment. Moss and Van Duzer (1998) further describe these three basic phases of PBL as follows:

1. Select Topic

Teachers start the instructional cycle by assessing class needs and by identifying project topics and the skills that need to be developed. At this stage, learners play an important part in decision making about what they want to do.

2. Making a Plan and Doing Research

After selecting the topic, learners plan the project, conduct research and develop their final products collaboratively. Activities that prepare students to solve problems, use language to negotiate among peers and develop plans are beneficial. Furthermore, they may need to practice some specific language skills in completing the projects.

3. Sharing Results with Others

The final result can be shared with a real audience in diverse ways; for example, oral presentation, video, website, and artifacts.

In addition to the procedure offered by Moss and Van Duzer (1998), the procedure proposed by Stoller (2002) has been chosen for this research study because her 10-step procedure is detailed and easy to follow. Her proposal focusses on incorporating project work into content-based classrooms as described below:

1. Students and teacher agree on the project theme

Initially, students are allowed to share their perspectives and select the theme. Although some projects are structured mostly by the teacher, students are encouraged to fine-tune the theme of the project.

2. Students and teacher determine the final outcomes

After selecting the theme, the final outcome needs to be decided by considering the nature of the project and its objectives. The students and their teacher may select a tangible outcome from a variety of choices, such as a written report, poster, brochure, newsletter, video, or oral presentation.

3. Students and teacher structure the project.

At this stage, students and teacher begin to plan and organize the project. Students need to consider the following questions: What information is needed to complete the project? How can that information be obtained? How will that information be collected and analyzed? What is the role of each student? and What is the timeline of the project?

4. *The teacher prepares students with the language needed to collect information.*

The class teacher may design language instruction activities to prepare students for data gathering tasks. For example, if the task requires students to interview people, the teacher may introduce language instruction activities involving question formation and conversational gambits.

5. *Students collect information*

After practicing some of the necessary language skills and strategies, students are then ready to collect information and organize it.

6. *The teacher prepares students with the language needed to compile and analyze information.*

After gathering the necessary information, students need to organize and synthesize it. In order to prepare them, the teacher may organize sessions in which students can practice organizing sets of materials, evaluating, analyzing and interpreting. Graphic representations that show the relationships between data should be introduced to students.

7. *Students compile and analyze data.*

During this stage, each group evaluates the value of the collected information. They may discard irrelevant data and keep the rest for the project.

8. *The teacher prepares the students with the language needed for the final activity.*

After successfully analyzing data, the teacher may conduct language improvement activities to prepare students for the project presentation. Oral

presentation skills (e.g. pronunciation, organization of ideas, and eye contact) can be introduced and practiced at this stage.

9. Students present the final product

Students make a presentation of their product. Teacher may videotape the presentations so that students can later review their performances and get feedback from the teacher and their peers.

10. Students evaluate the project

At this last stage, reflective activities are useful and necessary since they allow students to reflect on the language that they mastered during their project as well as the content that they learned. Not only do students realize how much they have learned, but teachers also gain benefits from the students' insights for future projects.

In the present study, the researcher designed the procedure for implementing PBL by adapting the 10-step PBL procedure proposed by Stoller (2002). The new procedure is presented step-by-step with detailed explanation in chapter 3 (3.4.1 Project-Based Learning Lessons). However, it should be noted that some of the steps proposed by Stoller (2002) were retained for the present study.

It can be seen that each of the steps in PBL (e.g. planning, researching, collecting, analyzing, synthesizing, reporting and reflecting) plays a significant role in leading students to complete a successful project. It is therefore necessary to make sure each step is completed to a reasonable standard by assessing the student progress and performance throughout the entire project.

2.2.4 Assessment of PBL outcomes

Assessment of PBL outcomes is rather challenging compared to the assessment methods used in traditional teaching methods. Since one of the major principles

underlying PBL is learning by doing, it may not be appropriate to measure students' performance by just giving them a standardized test like multiple-choice or a true-false test. Therefore, in order to effectively evaluate students' performance, teachers need a variety of formative and summative assessments (Slater, Beckett, & Aufderhaar, 2006).

Formative assessment refers to an assessment process in which the goal is to gather feedback that can be used by the teachers and the students for improving the teaching and learning activities (Black & Wiliam, 1998, Crooks, 2001), whereas summative assessment refers to "a judgment which encapsulates all the evidence up to a given point" (Taras, 2005, p.468). To put it simply, summative assessment is aimed to measure the level of success or proficiency that has been obtained at a particular time (Crooks, 2001).

In PBL, the assessment can be done by teachers, peers, and the learners themselves (Arlington Education and Employment Program, 1997; Moss & Van Duzer, 1998). During the project, teachers can observe the skills, knowledge, and language that the students use. Arlington Education and Employment Program (1997) suggested that teachers need to provide measureable and understandable criteria to learners at the beginning of the project. They should identify and describe levels of performance in order to help learners understand what stage they have reached on a learning continuum. Furthermore, the learners should be allowed to take part in the process of identifying objectives and evaluation criteria. This can help them fully understand the purpose and objectives of the project. However, this may only be suitable for students at intermediate and advanced levels.

Peer assessment involves learners giving feedback to other learners on the quality of their work (Spiller, 2012). It can be done by evaluating the work of the group

members while working on the project; for example, learners examine each other's writing and provide suggestions for revision. Additionally, the final performance or products can also be assessed by other learners (Arlington Education and Employment Program, 1997).

Self-assessment requires students to evaluate their own learning process. Boud and Falchikov (1989) defined self-assessment as “the involvement of learners in making judgments about their own learning, particularly about their achievements and the outcomes of their learning” (p.529). They further explained that self-assessment consists of two key elements. The first is making decisions about the expected standards or criteria of performance and the other is making judgments about the quality of the performance based on those standards. When students complete the self-assessment, they should cover both of the aforementioned aspects. If the students are allowed to set their own goals, they will become more active, more responsible and more motivated in their own learning (Spiller, 2012). Some examples of activities that students can assess for themselves are interviews and writing activities (Moss & Van Duzer, 1998). Rolheiser and Ross (2001) pointed out that it is necessary to teach students how to evaluate themselves according to their own criteria. Students need to see examples of what they mean in practice. These examples or models help students understand what the criteria mean to them.

Besides teachers, peers and students, outside audiences can take part in the assessment process. In PBL, outside audiences are welcome in the final presentation of the project, whether to appreciate (e.g. parents), or to judge (e.g. other teachers, researchers, or experts) (McGrath, 2003). Their feedback is beneficial and can be used to improve the students' present and future projects.

One of the assessment tools that is widely used and seems to be accepted by most educators and researchers is a *rubric* (Jonsson & Svingby, 2007). It is a scoring tool that provides scoring guidelines for evaluating students' work (Arlington Education and Employment Program, 1997) and is usually given to the students before the assignment begins so that they know the criteria on which their work will be judged.

Wolf and Stevens (2007) pointed out several advantages of a rubric for both students and teachers. Firstly, it provides students with clear criteria about what they will be evaluated on so that they can perform accordingly. Secondly, it provides teachers with guidelines about the design and the delivery methods of their instruction. In other words, a rubric not only informs students of what are expected to do, but also what and how teachers should teach. Thirdly, it enhances the consistency of scoring across students and assignments and also between different raters (Jonsson & Svingby, 2007). Lastly, it can be used as a tool for peer feedback and self-assessment.

Although the use of a rubric provides many benefits, other challenges still exist. The first challenge is that it takes time to create a rubric and the teachers may find the task of developing, testing, evaluating, and updating time-consuming. Another challenge is that a poorly designed rubric does not support the learning process. It can restrict the students' creativity in that students may feel that they need to complete the assignment strictly according to the rubric instead of taking the initiative in exploring their learning (Wolf and Steven, 2007).

In sum, to effectively evaluate students' performance in PBL, the teacher should employ not only a summative assessment, but also a formative assessment because the students will be involved in various activities while working on the project. To be more specific, the teacher should pay attention not only to the students' final products, but

also to their learning process. In the next section, some of the positive outcomes of PBL found by a number of researchers are presented.

2.2.5 Positive Outcomes of PBL

The benefits of PBL have been widely recognized for many years, especially in educational fields such as Science, Geography, and History (Hutchinson, 2001). Furthermore, a number of research studies have reported a variety of advantages of PBL, either in general education or in second and foreign language education (e.g. Thomas, 2000; Hutchinson, 2001; Stoller, 2006; CELL, 2009; Fujioka, 2012). The major benefits are discussed in the following sections.

a) Enhancing Authenticity of Experiences and Language

PBL pays attention to real-world problems. It allows students to explore and solve them in ways that are relevant to them. Students have opportunities to engage in real world situations and practices, for example, communicating with people outside the classroom and practicing their problem-solving skills in real-world situations. Furthermore, students have opportunities to use other useful resources such as, the Internet, the local community, advertising materials, and verbal communication in the real world (Simpson, 2011).

Nikitina (2011) developed a project which required Russian language learners to produce their own videos or short movies in the target language. In producing their videos, the students had opportunities to convey to their peers something that was relevant to them, by using the target language. For example, the students were learning about their university and making new friends (i.e. *My First Day in the University Project*), they explored the environment around the place where they lived and studied (i.e. *Travel and Living: Kundasang Project*), or cooked a meal together (i.e. *It's Tasty*

Project). These videos had real life relevance because they incorporated some parts of the learners' prior experiences. The results revealed that the video projects not only enhanced the authenticity of the learning experience, but also helped stimulate the use of real-world language.

b) Increasing Learners' Motivation, Improving Attitudes towards Learning, and Boosting Self-Confidence.

According to Ellis (1997), the degree of a learners' effort in learning a second language is influenced by their motivation. Additionally, a number of research studies have revealed that learners who have higher motivation tend to pay more attention as well as exert more effort during the process of learning than those learners who have less motivation. Therefore, it is reasonable to conclude that motivation is one of the crucial factors that contribute to the achievement of learners in learning a second language. PBL responds to this requirement because it allows students to choose what they want to learn, identify their learning goals, and find methods to accomplish them. This results in higher motivation to learn a target language (Stanley, 2000). Backett and Slater (2005) also agreed that PBL is a valuable means to promote learners' motivation.

Thorp (1997) reported that students were highly motivated in doing the project *Covent Garden Captured* because it involved them in actively using the English language and allowed them to select their own topic, set their own goals, and choose their own ways to achieve them. In addition to an increase in students' motivation, *the Covent Garden Project* also engaged students in collecting information and conducting street interviews, which enabled them to be more aware of their own ability to learn from outside the classroom, more confident in real-world situations, and less worried about unpredictable problems. Srikrui (2008) examined English minor students'

opinions on conducting an interview with native English speaking teachers. She found that the students perceived the benefits of the project. They gained more motivation and more confidence in using English in terms of listening and speaking. Ke (2010) revealed that students were motivated by the PBL course combining oral English with practical experience related to their majors (i.e. Geography and Tourism). Students' higher motivation was the result of their beliefs that the problems they encountered during the project were similar to those that may occur when they go to work. This project is believed to help prepare the students for solving the problems that they may face in their future careers.

c) Developing Language Skills

Since projects provide students with opportunities to use their language skills naturally, we can see that students are engaged in activities that require the use of integrated skills, for example, they read to write, write to speak and listen to write. Therefore, it has been reported by practitioners that reading, writing, speaking, listening, vocabulary and grammar skills are improved by working on projects (Stoller, 2006)

In their research, Kagnarith, Theara and Klein (2007) mentioned that a questionnaire project encouraged the use of the four language skills among students. This is because, in order to complete the project, students were required to create survey questions, interact with respondents, analyze the data, and record the results for their final presentations. It can be seen that a variety of tasks and activities integrated into the questionnaire project allowed students to develop their language skills naturally. Poonpon (2011) investigated the opinions of undergraduate students who took an English course on Information Science and the implementation of PBL. Students

reported that their language skills (i.e. reading, writing, speaking and vocabulary) improved since they had opportunities to use these skills to acquire, analyze, and synthesize data while working on their projects.

d) Developing Social, Cooperative and Collaborative skills

PBL benefits students in promoting collaborative skills (CELL, 2009). Since the tasks in PBL are collaborative in nature, they allow students to practice social and collaborative skills with their group members. Social skills, such as patience, empathy, and conflict resolution can be developed during the learning process. For instance, the work of Musa et al. (2011) reported that PBL was successful in that it yielded students' multiple opportunities to use and practice workplace related skills, including team-working, managing conflicts, decision making, and communication skills, which consequently enhanced their social skills. Additionally, researchers stated that students favored a supportive environment of PBL (Fujioka, 2012). In other words, the success of the projects greatly depends on group effort and cooperative relationships among group members (Moss & Duzer, 1998).

e) Increasing Content Knowledge

The PBL approach allows students to work collaboratively through gathering, processing and reporting real information related to the project's topic or theme. Consequently, students are exposed to content from various sources (Stoller, 2002). Additionally, by integrating project work into the language classroom, students are encouraged to use the language as a means of learning new topics that they are interested in. This means that students can improve their language skills and increase their content knowledge at the same time.

Beckett and Slater (2005) implemented the Project Framework serving as a tool for language, content, and skills integration in ESL contexts. The project was aimed to promote students' higher level academic literacy. The data from the students' interviews and reflections showed that the majority of the students saw the value of the PBL approach to language learning since they could simultaneously acquire language, subject matter and skills within this framework.

f) Increasing Autonomy

Projects are learner-driven because they encourage learners to identify their learning needs, locate resources, do an independent study, and assess their own work, which helps promote their autonomy in learning (Thomas, 2000). Gu (2002) reported a successful case study of a cross-cultural collaborative online writing project. Twenty Chinese students at Suzhou University were paired with twenty-eight American students at the Southern Polytechnic State University of Georgia to complete a project about a Chinese silk pajamas exhibition and the marketing strategies of Suzhou freshwater pearls in Georgia. The researcher found that this collaborative project not only improved students' performance of writing and communication, but also initiated students' active roles in learning. With similar results to Gu (2002), Fang and Warschauer (2004) conducted a five-year study of a technology-enhanced educational reform initiative at a university in Eastern China. They found that Chinese EFL students interacted more frequently in PBL, played a more active role, and had more autonomy in their learning than they would have had in other EFL courses.

g) Improving Abilities to Make Decisions, Solve Problems and to Think Critically

Practitioners reported that students involved in PBL improved their critical thinking and problem-solving skills (CELL, 2009). The process of investigation in PBL, such as analysis, synthesis and evaluation of information requires learners to have high-level critical thinking skills (Grant, 2002). For instance, Beckett (2006b) examined the teachers' goals of implementing PBL in their ESL classrooms in a Canadian secondary school. The results from the observations and interviews of two teachers indicated that they favored PBL because it not only allowed them to teach language, content and skills at the same time, but also to foster students' critical thinking and problem-solving skills.

Although a number of research studies of PBL reveal many of its benefits, some pointed out its constraints as discussed in the next section.

2.2.6 Challenges in Implementing PBL

Some worries about implementing PBL were raised and discussed by several practitioners. Firstly, project work is time-consuming (Hutchinson, 2001; CELL, 2009). It takes more time to plan, prepare, make and present a project than it does to prepare a lesson for the traditional classroom. Secondly, students tend to use their mother tongue in the absence of the teacher, especially in EFL contexts (Hutchison, 2001). Thirdly, PBL seems to be a great challenge for students who are used to teacher-centered classrooms, like students in China (Gu, 2002). Students need to change themselves from being passive to active learners. In other words, in PBL, students need to work collaboratively with group members and be a director of their own learning. Similarly, Fang and Warschauer (2004) found that the method focusing on learner control and

responsibility of PBL made a number of Chinese students uncomfortable. For example, as one student commented in his self-evaluation: “If all the students are asked to teach themselves, what do we need teachers for?” (p.308). Lastly, there are some concerns of teachers in implementing PBL. Marx, Blumenfeld, Krajcik, and Soloway (1997, as cited in Thomas, 2000) revealed examples of teachers’ difficulties as follows:

- **Time:** Time limitations can also be an obstacle since in-depth investigation of the projects requires more time than expected.
- **Classroom Management:** It challenges teachers because they must balance between the need to allow students to work on their own and the need to maintain order in the classroom.
- **Control:** There is a contradiction between teachers’ needs to control the flow of information and their needs to encourage students to construct their own knowledge in the PBL approach.
- **Support of Student Learning:** Teachers do not know whether they give students too much freedom or too much support in learning.
- **Technology Use:** It is somewhat difficult for teachers who are unfamiliar with technology to integrate it into their classrooms.
- **Assessment:** It is hard to design a tool to assess students’ understanding in PBL.

In order to overcome these challenges, the teachers need to plan carefully for the detailed steps of the PBL implementation, teaching materials, timeline and so on. In addition, they need to prepare themselves in terms of interpersonal, communication, and management skills as well as teaching styles which are important in operating PBL (Buck Institute for Education, 2013) .

In sum, a large amount of empirical evidence has shown that while PBL provides a lot of positive outcomes, it also presents some challenges as mentioned above. However, if PBL can provide learners with better learning conditions for language learning, it is worth implementing. In the next section, some previous research studies are discussed in order to show how PBL can be developed and integrated into language instruction.

2.3 Previous Research Studies on Project-Based Learning

As mentioned earlier, PBL originated and was developed under the theory of constructivism and a number of educators have initiated project work to prove the concept of this theory. This section discusses previous studies in EFL learning contexts and also in the Thai context since they are closely related to this study. However, students in Thailand do not use English generally outside the classroom.

2.3.1 Previous Research Studies on PBL in EFL Learning Contexts

Over the past two decades, a number of research studies (e.g. Tomei, Glick & Holst, 1999; Kobayashi, 2006; Foss et al., 2007; Ke, 2010; Shokri, 2010; and Musa et al. 2011) employed PBL as their main instructional approach with most of the studies following similar patterns and procedures. However, in this section, five successful attempts at using the PBL approach as an intervention in their teaching practice will be discussed: (1) Tomei, Glick & Holst, (1999); (2) Foss et al., (2007); (3) Shokri, (2010); (4) Musa et al., (2011); and (5) Roza, (2011).

Tomei, Glick & Holst (1999) reported their achievement of the Group Survey Project in which the PBL approach was used with freshman students at a Japanese national university. In this project, students in a group of three to five were required to

interview other members of the class and developed 7-10 minute presentations to report their findings. In the 4 - 5 weeks before introducing the projects, the students were engaged in activities that required them to express their opinions. These activities not only helped prepare them with the necessary language for project work but also prepared them for working in small groups. The project was introduced to students in the first lesson in order to inform them of the objectives and to explain how the project would be carried out. This project consisted of five lessons: (1) getting into groups and choosing a topic; (2) creating questionnaires; (3) surveying; (4) collecting and analyzing the data; and (5) presenting their findings. Tomei, Glick & Holst (1999) suggested that in each of the 5 lessons, the first half should be devoted to grammar-based activities and the second half for working on the project so that the project work can provide meaningful follow-up to language practice and application. In addition, in order to assess their presentation performance, the audience was invited to make comments by using a grading sheet as an assessment tool. The grading sheet had letters or numerical grades for different aspects of the presentations (i.e. body language and volume). A space for additional comments was also included in this sheet. After the evaluation, it was found that students had become familiar with communicative presentations and their motivation increased. In addition, they became familiar with giving a presentation.

Foss et al. (2007) integrated *the Wikipedia project* into a short-term intensive English program for Japanese university students studying science and technology division. Wikipedia is a free Internet-based encyclopedia written collaboratively by Internet volunteers (Wikipedia, 2006). This project required students to create a well-formed Wikipedia entry for the university retreat in English as well as a professional

15-minute PowerPoint presentation. This project followed a step-by-step procedure. At the first step, the students, in a group of eight to ten, brainstormed ideas for writing a university retreat entry. After getting some broad ideas, the students narrowed them down to the ones in which they were most interested. Within the groups, the students had to find partners who had similar interests and then they started searching for the information for producing entries. The information was gathered from various sources, such as the Internet and on-site research (i.e. at the university retreat). After getting all the necessary data, each group started to create an entry and posted it on the Wikipedia website. For the final step, all entries were presented through PowerPoint presentations. Allowing students to share their entries with the world, *the Wikipedia project* enhanced students' motivation and brought the real world into their language learning experience.

With a similar procedure to that conducted by Foss et al. (2007), Shokri (2010) examined the effectiveness of a team project activity in promoting frequent use of the English language, practicing learners' learning strategies, and boosting learners' self-confidence. Sixty Malaysian engineering students were investigated through a team project assignment which was aimed at developing their communication skills in the English language. The procedure of this assignment consisted of three main stages: (1) a brainstorming stage which allowed students to discuss and select the topics based on consensus; (2) a writing proposal stage in which students needed to explain the information about their projects via the mini proposals; and (3) a reporting stage in which the groups made presentations of the outcomes to an instructor and their classmates. The feedback of the students was collected through a questionnaire and the results showed that the application of a team project improved their communicative competence, developed their learning strategies, and boosted their self-confidence.

Musa et al. (2011) conducted a study to investigate to what extent PBL integrated into project work had equipped students with employability skills needed in a real workplace environment. It looked at employability skills, such as decision-making, problem-solving, managing conflicts and teamwork. This project work required students to work in groups of two to three. Each group needed to identify a problem area at a workplace and plan the methods for collecting information for the project, for example, the use of questionnaires, interviews and observations. At the end of the semester, the students were required to make effective presentations of the report as well as to produce problem solution reports as the final products. A survey questionnaire was designed and administered to twenty-nine second year students taking a Workplace Communication course. This questionnaire aimed to explore students' opinions on PBL in terms of teamwork, project management, communication skills, interpersonal skills and problem solving. The questionnaire used a 5-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree". The results of this study showed that PBL could facilitate the transference and inculcation of workplace related skills among the students because the students were exposed to various skills such as teamwork, managing conflicts, decision making, and communication skills.

Roza (2011) investigated whether the learning concepts proposed in the Algerian secondary school syllabuses and textbooks supported the integration of project work into English language teaching. In order to gather the data, she adopted the checklist, which contained thirteen evaluation questions aiming to measure the degree to which the syllabuses and textbooks supported the principles of PBL approach. The results indicated that the concepts suggested in the syllabus helped promote the project integration. Furthermore, these pedagogical documents could support the project in

placing learners at the core of learning, encouraging learning by doing, and focusing on both process and product.

A number of empirical studies has proven that PBL is one of the more powerful teaching approaches which is gaining acceptance worldwide. Practitioners and educators have incorporated PBL into a wide variety of teaching environments around the world, including Thailand. In the next section, some of the previous PBL research studies in the Thai context are discussed.

2.3.2 Previous Research Studies on PBL in the Thai Context

Although there is considerable evidence on the benefits and success of the PBL approach in language classrooms, studies on how PBL could be effectively implemented for Thai learners is limited (Simpson, 2011). Below are some of the attempts to integrate PBL into English language classrooms in Thailand.

Siritararath (2007) investigated the effects of PBL on an English oral communication course with twenty-two Thai undergraduate students. The 15-week lesson plans were designed based on the course goals and objectives. The researcher described her steps of implementation in detail as follows: In the first three weeks of the course, the teacher prepared the students by equipping them with the necessary knowledge and skills that would be used as tools for doing their projects; for example, the skills of using online dictionaries to look up the definitions and correct pronunciations of the words. In the fourth week, the teacher introduced the process of doing a project to the students in order to increase their understanding. After that, a whole class discussion on the topic of the project was organized for students. They agreed to work on a project about *entertainment* as their first project topic. After being given the topic, the students formed small groups and brainstormed what their final

outcome would be, as well as their plan to accomplish it. In the fifth week, the progress and the problems of each group were shared with the whole class. In the sixth week, each group gave a presentation of their outcomes. For instance, one group presented the information from their survey and another group did a game show. All presentations were recorded by videotape recorders. In the seventh week, the students watched their own performances from the recorders. While they were watching, the teacher gave comments to the students for their future improvement. From the eighth to fourteenth week, the students were required to create two more projects in which the process and activities were similar to the ones carried out in the fourth to seventh week.

In order to evaluate the effectiveness of this PBL course, the researcher employed five research instruments to gather data. First, a pretest and posttest were used to see if the scores gained indicated the effectiveness of an English oral communication course based on the PBL approach. Second, learner logs were used to triangulate the results from the test scores and to allow the students to reflect on their own learning. The form of the learner log in this study consisted of six open-ended questions and space for additional comments. The students were asked to complete a learner log form after each lesson every week. Third, a semi-structured interview was conducted at the end of the course in order to obtain more in-depth and broader information. Fourth, the teacher's diary was used during the implementation to collect data from the teacher's perspectives on the students' performance. In addition, it was also used to triangulate data from other instruments. Lastly, the opinion questionnaire was used at the end of the course to collect the students' opinions on the course.

The data obtained from these instruments showed that the PBL approach integrated into an English oral communication course improved the students' oral

communication and presentation abilities. For example, the results from the paired sample T-test showed that the difference between the mean pretest score and the mean posttest score was statistically significant at .05 level. This was due to project work involving the students in using English for a variety of communicative purposes. It provided students with intensive exposure to real-world situations in which they could interact with each other in natural ways. Moreover, it was found that the tasks in the English oral communication course based on the PBL approach enabled the students to practice and develop their self-confidence. The findings also indicated that the students' third presentation was much better than the first two because they were less anxious and more confident.

Although PBL had many positive learning outcomes, there were two limitations of PBL that were raised by the participants. First, PBL required more time when compared to the activities in the traditional classroom. Second, PBL failed to enhance improvement in their grammar. The participants in this study revealed that they were unable to detect any improvement in their grammar after engaging in the project work.

Lui (2011) developed an English for Specific Purposes (ESP) course for students who enrolled in English for Exercise and Sports Science course at Burapha University (BUU), Thailand. Since sports science students are more physically active than any other undergraduate students, they do not like to sit still in the classroom. Instead, they prefer to learn through activities involving physical movements. Therefore, the researcher employed kinesthetic activities based on the PBL approach for this course because they are commonly related to movement and physical actions.

Thirty students were selected by cluster random sampling to participate in this study. During the 16-session course (i.e. 1 hour per session), the students in small

groups were required to produce four projects involving the field of sports sciences: (1) Sports Coaching, (2) Fitness Program, (3) Creating a New Sport, and (4) Creating a New Sports Club in BUU. Each project followed a similar procedure and required four sessions to complete each one. A series of designed kinesthetic activities were based on the PBL framework. For example, an activity named *moving interviews* required the students to create interview questions and move to other groups to interview other students.

The procedure of the project development consisted of three main phases: a preparation phase, a practice and process of the project phase, and a performance of the project phase. In the first phase, the teacher introduced the project and its main concepts to the students. Additionally, the teacher provided the students with useful information for completing the projects, for example, introducing terms that were associated with the topics. Afterwards, the students worked collaboratively within a group to gather information and prepare for the presentation of an end product. While the students were working together, the teacher acted as a facilitator who monitored and gave comments and suggestions. In the last phase, the students had opportunities to practice and improve their presentation skills in English. While each group gave a presentation, the teacher used a specially designed rubric as an assessment tool to evaluate students' presentations performance.

In this study, the researcher used interviews, a pretest and a posttest, and questionnaires as her research instruments to collect data. From the results of the tests, a significant difference at .01 was found between the total pretest mean score and the total posttest mean score. It indicated that the students improved their English usage concerning the field of sports sciences after using kinesthetic learning activities through

the PBL approach. A possible reason might be that all the kinesthetic learning activities were appropriately designed with the objectives which related to the course aim. Moreover, it was found that the students were highly satisfied with this course. According to the results of the 5-point scale survey questionnaires, the mean score of 4.40 from 5-points could be interpreted to mean that the participants were satisfied with the kinesthetic activities based on the PBL approach. It was because the kinesthetic activities and PBL related to the students' real lives. As a result, they had opportunities to learn language in a real environment.

Simpson (2011) investigated whether PBL could enhance English major students' English language proficiency, learning skills, and self-confidence. The 16-week PBL application was developed to meet the course objectives and was conducted over one semester in an English for Tourism course. During the implementation, both qualitative and quantitative instruments were used, which included TOEFL®PBT, a writing test, a speaking test, an observation, student surveys, project diaries, open-ended questionnaires, field notes and work-in-process discussions were all employed to collect the data.

The findings indicated that PBL had a significant effect on the development of the low and medium ability groups of students. The four language skills of these groups improved significantly after the intervention course. It was because PBL provided opportunities and guidance for students to learn in a meaningful way. Therefore, they could apply their knowledge to real-world experiences resulting in the improvement of their language skills. However, the high ability students showed progress in speaking and writing, but not in their listening and reading skills. This indicated that the PBL

approach might not suit all learners or it might require some modification for high ability students.

Besides students' language skills, students' learning skills (i.e. teamwork, high-order thinking and presentation skills) and their self-confidence were improved. Simpson (2011) explained that students' learning skills were enhanced because of the freedom of autonomous learning deriving from the collaboration between the teacher and the students. So the students could learn how to control their own learning and make decisions on what particular skills are required in order to achieve their learning objectives. In addition, the students gradually increased their self-confidence since they took responsibility for their own learning instead of depending on their teacher. From the overall findings, the researcher concluded that PBL could be an effective approach to teaching English as a foreign language.

From the research studies discussed previously, it can be seen that the PBL approach has been integrated into language classrooms in a variety of forms using similar principles and frameworks. Some projects were highly structured by the teacher, while some gave students independence in defining objectives and selecting their own directions. Some projects required four sessions (i.e. four hours) to complete one project, whereas some took 16-17 sessions to complete it.

According to the data from the Thai Library Integrated System (ThaiLIS), which collects all theses, research papers, and articles written by graduate students, teachers and academic staff from all over Thailand, there are more than a hundred titles with regard to PBL from the year 2002 to 2012 (Office of Information Technology Administration for Educational Development, 2013). Most of them involve the integration of the PBL approach into many subjects in different fields, such as

Computer sciences, Engineering, History, Math, Sciences and Social Sciences. Only a few of them investigated the effects of the PBL approach in the area of second language education. Among these research studies, more than half of them focused on the effects on one language skill. For instance, Siritararath (2007) had speaking skills as the main concern while Intraprawat (2010) focused mainly on reading skills. However, only a few of them studied the effects of PBL on overall language skills (i.e. listening, speaking, reading and writing). Simpson (2011), for example, investigated students' improvement of overall language skills after experiencing the PBL course. Therefore, the present study aims to examine the effects of the PBL approach on the development of Thai first-year university students' overall language skills as well as investigating the students and the teacher's opinions on the PBL approach.

2.4 Summary

In this chapter, the related literature is reviewed in order to provide an overall picture of the PBL approach. It starts with its background, related terms and definitions, and the theoretical framework of the PBL approach in general fields of education. After that, the use of PBL in second and foreign language education is discussed, starting from the characteristics of PBL, roles of teachers and students, teaching procedures, assessment, positive outcomes, and challenges. Lastly, some of the previous research studies on PBL in EFL contexts are presented. In the next chapter the methodology implemented in the present study is presented

CHAPTER 3

RESEARCH METHODOLOGY

This chapter describes how the study was carried out. It explains the research methodology, which consists of the research context and the participants, research design, variables, research instruments and procedures. At the end of the chapter, data collection and data analysis procedures are discussed.

3.1 Research Context and Participants

This study was conducted with an English I course at Suranaree University of Technology (SUT); one of the nine research universities of Thailand. SUT was established as a public autonomous university, which is considered a science and technology university, under the supervision of the Royal Thai Government. SUT employs a trimester credit system for its educational management. Each trimester consists of thirteen weeks. The university offers a variety of degree programs through the institutes of Agricultural Technology, Engineering, Social Technology, Medicine, Science, and Nursing (Suranaree University of Technology, 2012).

The English I course is one of the five English language requirements offered by the School of Foreign Languages. This course aims to develop students' English language proficiency for effective communication in social and academic settings (The School of Foreign Languages, 2013). The duration of the course is thirty-six hours over twelve weeks. Students attend the class three hours a week. The book used in this course

is produced and published by Cambridge University Press entitled *Four Corners 3*. This book is designed to develop students' overall skills including listening, reading, speaking, writing, grammar, vocabulary, and functional language. The contents in this book cover high-interest topics such as personal stories, interesting lives, our world, personalities, and the environment (Richards & Bohlke, 2012). It is important to note that in this study, the course was conducted by two teachers. One was the teacher who taught in the regular classroom and the other was the researcher as a teacher who guided and facilitated the students to complete the project.

A convenience sampling method was used to select the participants of this study. The participants were 47 students at SUT taking the English I course in the second semester of the academic year 2013. The reason for selecting this group of students is that they had just entered the university, therefore, they had never had any experience of learning through the PBL approach at university level. Furthermore, English I was chosen because of the nature of its content that allows opportunities for integrating PBL into real world classrooms.

3.2 Research Design

The present study employed a pre-experimental research or a single-group pretest-posttest designed to investigate the effects of the PBL lessons on the students' overall language ability as well as the students' and the teacher's opinions on the PBL approach.

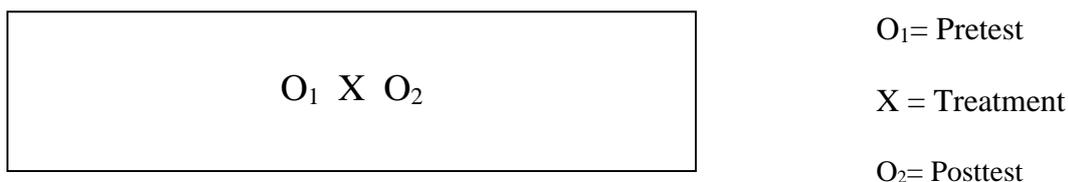


Figure 3.1: A single-group pretest-posttest research design

According to Jackson (2008, p. 124), a single-group pretest-posttest is referred to as “a design in which a single group of participants takes a pretest, then receives some treatment, and then takes a posttest measure.” Consequently, measures are taken twice: once before the treatment and once after the treatment and then the two measures are compared. The changes in the outcome are presumed to be the result of the treatment (as shown in Figure 3.1). However, one weakness of a single-group pretest-posttest design is the lack of a comparison group. Without a comparison group, the results only indicate the effects of the PBL approach on the experimental group. As a result, these results cannot be compared with other methods.

A single-group pretest-posttest design was selected for use in this study because in the context of this study it was hard to control the variables of other groups of English I, especially in terms of the teaching methods. In other words, all English I teachers at SUT have freedom to employ any teaching methods in class and it is possible that they employ more than one.

In the present study, the implementation of the PBL lessons was considered as a treatment which was monitored. In addition, its effects on the students’ overall language skills, students’ opinions and teacher’s opinions were examined. Besides quantitative data (i.e. the tests), qualitative data was gathered through student diaries, a teacher’s diary, assessment portfolios, and semi-structured interviews to increase the breadth and depth of the quantitative findings.

3.3 Research Variables

There were two types of variables: (1) an independent variable and (2) dependent variables. In this study, the PBL approach was an independent variable, while the development of students' overall language skills, students' opinions on the PBL approach, and teacher's opinions on the PBL approach were dependent variables.

3.4 Research Instruments

To achieve the aims of the present study, six research instruments were employed: (1) Project-Based Learning lessons; (2) tests; (3) student diaries; (4) a teacher's diary; (5) a portfolio assessment; and (6) semi-structured interviews.

3.4.1 Project-Based Learning (PBL) Lessons (Appendix A)

The PBL lessons which were employed as a treatment in this study were developed based on the principles of the PBL approach. In addition, the 10-step PBL procedure proposed by Stoller (2002) was adapted for use in this study because it provides a step-by-step guide to carrying out a project for teachers and students with detailed explanations of each step.

The steps of development can be summarized as follows: (1) review the basic information of English I, including course objectives, the content in the course book, and the duration of the course; (2) develop the PBL lessons based on the above mentioned information of English I and the principles of PBL. The PBL procedure proposed by Stoller (2002), which was discussed in chapter 2 (*2.4.3 Procedures of Project-Based Learning*), was used as a guideline for developing the procedure of the lessons; (3) identify and sequence tasks to be included in each lesson as well as develop materials in order to facilitate the students in completion of the project.

The PBL lessons were implemented with the selected group of participants which were 47 English I students. The PBL lessons aim to develop students' overall language skills in terms of language ability and learning process. The lessons consisted of ten main steps as described below:

Step 1: The teacher introduces the PBL approach and the project to the students.

In this study, the information about the PBL approach was introduced to the students. After the students had gained some background knowledge about the PBL approach, the teacher introduced the project that they would be engaged on during the course. The project criteria were described and some examples of projects were shown to the students. After that, the students formed a group of six to seven to work together on the project. Mixed-ability grouping was employed in the present study. The students' pretest scores were used to determine group members. The main purpose of using mixed-ability grouping was to yield students chances to interact with peers with different levels of ability.

Step 2: The students determine the topic and the final outcome of the project.

Each group brainstormed and agreed on the theme and the final outcome of the project. The theme that the students selected were related to the topics that they learned in the English I course (i.e. education, personal stories, interesting lives, and our world). "*Our group*" form (Appendix H) was distributed to every group for recording the contact information of the group members (i.e. names, telephone numbers and email addresses) as well as the topic and the final outcome of the group.

Step 3: The students and the teacher plan the project

After each group determined the topic and the final outcome, they needed to plan the methods to accomplish it. In this step, the students planned and organized the project as well as assigned a role for each member, while the teacher acted as a facilitator who helped and provided suggestions for them. It was necessary for steps 3-9 to be conducted outside the classroom since English I course has fixed content to be covered and taught in class. As a result, each group met the teacher outside the classroom for about 7 hours (an hour for each meeting).

Step 4: The students gather information

The students followed their plan and work according to their assigned role. In this step, the students began to search and gather information relevant to the project. The information obtained was shown to the teacher for suggestions.

Step 5: The students submit the first draft of the project.

Each group collaboratively prepared the first draft of the project and submitted it to the teacher for comments. After receiving comments from the teacher, the students revised and prepared the second draft.

Step 6: The students submit the second draft of the project.

The second draft was submitted for suggestions. After the teacher reviewed this second draft, comments were provided where necessary. Then the students revised it and prepared the final draft.

Step 7: The students submit the final draft of the project.

The students submitted the final draft to the teacher for approval. However, some modifications to the draft were needed based on the teacher's suggestions and comments before they produced the final product in the next step.

Step 8: The students prepare themselves and rehearse before producing the final product.

After the final draft was complete, the students prepared themselves for the production step. The preparation included conducting a rehearsal among group members and making an appointment with the parties involved before the production.

Step 9: The students produce the final product

Each group arranged to meet and to help one another to produce the final tangible product. In this step, it should be noted that the students in each group worked on their own after receiving guidance from the teacher in the previous steps.

Step 10: Students present the final product

In this step, the students were ready to present the final product of their project. The final product was assessed and evaluated by the teacher, peers, students themselves according to the final evaluation score rubric (Appendix I) which was adapted from the video project rubric created by Vandervelde (2011) and the video documentary developed by Rcampus (2014). This final evaluation score rubric covered four areas of evaluation: (1) Language use: level of difficulty and accuracy; (2) Quality of work: clarity of the production and interesting content; (3) Creativity: innovation and usefulness; and (4) Technology: appropriate integration of technology use. The evaluation rubric was composed of five bands ranging from band 1 to band 5. The criteria details were indicated in band 1, band 3 and band 5.

To validate the PBL lessons, an expert in the field of language learning and teaching who has experience in teaching the English I course was invited to evaluate the lessons. The lessons were revised according to the experts' comments and suggestions before being implemented.

3.4.2 Tests

Tests were employed to measure the change in students' overall language ability before and after the implementation of the PBL lessons. In this study, two types of tests were developed based on the content of English I: (1) a *60-item multiple-choice test* and (2) a *speaking test*. The 60-item multiple-choice pretest and speaking pretest were constructed by the researcher and were administered to all participants before the implementation of the PBL lessons. The posttest used in this study was the midterm and final tests developed by the school of Foreign Languages. It is important to note that the pretests and the posttests were constructed based on the same specifications as described below.

3.4.2.1 60-item Multiple-choice Test (Appendix B)

The 60-item multiple-choice test was used to measure students' language skills. Each item in the test was based on the content in the English I course book (i.e. Four Corners 3). The test consisted of sixty questions which were divided into five sections covering the five areas of language skills. The first part was the listening section (15 items), which included dialogues. The second part was the dialogue completion section (10 items), which aimed to indirectly measure the speaking ability of the students. The third section was vocabulary (10 items), which was taken from the course book. The fourth section was grammar (10 items), which was related to the grammar points listed in the course book. The last section was reading (15 items), which contained three to four unseen passages closely related to the reading passage topics presented in the course book.

To ensure the content validity of the test, the researcher invited two experts in the field of language learning and teaching or language assessment to

evaluate whether the questions in the test could measure what they claim to measure. In addition, the test was piloted with 51 first-year students at SUT who had never taken an English I course before. Then the internal consistency (reliability) was measured by conducting an item analysis through the use of the Item Analysis System (Version 2006) program developed by Khaimook (2006). The items in the test was revised according to the comments resulted from the item analysis.

3.4.2.2 Speaking Tests

Speaking tests in the form of a free discussion were used in the current study to measure students' speaking ability. In each test, the participants were divided into groups of four to five. Each group was given five minutes to discuss the given topic which was related to the ones in the course book, e.g. life at the university, interesting experiences, and a dream vacation. It should be noted that the participants were evaluated using the same procedure, choices of topics and criteria for both speaking pretest and posttest.

The speaking test scores were rated according to the holistic scoring rubric for speaking test developed by the staff members of the School of Foreign Languages (Appendix G). The holistic scoring rubric was composed of six bands ranging from band 0 (i.e. student makes no attempt to communicate with friends) to band 5 (i.e. student has spoken fluently and intelligibly with good use of communication strategies and performs well without a prepared script). Half-band grading was allowed in each band (i.e. 0.5, 1.5, 2.5, 3.5 and 4.5).

To ensure the reliability of the speaking test scores, two instructors rated the participants' oral ability. These two raters were English teachers who have experience of scoring the English I speaking test. Inter-rater reliability was applied.

3.4.3 Student Diaries (Appendix C)

A student diary was employed as a tool to explore the students' opinions toward the use of PBL to learn English. Every participant was required to write a diary during the project. In the diary form, there were guided questions, such as "How did I feel when working in these steps?", "Was it difficult or easy?", and "What did I learn in terms of language skills?" These helpful questions made writing a diary easier for the students to think of what to record and to help their responses aligned with the present study's research questions. However, some free space was provided for them to write any extra information they might have wanted to express.

Every student needed to submit three diary entries over the course of the project: at the end of step 4, step 7, and step 10. Since the purpose of this instrument was to elicit students' opinions, not to test the students' English proficiency, the students were allowed to write in Thai if they did not feel comfortable writing in English. Diaries of ten highly proficient participants, ten average proficient participants and ten participants with low proficiency (i.e. 90 entries) were chosen for an analysis. The proficiency of the participants was classified according to their pretest scores.

The main purpose of the student diaries was to ask the students to report on what they did during the steps of the project and what they had learned from certain tasks. In this way it was hoped to reveal their learning trace while completing the project. Another purpose was to encourage students to self-reflect on their learning process. Furthermore, the data from the diaries could be used to triangulate the results from the test scores.

3.4.4 The Teacher's Diary (Appendix D)

A teacher's diary was used in this study in order to investigate the teacher's opinions on the implementation of the PBL lessons. The researcher, as a teacher and project monitor, documented the details about assigned activities, difficulties, possibilities and opinions of every step of the implementation in the diary (i.e. 10 entries). Some guided questions were provided in the teacher's diary, for instance, "What tasks or activities did I do in this step?", "How did I feel?", "What problem did I face in this step?" and "How did I solve them?". The main purpose of the teacher's diary was to keep a record of what was done in the process of facilitating the students, what difficulties were encountered and what solutions were employed for particular problems in each step. The information obtained from the teacher's diary provided useful qualitative information from the teacher's perspective. It was hoped that it would also be useful for teachers who want to use the PBL approach in their teaching.

3.4.5 Portfolio Assessment

The present study employed a portfolio as another assessment tool to monitor students' progress over time. Unlike the showcase portfolio which emphasizes the product of learning, an assessment portfolio or a growth portfolio emphasizes the process of learning (Mueller, 2012). According to O'Malley & Pierce (1996, p.37), "assessment portfolios were focused reflections of specific learning goals that contain systematic collections of student work, student self-assessment, and teacher assessment". Each portfolio entry should reflect the students' progress as well as steps they take to complete their projects. More than just a file folder, the overall goal of a portfolio is for the students to demonstrate growth and the development of skills.

In the present study, a portfolio assessment was used as a tool for monitoring the concrete progress of the project. The teacher employed it to see how students learn in each step in order to be able to produce their work. The progress of each group in each step (e.g. drafts produced in some steps) was monitored by the teacher and collected in a portfolio. To monitor, the teacher employed the criteria mentioned in the portfolio evaluation rubric (Appendix E) developed according to the guidance provided by Byrd (2010). This rubric covers four areas of evaluation: (1) language skills; (2) teamwork skills; (3) high-order of thinking skills and technology use; and (4) progress of the project. This rubric was provided to all of the students in advance.

3.4.6 Semi-structured Interviews

A semi-structured interview was used to gather additional data from the participants. The purpose of using a semi-structured interview was to investigate students' opinions on the use of the PBL approach to learning English as well as problems they faced during the project. According to Nunan (1992), interviews can be classified into three categories: (1) unstructured interviews, (2) semi-structured interviews, and (3) structured interviews. The advantage of a semi-structured interview is that it gives interviewers a degree of power to control the course of the interview. In addition, the guided questions help ensure that each interview covers essentially the same topics (Remler & Van Ryzin, 2011). The interviewer in a semi-structured interview generally knows what he/she wants to be explored beforehand.

A list of eight open-ended questions (Appendix F) was predetermined by the researcher in order to guide or structure the interview. Half of the participants (i.e. twenty-five students) were randomly selected to join in the interviews. The participants were interviewed in Thai because it was easier for them to express their opinions. The

interviews were conducted after the posttest and each lasted approximately fifteen minutes. All the interviews were tape-recorded and subsequently transcribed. The key extracts of the interviews' transcripts were translated into English.

3.5 Research Procedure

Timeline

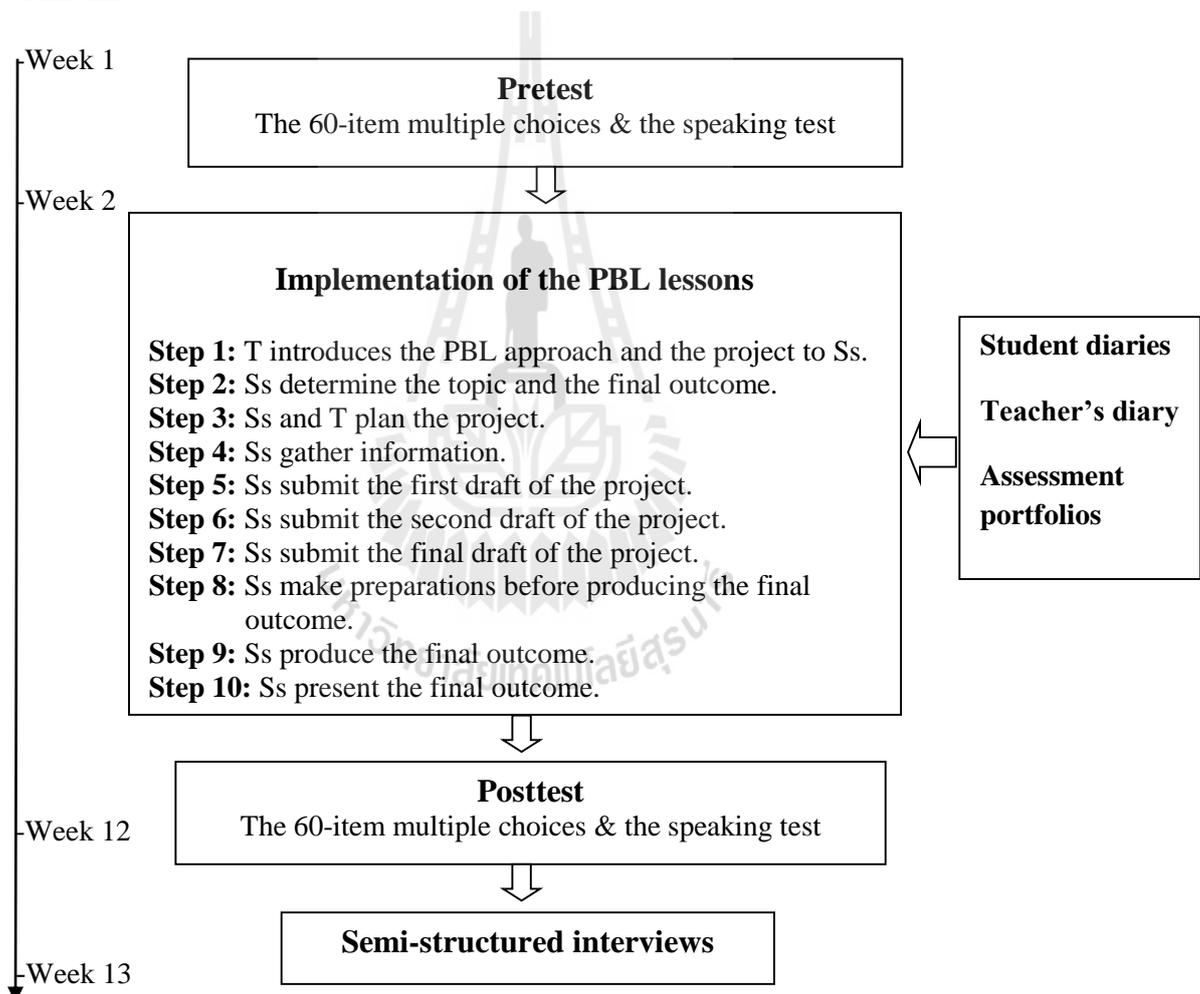


Figure 3.2: Research Procedure

This section aims to explain how the research study was carried out (as shown in Figure 3.2). Before the implementation of the PBL lessons, all students took the pretest in order to measure their English proficiency. After that, all students went through the ten steps of the PBL lessons in order to complete their project. After the implementation of the PBL lessons, all participants took the posttest and half of them were asked to participate in the semi-structured interviews.

3.6 Data Analysis

This section discusses the methods used for the data analysis. In the present study, the researcher employed both quantitative and qualitative methods to analyze the data. The details are given below.

3.6.1 Quantitative Data Analysis

3.6.1.1 Test Scores

Descriptive statistics, i.e., mean score and standard deviation were employed to analyze the students' overall language skills. In addition, a paired sample t-test was used to compare the participants' mean scores gained from the pretests and the posttests. The purpose of using a paired sample t-test was to determine whether there was any improvement in the students' overall language skills after implementing the PBL approach. A paired sample t-test was also used to determine whether the mean scores of the pretests and the posttests were significantly different.

3.6.2 Qualitative Data Analysis

3.6.2.1 Data from the Student Diaries, the Teacher's Diary and the Semi-structured Interviews

Data collected from the student diaries, the teacher's diary and the semi-structured interviews were analyzed qualitatively in order to find patterns in their responses to the PBL approach. The steps of the qualitative analysis in the present study were adapted from the procedure suggested by O'Conner & Gibson (2003) as described below.

1. Organizing the data

To allow the researcher to go through each topic and identify concepts and themes easily, the data from the diaries and the interview transcripts were organized in a way that is easy to look at.

2. Finding and organizing ideas and concepts

After gathering various responses, the researcher then searched for specific words or similar ideas and grouped them into categories of similar answers. The different ideas were noted and kept in a list.

3. Building the overall themes in the data

In general, each response category has one or more associated themes. Therefore, the categories that had similar or related themes were combined under one main theme. The most salient patterns of the students' opinions were identified.

4. Finding possible and plausible explanations for findings

The researcher made a summary of the findings and themes.

3.6.2.2 Data from Portfolio Assessment

The students' work collected in the portfolios in each step was monitored and evaluated according to the portfolio evaluation rubric (Appendix E). Then the score results from the evaluation in each step were compared in order to find out whether the students had made any progress in terms of language ability and in the learning process while working on the project.

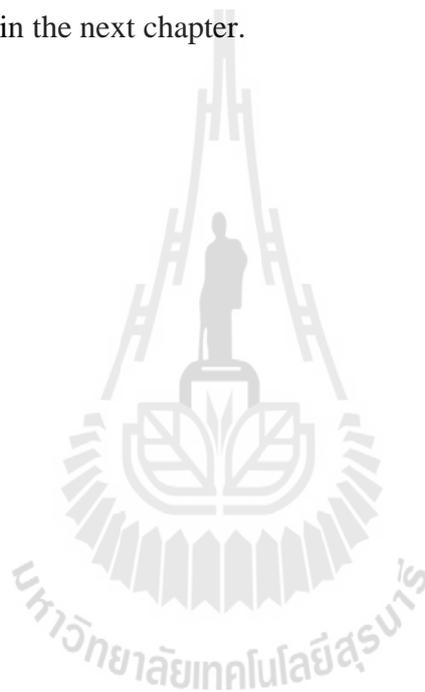
To summarize, Table 3.1 illustrates how the three research questions in the present study were answered through quantitative and qualitative data collection and data analysis.

Table 3.1: Summary of Data Collection and Data Analysis

Research Questions	Data collection instruments	Data analysis
1. Does the PBL lesson improve the overall language skills of first-year students at SUT in terms of language ability and learning process?	-Tests - Portfolio assessment -Student diaries -Semi-structured interviews	Quantitative analysis <ul style="list-style-type: none"> ▪ Descriptive statistics ▪ Paired-samples t-test Qualitative analysis <ul style="list-style-type: none"> ▪ Content analysis
2. What are the students' opinions on the implementation of the PBL approach in learning English and their problems while engaging in the PBL approach?	-Semi-structured interviews -Student diaries	Qualitative analysis <ul style="list-style-type: none"> ▪ Content analysis
3. What are the teacher's opinions on the implementation of the PBL approach in teaching English and the problems while using the PBL approach?	-A teacher's diary	Qualitative analysis <ul style="list-style-type: none"> ▪ Content analysis

3.7 Summary

This chapter described the research methodology used for the present study. The participants were 47 first-year students taking the English I course at SUT. The instruments used to collect the data were the PBL lessons, tests, student diaries, and a teacher's diary, portfolio assessments, and semi-structured interviews. Then the data was analyzed using both quantitative and qualitative methods. The results of the data analysis are presented in the next chapter.



CHAPTER 4

RESULTS

The purpose of this chapter is to present the findings of the present study. The quantitative and qualitative data obtained through different research instruments were analyzed and presented in response to the three research questions formulated at the beginning of the study.

4.1 Answer to Research Question 1:

Can the PBL lessons help improve the overall language skills of first-year students at SUT in terms of language ability and learning process? If so, how?

In order to determine whether or not the PBL lessons can help improve the overall language skills of first-year students at SUT in terms of language ability and learning process, four research instruments were employed. Quantitative data were obtained from the written and the speaking pretest and posttest while qualitative data were obtained from the portfolio assessment, the student diaries, and the semi-structured interviews.

4.1.1 Results of the Tests

The quantitative data was obtained from two types of tests (i.e. written and speaking tests) of which the specifications were based on the content of English I. Both of the tests were used to measure the students' overall language ability before and after the implementation of the PBL lessons.

▪ Written Tests

The pretest which contained 60 items of multiple-choice questions was administered in the first week of the course before the PBL implementation. The test covered the contents of the course including Unit 1: Education, Unit 2: Personal stories, Unit 4: Interesting lives and Unit 5: Our world. As for the posttest scores, they were obtained from 2 parts: (1) the midterm test and (2) the final test. Both of them were developed by the School of Foreign Languages. The midterm test covered units 1 and 2, while the final test included units 4 and 5. Thus, the posttest scores were averaged from the results of the midterm and the final tests.

According to the data analysis, the results of the written tests indicated that the overall language ability of the participants improved after participating in the PBL lessons. As shown in Table 4.1, the mean score (\bar{x}) of the pretest was 25.36, while the mean score (\bar{x}) of the posttest was 35.75.

Table 4.1: The paired-samples t-test of the written tests

	Paired-samples t-test			df	Sig. (2-tailed)
	Mean (\bar{x})	Std. Deviation (SD)	Mean Difference		
Pretest Score	25.36	9.03			
Posttest Score	35.75	8.18	10.39	46	.000

Additionally, a paired-samples t-test was conducted to determine if the difference in the students' mean of pretest and posttest scores was statistically significant. As shown in Table 4.1, the result indicated that the mean difference was 10.39. Meanwhile, a two-tailed *p* value was .000, which meant that there was significant difference between the means of the written pretest and posttest scores. In sum, this

result suggested that the PBL lessons helped improve the overall language skills of first-year SUT students in terms of language ability which included listening, speaking, vocabulary, grammar and reading.

▪ Speaking Tests

The speaking tests also had a pretest and posttest. The pretest was conducted in the first week of the course before the PBL implementation, and the posttest was administered in the last week of the course after the PBL implementation. Forty-seven participants were divided into groups of four or five to discuss freely the topics they chose through a lucky draw. The students' scores were rated by two English teachers according to the holistic scoring rubric (Appendix G) provided in advance. The results of both pretest and posttest are presented in Table 4.2.

Table 4.2: The paired-samples t-test of the speaking tests

	Paired-samples t-test			df	Sig. (2-tailed)
	Mean (\bar{x})	Std. Deviation (SD)	Mean Difference		
Pretest Score	6.49	1.63	3.51	46	.000
Posttest Score	10.00	2.64			

The results of the speaking tests were consistent with those of the written tests. They also revealed that the participants' speaking ability improved after engaging in the PBL lessons (as presented in Table 4.2). After comparing the mean scores of the pretest and the posttest, it was found that the mean score (\bar{x}) increased from 6.49 to 10.00.

A paired-samples t-test was used to compare the speaking pretest and posttest scores. The result indicated that the mean difference was 3.51, while a two-tailed p

value was .000, which meant that there was significant difference between the mean of the speaking pretest and posttest scores. This result suggest that the PBL lessons helped improve the speaking ability of first-year SUT students.

In conclusion, the quantitative data obtained from both written and speaking tests consistently revealed that the overall English language ability of the participants significantly improved after participating in the PBL lessons. However, in order to know how the students acquired English language skills during the process of PBL, the data from the qualitative research instruments were also analyzed and explained as shown in the next section.

4.1.2 Qualitative Data

To answer research question 1 qualitatively, particularly about the students' learning process, the portfolio assessment, the student diaries and the semi-structured interviews were administered. The data obtained from these qualitative research instruments were analyzed by means of content analysis.

With regard to the first part of question 1 asked "*Can the PBL lessons help improve the overall language skills of first-year students at SUT in terms of language ability and learning process?*", the data obtained from the semi-structured interviews, which was conducted after the PBL implementation, revealed that all of the participants who were interviewed agreed that they were able to improve their overall English skills after participating in the PBL lessons as can be seen from the comments shown below.

Subject 20: "*My speaking skill improved. At first, I didn't have confidence to speak English, but now I tried to speak even though it was incorrect.*"

Subject 25: "*Yes, I could develop my English skills. At least, I learned grammar when I wrote the video script. I used online dictionary to find out how to pronounce some particular words, so I could pronounce them correctly.*"

Subject 26: *“The skill that I could develop the most was listening. It was because I got chances to speak English with the teacher. And when I went back home, I searched for information from the Internet and listen to it.”*

Subject 36: *“My English skill has been improved a lot. I know more vocabulary. For listening skill, at the beginning, I couldn’t understand when people speak English, but now it was getting better. I could understand the main idea”*

Subject 41: *“My English had been developed; especially my speaking skill. I had a chance to speak English because I was Master of Ceremonies (MC) in the video.”*

It can be seen from the above extracts that the participants provided positive feedbacks towards the PBL lessons. In other words, they perceived that their English language skills, such as listening, speaking, grammar and vocabulary improved after participating in the PBL approach. The findings obtained from the semi-structured interviews (qualitative data) were consistent with the results of the tests (quantitative data), which indicated that the PBL lessons could help improve the overall language skills of first-year students at SUT in terms of language ability and learning process.

As for the second part of question 1 asking *“How the PBL lessons help improve the overall language skills of first-year students at SUT in terms of language ability and learning process*, the data obtained from the portfolios, the student diaries, and the semi-structured were analyzed. It was found that although the participants agreed their English improved after doing the projects, the methods they employed for acquiring the English language were different. Therefore, the data of how the participants acquired English language skills were compiled and categorized into six major types of methods: (1) use of the Internet; (2) peer interaction; (3) self-study from the course book; (4) self-practice; (5) teacher consultation; and (6) interaction with foreigners. The first five methods were commonly reported by most participants, while only some of them used the last method. This could be explained by the different nature of the final products, which led to the different types of activities. Therefore, it was found that only 15% of

the students had opportunity to communicate with foreigners. The details of each category are presented as follows:

- **Use of Internet**

A number of the participants reported that they usually used the Internet to find information and learn about the English language while working on the project. It can be seen that they learned through various websites and applications on the Internet as revealed in the participants' comments below.

Subject 9: *"I listened how to interview people in English by watching from the video clips provided in different websites."*

Subject 10: *"I learned the biography of famous people from the documentary videos on YouTube...I learned about past tense, past perfect tense and if clause from the articles provided on the Internet...I got some new words such as, contribution and develop from the online dictionary"*

Subject 20: *"I listened from the video being available on the Internet. Some video provided both Thai and English subtitles so they helped me understand more."*

Furthermore, it was found that the participants not only used the Internet to seek information and learn about English, but they also used it as a tool to practice their English language skills, such as listening and speaking as found from the following statements.

Subject10: *"I practiced my listening skill by listening to YouTube."*

Subject 24: *"I listened from various Websites and I listened to them many times. I often used translator program. I was in my room alone and listened to it many times. I practiced both listening and speaking at the same time."*

With regard to the above extracts, the students indicated that the Internet plays a vital role in the students' learning process since it provides abundant information resources. It has become common practice for the students to seek and gather information through the use of the Internet. Furthermore, with a lot of free programs provided on the Internet, especially language translator programs, the students often

used them to find the meaning of the words as well as to practice their listening and speaking skills.

▪ **Peer Interaction**

Another useful way to improve English language skills reported by the participants was peer interaction among group members. The results revealed that the participants had more opportunities to use English naturally to communicate with their friends. It was because during group meetings the participants were encouraged by the teacher to use English as a means of discussion as mentioned in the participants' comments below.

Subject 2: *"I improved my listening skill by listening to my friends. When they asked me in English, I could answer."*

Subject 13: *"I developed English speaking skill by talking to my group members."*

Subject 31: *"I had English conversation with my group members"*

Peer interaction through project work not only provided the students with more opportunities to use English for real communication purposes, but also allowed them to help one another to complete each task in the project. Furthermore, it was found that the less capable students could learn English from their more capable friends as appeared in the following extracts

Subject 10: *"If I didn't know how to write the script in English, I would ask my friends first."*

Subject 11: *"I read my friend's script and we helped each other review it and make corrections."*

Subject 29: *"I could improve my pronunciation. It is because there was one student in my group who could pronounce very well and correctly, so I asked him to show me the ways to pronounce the words."*

Subject 39: *"I tried to write the questions for the interview in English by myself first. Then I asked my friends to read it and give comments."*

Subject 41: *"I and my friends helped one another write the video script and then we reviewed it by ourselves before submitting to the teacher."*

Interestingly, it was found that some of the participants tried to improve their speaking by practicing their dialogues with their friends as mentioned in the following comments.

Subject 2: *“I developed my speaking skill by practicing with friends.”*

Subject 24: *“I practiced the dialogue used in the video by speaking with friends.”*

Subject 35: *“I practiced speaking and pronouncing with my friends”*

In sum, all of the above statements revealed that the students were able to improve their English language skills through peer interaction, especially speaking, listening and writing. It was because during the process of PBL the students had more opportunities to communicate with their friends and they could also help and support one another in order to accomplish their joint project.

▪ **Study from the Course Book**

In the present study, one of the criteria in doing the project was that the topic and content of the project should relate to the content of the English I course. Therefore, it was found that while the participants were doing the project, they usually consulted their English I course books as seen from their diaries below.

Subject 2: *“I could develop my reading skill when I read the articles in the course book and tried to understand them. And when I found the words that I didn't know, I searched for the meaning.”*

Subject 29: *“I studied the content that I needed to integrate into the project as well as vocabulary from the course book. I read unit 2 (personal story) from the Four Corners book...I wrote sentences according to the rules that I learned from the Four Corners book.”*

Subject 33: *“I read the Four Corners book in order to be able to construct the sentences by using present perfect tense.”*

Subject 34: *“I listened to the CD provided in the course book in order to practice my listening skill...I learned about present simple tense by reading the course book...I learned new words about feeling from the Four Corners book.”*

The extracts above revealed that the participants used their own course book as a source of information to develop their English skills, particularly reading, grammar and vocabulary. Moreover, it is important to note that this course book (Four Corners) provides a CD for the students to practice listening on their own whenever they want as indicated in the comment of subject 34.

Personal Stories	Group 4 (Boy Band)
Stepping on dog poop	
<p>One day I made an appointment with my friend at SUT cafeteria. But <u>unfortunately</u>, I forgot the appointment time, so I left my room a little bit late. While I was walking to the cafeteria, I felt like I stepped on something. However, I didn't pay much attention on it because I was in a hurry to meet my friend. During talking to my friend, <u>suddenly</u>, I smelled something bad. My friend and I tried to find where that smell came from. Finally, my friend found out that the smell was from my shoes. Oh! The thing that I stepped on was dogsled or dog poop. I was really <u>embarrassed</u>.</p>	
Shooting the ball	
<p>One day, I played basketball with my friends at the basketball court. We had people, so we were divided into two teams. While I was playing, I had a chance to shoot the ball. So, everyone in my team looked at me and hoped that I could make a score. At that time, I was a little bit <u>nervous</u>, so I closed my eyes and quickly threw the ball to the basket. <u>Suddenly</u>, I heard a strange noise from somewhere. When I opened my eyes and I saw a man was lying on the floor. <u>Sadly</u>, one of my friends told me that he was hit by my ball. I felt really guilty and <u>upset</u>.</p>	

Figure 4.1: A part of group 4's script 1

Besides the data obtained from the student diaries and the semi-structured interviews, the students' work collected in the portfolios provided evidence which showed that the students had studied the contents from their course book and tried to integrate them into the project as presented in Figure 4.1.

The script of group 4 showed that this group attempted to integrate the contents of unit 2 (e.g. sentence adverbs, verbs to describe reactions, and past continuous and past simple tense) into their project work. The adverbs such as *unfortunately*, *suddenly*, and *sadly*, as well as verbs to describe reactions like *embarrassed* were used in the stories. Additionally, the students had made up their stories by using the correct and appropriate tense forms.

<p>Interesting lives</p> <p>A: Have you ever played sport?</p> <p>B: Yes, I have played sport.</p> <p>A: Why do you like to play sport?</p> <p>B: Because it makes my body strong and it is interesting.</p> <p>A: What kind of sport do you play?</p> <p>B: I play Tae Kwon Do.</p> <p>A: How long have you played and do you still playing it?</p> <p>B: I have played it since I was in the middle school.</p> <p>A: Have you ever won an award?</p> <p>B: I have never won. I play because I want to protect myself from danger.</p> <p>A: Do you have an idol?</p> <p>B: I have an idol. He is Jackie Chan.</p> <p>A: Why do you like him?</p> <p>B: Because he looks cool in movies.</p> <p>A: Have you ever met him?</p> <p>B: No, I have never met him.</p> <p>A: What benefit have you got from sport?</p> <p>B: I use it to protect myself from being attacked.</p>	<p>Group 6 (All stars)</p>
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Figure 4.2: A part of group 6's script

Another example was taken from the portfolio of group 6 (Figure 4.2). This group decided to do the project about their experiences in playing sports. This project related to the contents of Unit 4 (Interesting lives), which focuses on the use of the

present perfect tense and the ways to express life experiences. Thus, this group had an idea to produce an interview on video asking each member about his experience in playing sport. Referring to the interview script above, it can be seen that both questions and answers were written by using the present perfect tense. It was evident that the students had been able to integrate the contents learned from their course book into their project work.

From the above qualitative data analysis, it can be clearly seen that the participants were able to develop their English language skills by applying what they learned from the course book into their project. In other words, these PBL lessons provided opportunities for the participants to use their knowledge in new or real-life situations.

- **Self-practice of English**

Apart from the language learning methods mentioned earlier, practice was another method employed by the students. In order to gain more confidence in using English, the students practiced their English skills on their own in different ways. Firstly, they practiced their listening and speaking skills through programs provided on Websites as mentioned in the extracts below.

Subject 24: *“I listened from various Websites and I listened to them many times. I often used translator program. I was in my room alone and listened to it many times. I practiced both listening and speaking at the same time.”*

Secondly, the findings also revealed that the participants had opportunities to practice their pronunciation and speaking while they rehearsed their scripts. They tried to pronounce all the words correctly before being video recorded as shown in the following extracts.

Subject 8: *“While I read my script and accidentally found the words I could not pronounce, I searched from the Internet how to pronounce them and practiced pronouncing them several times.”*

Subject 23: *“My speaking skill was developed quite a lot because I had to read the script and practice my pronunciation.”*

From the above extracts, it can be concluded that practicing on one’s own can facilitate language learning. Many of the participants employed this method to develop their English language skills, especially pronunciation. Furthermore, the results also indicated that the use of technology plays an essential role in today’s learning, because it is a tool that the students usually employ for self-learning and self-practice.

▪ **Teacher Consultation**

As mentioned earlier in Chapter 2 (2.2.2 *Roles of teachers and students in the PBL approach*), teachers’ roles in the PBL approach differ from those in traditional teaching. In PBL a teacher is not only a knowledge transmitter, but also a facilitator who instigates, organizes and stimulates the learning process. According to the results found from the data analysis, there was some evidence showing that the teacher is needed in the PBL approach. Firstly, during the 10-steps of the PBL lessons the teacher worked with the students closely and usually joined in group meetings. Therefore, the teacher was able to encourage the students to speak English during the discussion. As a result, the participants had more chance to develop their listening and speaking skills with their group members and the teacher as revealed in the following extracts.

Subject 02: *“I improved my speaking because I had chance to talk to the teacher in English. Whenever I spoke incorrectly, the teacher would give me some advice.”*

Subject 26: *“I acquired new vocabulary during talking to the teacher and friends. During the project discussion, the teacher talked to us in English. When I heard the difficult words, I could ask the teacher.”*

Student 40: *“I could improve my speaking skill because I had chance to talk to my group members and the teacher during the meeting.”*

Not only listening and speaking skills were developed through the teacher's support, but the findings also revealed that the participants' writing skills improved after receiving feedback and suggestions from the teacher. That is, every draft of the video scripts written by each group was reviewed by the teacher. Afterwards comments and suggestions were provided as seen from the extracts below.

Subject 13: *"I and my friend helped each other write the script. Then we showed it to the teacher. If it was incorrect, the teacher would help us correct it."*

Subject 14: *"I wrote the script by myself, but when I wasn't sure about my writing, I would consult with the teacher."*

Subject 24: *"I tried to write the script by using present perfect tense. Then I showed it to the teacher. When the teacher found the wrong sentences, she would give me suggestions. I learned from the teacher and I started recognizing"*

All of the above extracts provide evidence that the teacher played a crucial role in PBL approach. The participants were supported and facilitated closely by the teacher. Furthermore, they had plenty of opportunities to consult with her during the 10-steps of the project work.

▪ **Interaction with Foreigners**

In doing the project, the students had freedom to determine their own topics. Hence, the learning processes of each student might differ from one another depending on the project and the plan they designed. However, it was found that some students had opportunities to interact with foreigners during the project process while some did not. Some of the participants who had opportunities to communicate with foreigners reported that they were able to develop their listening and speaking skill when they talked to foreigners, while some of them were able to develop their listening skills by using the tape recorder several times during the process of subtitling as shown in the statement below.

Subject 19: *“I had a chance to interview the foreigners. I could develop my listening and speaking during the interviews.”*

Subject 39: *“I could develop my listening because I listened to the foreigners’ answers several times during the process of subtitling.”*

Subject 44: *“I developed my listening skill by listening from the foreigners’ answers during the interview.”*

To summarize, the data from both the quantitative and the qualitative data analysis clearly shows that, overall, the participants enhanced their English ability in listening, speaking, reading, writing, grammar and vocabulary as a result of PBL being integrated into the English I course. The participants had the opportunity to use English more frequently during the 10-step of the PBL lessons. Furthermore, they were able to work collaboratively with their friends and interact with people outside the classroom by using English language as a medium to accomplish their goals.

4.2 Answer to Research Question 2

What are the students’ opinions on the implementation of the PBL approach in learning English and problems while engaging in PBL approach?

To elicit the participants’ opinions on the implementation of the PBL approach in learning English and the problems they faced while engaging in the PBL approach, two qualitative research instruments were employed (i.e. the student diaries and the semi-structured interviews). After analyzing the data, the viewpoints of the participants were found in multiple aspects that will be discussed in the following sections.

4.2.1 The Participants’ Opinions on the PBL Lessons

As shown by the student diaries and the semi-structured interviews, the participants’ opinions on the PBL lessons were categorized into three major points as follows: (1) the activities in the PBL approach; (2) the procedures of the PBL lessons;

and (3) other positive effects of the PBL approach in addition to English language skills.

The students' opinions on each topic are presented below.

4.2.1.1 The Activities in the PBL Approach

The results revealed that most of the participants (96%) gave positive responses to the activities in the PBL approach. The most obvious reasons that made the participants feel satisfied with the lessons involved four areas. First, the participants preferred to work in a group rather than individually. This was because group work allowed them to make new friends, particularly those students who were from different faculties. Essentially, the more opportunities they had to work together, the more familiar they became with one another. Additionally, the participants realized that being part of a team helped them develop their interpersonal and teamwork skills. In other words, the students were able to learn how to work with friends harmoniously as well as to share ideas and also to help one another. Below are some of the participants' comments.

Subject 1: *"It was fun because I had met friends from different faculties."*

Subject 3: *"I enjoyed because I could work with friends. It made me learn how to work in a team friendly and peacefully. I learned how to adapt myself to other people and accept other people's opinions."*

Subject 8: *"I liked it because I could work in a team. I had more fun than working alone. We could share ideas about what we should do and what we should not."*

Subject 17: *"I liked it.... I sometimes shared ideas with friends and helped one another as much as I could so that the work could go well."*

Secondly, the participants reported that activities in the project work were challenging and exciting, because they had opportunities to do a variety of challenging, interesting and enjoyable things that they had never done before, for example, producing a short video or interviewing foreigners. Even though many of the

participants agreed that to accomplish the project was a difficult task, they appreciated it as can be seen from the following comments.

Subject 13: *“I enjoyed working although I had got some stress.... I enjoyed a trip going to produce a video.”*

Subject 20: *“It was new for me. I had never done this kind of thing before, but I had chance to do it this time. I think I could learn from this project more than the regular class....I liked it. It was fun.”*

Subject 27: *“It was fun..... I had learned by trial and error. I thought it was better than doing nothing.”*

Subject 31: *“It was fun and challenging. Although I used to do this kind of work before, I had never done seriously and spent a lot of time like this one. For this project, I tried hard and gave it more time than before.”*

Subject 36: *“I felt good. At the earlier stage, I felt that it was difficult. However, after everyone in my group began to talk and express their ideas, I felt that it was easier.”*

Thirdly, the participants felt that they had more opportunities to learn and improve their English language skills throughout their work on the project. Unlike learning in the traditional classroom, by working on a project, the participants had more opportunities to use and practice their language skills in real-life situations as shown in the extracts below.

Subject 1: *“I learned how to use English from the native speakers. This allowed me to heighten my confidence in using English.”*

Subject 12: *“I thought it was good because I had an opportunity to meet foreigners. I was able to understand what they said. Overall, I liked it.”*

Subject 42: *“I felt that I could learn more when I had chance to do it myself. It was clearer than using imagination.”*

Lastly, the participants appreciated the project work because they felt that they were able to develop various skills at the same time, not only their English language skills, but also other necessary skills, such as teamwork and problem-solving skills which were developed throughout the entire project as shown in the following statements.

Subject 3: *“It taught me how to deal with problems. More importantly, it helped me become a reasonable person.”*

Subject 21: *“I had got many things from the project; not only English language skills, but also new friends. Moreover, I learned to adapt myself with friends, listen to friends’ opinions and learned to think rationally.”*

Subject 22: *“It was clearly seen that many skills had been developed, not only reading, grammar, and listening, but also critical thinking and team work.”*

However, the details about other skills than English language skills which were developed while engaging in the project will be discussed further in the following section (4.2.1.3 *Other positive effects of the PBL approach in addition to English language skills*).

Though most of the participants expressed positive feelings about the PBL approach, a few (4%) gave negative responses. The major cause of their dissatisfaction was that they had been under stress and that they were worried about unexpected problems. For instance, subject 13 reported that she felt stressed when she faced problems during the data collection process, while subject 29 was worried about his English ability as well as his duty as a group leader. Both of their comments are shown in their diaries as presented below.

Subject 13: *“I had some stress because the work didn’t go smoothly during the step of data collection.”*

Subject 29: *“I felt that this work was difficult because it was an English project. English was the subject that I wasn’t familiar with. Moreover, I was assigned to be a group leader; therefore, I needed to contact with all group members and arrange work. It made me feel a little bit bored.”*

In sum, the overall results indicated that almost all of the participants expressed their positive opinions on the PBL approach as it made learning more fun and effective. Only few of them had experienced uncomfortable feelings about it due to limited

English ability and lots of responsibility as a leader. In the next section, the students' opinions about the PBL procedure will be discussed.

4.2.1.2 The Procedure of the PBL Lessons

With regard to the overall procedure of the PBL lessons, the findings revealed that most of the participants (64%) were satisfied with them. It was because they felt that the PBL procedure was appropriate in terms of the steps, the duration, and the number of the students per group as shown in the following comments.

Subject 9: *"It was good and appropriate. The weekly meetings helped encourage us to come and do the work."*

Subject 13: *"I think the procedure was good. It guided us to work step by step."*

Subject 33: *"The procedure was suitable. The duration and the number of students in each group were appropriate."*

However, some of the participants (36%) recommended that the procedure should be slightly adjusted. Two main points were addressed. The first point was about the students' problems at the beginning period of the project. As indicated in the comment of subject 25 below, this student felt that it much too fast to suddenly start working with team members whom she had just met. She thought that it would be better if she had had a chance to get to know her group members and try to get familiar with them before starting work.

Subject 25: *"It was very fast at the beginning of the project. I and my team members had never known one another before, so I think we should get to know and be familiar with one another before the project starts."*

The other significant point was that the production stage was too short in the view of the students. Since the video production step required various processes: such as rehearsing the script, recording the video, cutting, and editing, it needed a longer period of time. Some of the participants' comments are as follows:

Subject 10: *“I think that the duration of the script writing step should be reduced while the duration of the production step should be extended. The duration for writing process was quite long.”*

Subject 26: *“The production period was too short. It only lasted two weeks. I think this step was important.”*

Subject 29: *“The production stage was too short. We didn’t have enough time for producing the video, so we couldn’t do it well.”*

Concerning which step of the PBL lessons the participants liked the most, the results indicated that the participants (100%) preferred step 9, producing the final product, (step 9) the most for a number of reasons. First, a number of the participants (38%) who attended the interviews said that they enjoyed and had fun during the process of the video production. Due to the fact that in the regular classroom the students rarely had an opportunity to engage in this kind of activity, like a video production,; therefore, it was an exciting activity for them. Some of the students’ responses obtained from the semi-structured interviews are as follows:

Subject 9: *“I enjoyed when I went to interview the foreigners.”*

Subject 33: *“I liked the production stage because it was humorous and enjoyable. For example, when my friends made a little mistake during the video recording, it was funny.”*

Subject 36: *“I liked the step of the video production. Although there were a lot of mistakes during this process, I really enjoyed it.”*

Second, in the step of production the students with their teams had opportunities to visit various places either inside or outside the university, which the students might have never visited before. Thus, traveling to new places was not only interesting and exciting for the students, but they also gained experience and new knowledge from actual locations. Some of the students’ opinions are as follows:

Subject 3: *“I enjoyed visiting the real location because I had watched the actual process of the pottery production.”*

Subject 21: *“I liked the process of making the video because I had an opportunity to learn outside the classroom. It was like taking a field trip. I could learn how to produce pottery.”*

Finally, the participants also reported that they were satisfied with the process of producing the video because it was challenging. The comments of the two subjects below were evidence showing that the production process provided them a chance to engage challenging tasks that they had never done before.

Subject 42: *“I liked the step of production because it was challenging. I wanted to try to do whatever I didn’t have confidence to do. I wanted to know if it was really difficult or not.”*

Subject 44: *“I liked the step of interviewing the foreigners. It challenged me because we didn’t know each other before. Therefore, I needed to introduce myself first in order to make them trust me.”*

Interestingly, although the results of the research revealed that the production step (step 9) was the step the participants most preferred, it was found that this step was also the most challenging step for them. The main reason was that the process of production required the students to employ various skills (e.g. language, teamwork and technology skills) as well as the use of instruments for the production (e.g. video camera and microphone). Hence, whenever the students lacked some of the necessary things during the production, they faced some difficulties and needed to solve them immediately.

Besides the stage of production, the step of writing the script (step 5- step 7) was another stage during which the participants encountered obstacles. The problems were mainly due to the participants’ insufficient knowledge of English such as vocabulary and grammar. Thus, they were unable to construct correct and complete sentences. However, the details of the participants’ problems will be discussed further in section 4.2.2 (*The problems that the participants encountered and the solutions they*

employed during the project.). In the next section, the details of the participants' views about skills other than

English language skills which improved during the project are presented.

4.2.1.3 Other Positive Effects of the PBL approach in addition to English Language Skills

After the analysis of data, it was discovered that the participants not only realized their English skills were improved by engaging the PBL lessons, but also noticed that their others necessary skills were also developed. All of the participants (100%) agreed that during the PBL implementation they were able to improve a variety of useful skills and ability. Based on the content analysis, the results revealed the six most frequently reported benefits as follows: (1) teamwork skills; (2) technology skills; (3); management skills; (4) leadership skills; (5) self-confidence; and (6) creativity. The details of each type are explained below.

- **Teamwork Skills**

The skills reported most by the participants were linked to teamwork skills. According to Crebert, Patrick, Cragolini, Smitch, Worsfold, & Webb (2011), teamwork skills involve the combination of interactive, interpersonal, problem-solving and communication skills required by a group of people cooperatively working on a mutual work for a mutual goal. Due to the fact that the tasks in PBL are collaborative in nature, they provided a lot of opportunities for the students to practice their teamwork skills with their team members. As shown in the extracts below, the participants revealed that the project work could help them improve their teamwork skills. The first obvious reason was that when they worked as a team, they not only had to share their ideas to the group, but also needed to respect the opinions of their group members. In

other words, the participants tried to exchange ideas in order to work with their friends smoothly and cooperatively. Below are some of the participants' opinions.

Subject 3: *"I tried to adjust myself to work with other people. I accepted the ideas of other people. It made me be an open-minded person. I tried not to stick only to my own idea and tried to listen to other people's opinions which might be better than mine."*

Subject 8: *"I learned how to work as a part of a team. Since this project work was a group work, so it needed the ideas of the group members."*

Subject 20: *"I improved my teamwork skills. When working with others sometimes we had different ideas, so we needed the discussion for the best solution."*

The second important reason was that the project allowed the participants to learn how to suitably and effectively share the tasks with the team members. Due to the fact that people have different abilities and talents, each task should be assigned to an appropriate person. Below are extracts showing that the PBL lessons could help the students learn how to share responsibility among team.

Subject 10: *"I learned how to share tasks with the group members. We shared tasks according to each member's ability. I had learned many things from each member since each of them was good at different things."*

Subject 17: *"We shared responsibility to every member according to his or her ability."*

All of the above extracts were evidence showing that the PBL lessons could help the participants improve their teamwork skills. That is to say, the participants learned to share ideas and responsibility with their group members as well as to help each other accomplish the mutual goal.

- **Technology Skills**

Besides using the Internet to search for the information, learn English, and practice language skills as mentioned earlier in the previous section (4.1.2 *Qualitative data: the use of Internet*), the participants also reported that they used technology as

tools to produce their final product. That is to say, they had learned how to integrate technological devices such as a video camera, a digital camera, a microphone, a smart phone or a tablet PC into their production process as can be seen from the following comments

Subject 12: *“I learned how to produce a short video. I tried to use the available resources like a smart phone to produce the video.”*

Subject 42: *“I integrated technological devices, like camera and microphone into the production process.”*

Apart from using technological devices, the participants also learned to create a video through the use of computer program or applications such as Imovie program, Microsoft PowerPoint program or any other computer programs as found from the extracts below.

Subject 10: *“I had learned how to make a short video by using a program on my computer. I had tried it before, but it was difficult so I gave it up. However, for this project, it was necessary so I tried to do it again and I could do it.”*

Subject 17: *“I improved my technology skills; especially in making a video by using “Imovie” program. I had learned how to insert an audio file into the video.”*

Subject 25: *“I had learned about the methods to make a short video as well as the functions provided in the Microsoft PowerPoint program. Previously, I didn't know that I could record my voice and insert it into my presentation through the Microsoft PowerPoint program, but I attempted to find it. Finally, I found the method to do it.”*

Although the participants might already acquire some basic technology skills such as Website navigation and E-mail management skills before, it was found that by involving the PBL approach the participants had gained new useful technology skills such as a video making skill. These skills not only enable the students to produce an interesting and impressing product for this project, and also benefit their future education and career.

- **Management Skills**

Since these PBL lessons were semi-structured, the teacher only planned and determined the steps to accomplish them briefly in advance. Therefore, the assigned project still required the students to make their own decision on the topic as well as plan and organize the methods to achieve their goals. With regard to the results of the content analysis, they revealed that the participants were able to improve their management skills, which include planning, organizing and problem-solving skills, resulting from student involvement in the project. The statements below were some of the participants' comments showing that they gained some working experience by engaging in this project as well as learned how to plan and organize their work.

Subject 3: *"I learned how to plan the project step-by-step...I did my best for the assigned tasks."*

Subject 8: *"I could develop my planning skill. Since in the first period of the project there were some mistakes, our group needed to plan again in order to complete our project in time."*

Subject 29: *"My planning skill was improved. I learned to manage time and work systematically."*

In addition to the planning and organizing skills, the participants also reported that they were able to build their problem-solving skills once they experienced problems. In this study, it was found that every group had different problems along the way to achieve their goals. Some of their problems and solutions were shown below.

Subject 13: *"I learned how to deal with the problems. For example, when I had a problem with my camera, I needed to use my mobile phone instead. Another example was that at first our group planned to interview foreigners at the Mall department store; unfortunately, we could not do it without the permission from the department store. So we needed to change the place to do."*

Subject 36: *"I could develop my problem-solving skills. When some of my group members didn't show up in the meeting, but we needed to make a decision for a project, I decided to discuss only with the member who showed up. Then we made a decision by ourselves and informed the rest later."*

From the above excerpts, they showed that the students were able to develop their problem-solving skills during the process of the project. Whenever they encountered with problems, they needed to immediately find the best solutions to solve them. In sum, the group project assignment could help the students cultivate various work management skills such as planning, organizing and problem-solving skills. These skills are vital for the students because they are foundation skills needed for their future career.

- **Leadership Skills**

Leadership skills refer to ability that a person needs in order to successfully motivate and direct other people. These skills include ability to help other people improve their ability or to guide others to accomplish their goals (MTD training, 2010). In the current study, it was found that each group leader as well as some capable students had chance to enhance their leadership skills as shown in the following responses.

Subject 29 *“I could improve my leadership skills because I was a group leader. Therefore, I needed to manage the team. For example, my teammates usually came to the meetings very late, so I had to change the meeting time to be earlier.”*

Subject 25 *“I tried to encourage my group members to share their opinions by keeping asking them. Then, we gradually adjusted ourselves.”*

The above responses revealed that the more capable students not only guided their teammates to perform tasks, but also helped and encouraged them to actively participate in the group activities.

- **Self-confidence**

According to the Oxford English Dictionary, self-confidence refers to a feeling of trust in one’s abilities, qualities, and judgment. From the data analysis, it was discovered that the participants gained more confidence in speaking English as a result

of the engagement in the PBL lessons. Some of the participants, such as subject 26 and subject 31, indicated that they tried to boost their confidence by practicing their speaking skill either with their friends or by themselves, whereas some of them had more opportunities to develop their speaking skills because of the assigned task. For example, subject 41 and one of his friends were assigned to be master of ceremonies in the short video presenting about a famous village in Nakhon Ratchasima province (Dan Kwain). Therefore, both of them seemed to have more opportunities than other group members to practice their speaking skills. Below are some of the participants' comments.

Subject 26: *"I developed my confidence in speaking English by practicing with my friends. And then, I asked my friends to monitor my progress."*

Subject 31: *"My confidence increased...In order to reduce my anxiety which might be an obstacle for doing the project, I practiced my speaking as well as my gesture."*

Subject 41: *"I was assigned to be a master of ceremony in the video project and I accepted to do it. I had more chances to speak English and this made me have more confidence."*

The above participants' responses pointed out that the PBL lessons facilitated them to improve their confidence in speaking English because of the extensive opportunities to practice and use it. This skill is considered an important skill which provides positive effects for language learners. Many participants accepted that when they have confidence, they will feel more comfortable to use English language and can perform the tasks better.

- **Creativity**

In order to make the final product interesting and useful for the audiences, the students were encouraged to use their imagination to create the final product. It was found that some of the participants tried to improve their creativity by watching from

the various video being available on the Internet as can be seen from one of the participants' comments below.

Subject 41: *“I improved my creativity by learning from other people’s ideas. I watched from the videos provided on the YouTube Website and then I discussed about those ideas as well as my own idea with the group members. Finally, we had got our own ideas to produce the video.”*

It can be seen that the PBL lessons provided positive effects not only on the students' English language skills, but also other important skills that useful for their future education and career. In the current study, the six positive effects including teamwork skills, technology skills, management skills, leadership skills, self-confidence, and creativity were enhanced through the involvement in the project work.

In sum, it can be concluded that most of the participants had positive attitudes towards the PBL approach. Overall, the participants were satisfied with the activities and the procedure of PBL lessons although some adjustments might be needed. Moreover, they perceived that not only their English language ability was improved, but also other necessary skills and ability were sharpened. However, to complete the project, the participants had to confront various problems along the way. Those problems will be revealed and discussed in the next section.

4.2.2 The Problems that the Participants Faced and the Solutions They Employed during the Project

Whereas the project work provided the participants enormous benefits as discussed earlier, challenges existed. The results of the content analysis revealed five major problems that the participants encountered as follows: (1) difficulties of time management; (2) insufficient knowledge of English language; (3) lack of original ideas;

and (4) disagreements among group members. The details of each category are presented below.

▪ **Difficulties of Time Management**

It is important to note that the participants in the current study were forty-seven first-year students from different institutes, who took English I course in the second term of year 2013. Besides English I course, the participants took the other five courses in this term. Thus, all of them had quite tight schedules. Moreover, since the participants took different courses conducted at different time, they had different free time. Therefore, it was rather difficult for the participants to arrange a group meeting outside the classroom. This problem was the most frequently reported in both the student diaries and the semi-structured interviews. The participants' responses are as follows:

Subject 24: *“Some of our group members could not participate in the group meeting because they were busy at that time. Therefore, our group was unable to share job responsibility to everyone fairly. Moreover, we could not know the opinions of the absentees towards the group plan.”*

Subject 29: *“Every member took many subjects and learned at different time, so it was difficult to find the same available time for the meetings.”*

However, the participants had tried their best to deal with this problem. The first solution found from their diaries was that the participants communicated with their team members through the use of email and social media such as “Facebook” as found in the diaries of subject 29 and subject 33 below.

Subject 29: *“We communicated through social network like Facebook because it was convenience and quick for communication.”*

Subject 33: *“I discussed with my group members through Facebook.”*

Another solution was that the participants tried their best to arrange group meeting, even though it was just a short period of time. For example, one group arranged short meeting immediately after the English I class. It was because every

group members needed to participate in the class as appeared in the extract of subject 24 below. While, some groups might set the group meetings on the weekend because there were no class and every member was free as can be seen from the response of subject 38 below.

Subject 24: *“We arranged short meetings right after finishing the English I class because all members needed to come to the class. Then, we could discuss and share jobs.”*

Subject 38: *“We tried to find the time that everyone in the group was free and convenience such as on the weekend.”*

In sum, although the problem in finding time for a group meeting was most frequently reported by the participants, they were able to effectively solve it by various ways. The participants not only made a good use of the Internet or social media to share information and discussion, but also had an attempt to find time for a face-to-face meeting, even in a short period of time or during holidays.

- **Insufficient Knowledge of English**

Throughout the steps of the PBL lessons, it was found that the participants encountered the problems in using English language in almost every step as they mentioned in both the student diaries and semi-structured interviews. However, the step that the participants encountered the difficulties in using English language the most was the step of script writing (from step 4 to step 5). Many of the students agreed that their problem was insufficient knowledge of English. For instance, subject 24 accepted that she had problems with sentence construction and grammar usage, while subject 39 and 43 had a problem with vocabulary. Some of the participants' comments are as follows:

Subject 24: *“I had a problem with sentence construction and grammar usage.”*

Subject 35: *“I was not good at English. Therefore, I was unable to help my friends to create the video script. Most of the time, I just followed my friends' opinions.”*

Subject 39: *“I had a problem when I wrote the script. I didn’t know much about vocabulary. English is not my mother language.”*

Subject 43: *“I had problems with translation. Most of vocabulary was difficult. I couldn’t remember.”*

To alleviate these problems, the results revealed that the participants tried to develop their English ability by self-learning and practicing English from the Internet. Additionally, the teacher and their friends played important roles in facilitating them to handle with these difficulties. However, the methods that the participants employed to improve their ability in terms of English language had already been discussed previously (4.1.2 *Qualitative Data*).

- **Lack of Ideas**

Another reported problem was that many of the team members were unable to generate ideas and perspectives during the group discussion, especially during the step 2 and 3 which were considered important stages. That is, step 2 and 3 were the process of selecting the topic and planning the project, which indicated the direction of the entire project. Therefore, they normally required ideas and opinions from every member. It was found that the participants looked uncomfortable to express idea and feeling in front of the members who they had just known as can be seen from the following statements:

Subject 25: *“We talked very little during the meeting. Only a few members shared ideas and opinions.”*

Subject 27: *“The members had no confidence to express their opinions.”*

Subject 36: *“In the first period of working, each member was shy and had no confidence to share opinions because we were not familiar with one another.”*

Nevertheless, the method that the participants used to resolve this problem was to encourage their friends to participate more in group discussion. The below

statements were evidence showing the more confident students tried to persuade the less confident members to propose their ideas and give some opinions.

Subject 27: *“I tried to talk more with my group members in order to build their confidence so that they were able to provide their opinions.”*

Subject 36: *“I solved the problem by proposing my own the ideas to other members first. Later, all members were able to discuss about it.”*

Although most of the participants were passive and lack of participation, it was found that the encouragement from more capable members could help the less confident members reduce their shyness and boost their confidence. As a result, the participants gradually adjusted themselves and participated more in the following meetings.

▪ Disagreements among Members

The last problem that was reported was disagreements or little arguments among group members. Although ideas and opinions were needed from every member, sometimes different ideas could lead to conflict among members. Below are some of the participants' comments:

Subject 11: *“Our ideas were so different that I didn't know if we could finish the project.”*

Subject 44: *“The problem was about the different ideas of group members.”*

However, the participants dealt with this problem by brainstorming among group members. In other words, they discussed all ideas before considering some of them more carefully. After that, they needed to decide on the best way to achieve their goal as can be seen from the following extracts.

Subject 36: *“When we had different ideas, we helped one another analyze and make a conclusion.”*

Subject 44: *“We brought various ideas of everyone in team to discuss. Then, we combined them together. Finally, we had got the best idea.”*

To summarize, the participants had positive attitude towards the PBL lessons because the activities in PBL provided challenging tasks for them to investigate their topic of interest, develop plan, collaborate with their team members and solve unexpected problems. Furthermore, the results ensured that the tasks in the PBL lessons provided opportunities for the participants to sharpen their working skills such as teamwork, technology, and management as well as to improve their self-confidence and creativity.

4.3 Answer to Research Question 3

What are the teacher's opinions on the implementation of the PBL approach in teaching English and problems while using PBL approach?

To investigate the opinions of the teacher on the PBL implementation, the teacher's diary was employed as a qualitative research instrument. During the ten-step of the PBL lessons, the researcher, as a teacher and project monitor had kept a weekly record about tasks and activities as well as feelings about the PBL activities and procedure in the teacher's diary. Also, the problems encountered and the solutions employed were documented. In the following section, the teacher's opinions found from the diary are discussed.

4.3.1 The Teacher's Opinions about Teaching English through the Implementation of the PBL Approach

From the analysis of data, it was discovered that, overall, the teacher was satisfied with the PBL implementation although many challenges arose. There were four primary reasons leading to the teacher's satisfaction. Firstly, the PBL approach allowed the teacher to work with a small group of students (i.e. 6-7 students per group).

Consequently, it dramatically increased opportunities for the students to talk as well as to work closely with the teacher. The extracts below were found from the teacher's diary.

"I liked to have a small group discussion because I had more chances to talk to the students individually and could understand each student's problems. They looked more comfortable to talk to me during a small group discussion."

"For some groups that had problems about creating a work plan, I provided them some guiding questions in order to generate their ideas for writing a plan. For example, the questions asking what, where, when, why and how are you going to do with the project."

"Some students asked me to suggest the ways to search for particular information. For example, one student asked me how to find video examples of English projects from the Internet, while another student wanted to know how to use keywords to find information from the Internet."

From the above extracts, they showed that the participants were able to consult with the teacher in specific points; for instance, the ways to plan the project and the methods to search for information from the Internet. To simply put it, a small group work provided the students opportunities to discuss with their teacher on a small particular topic that they might not have a chance to do in the regular classroom.

Secondly, it was discovered that the teacher was quite satisfied with the progress of the participants; especially, in the latter stages compared to the former stages. The extracts in Figure 4.3 were evident that after the students had obtained some guidance from the teacher in the beginning stages, the students seemed to have more understanding about their roles in PBL approach. In addition, they were able to manage their work by themselves as shown in the teacher's comments in step 7.

Extracts from the Teacher's diary:

In step 3:

"I was satisfied with the plan of some groups since they could do quite clear. While, some groups couldn't show me their plan, so I was a little bit unhappy."

In step 4:

"I was disappointed with some groups' performance because they didn't find any information about their project. They didn't bring anything with them for the group discussion."

In step 6:

"I was pleased with the overall progress of every group in this step. All groups seemed to understand their work more than in the former processes. All groups submitted their scripts to me through email."

In step 7:

"I was quite satisfied with the outcomes of all groups. Until now, everything followed my plan although a few students didn't participate much in doing the project. It seemed that most of the students understand their roles. I didn't give much guidance like in the beginning stages. I just helped them correct some small mistakes in their writing."

Figure 4.3: A comparison of the teacher's opinions on the progress of the participants during step 3, 4, 6, and 7

Thirdly, the teacher had noticed that the ten-step of the PBL lessons, which were planned in advance, could facilitate the participants to work on the project in step-by-step manner. Most of the groups were able to follow the plan and present their progress, even though they needed to work very hard in some stages like a production stage. This made the teacher feel satisfied as found in the extracts of the last teacher's diary below.

"Overall, I was happy with the progress and the outcomes of every group. All groups were able to follow the procedure of the PBL lessons."

Finally, it was discovered that the teacher was happy and pleased because the participants were so delighted with the PBL lessons; particularly, during the step of making a video as can be seen in the following statement.

“Although in the production step I was unable to join and coach all of the groups, I had observed some of them. I could feel that they were fun and happy. They usually smiled and laughed during this stage.”

In conclusion, the teacher’s attitudes towards the implementation of PBL approach were positive because of the students’ achievements in terms of language skills. However, implementing the PBL lessons was considered a challenging task for teachers. It was because the teacher had to face a number of problems along the way. In the next section, all of the problems confronted by the teacher are revealed.

4.3.2 The Problems that the Teacher Encountered and the Solutions Used

As mentioned earlier in chapter 2 (2.2.6 *Challenges in Implementing PBL*), PBL practitioners from every part of the world had expressed some concerns about PBL implementation. However, for the present study, four major challenges from the teacher’s point of views were addressed as follows: (1) heavy workload for teachers; (2) the students’ reluctance to speaking English; (3) misuse of technology; and (4) lack of interest.

- **Heavy Workload for Teachers**

The first challenge was that the PBL approach generated more work for the teacher when compared to the regular classroom instruction. As for the PBL lessons, the teacher needed to supervise various groups of the students who worked on different topics at different time and paces. Hence, the teacher needed to spend more time to supervise each group, instead of teaching once for the whole class of students as can be seen from the extract below.

“I had spent pretty much time to discuss with each group. I used one hour per group and per week, so I needed to spend seven extra hours a week. In addition, when I was at home, I sometimes communicated with the students through email.”

To handle with this problem, the teacher had arranged a clear timeline and deadline as well as mutually set the regular date and time for the weekly meetings with the students as shown in the below extracts.

“I provided every group with the project timeline so that all of us could have a rough idea about how to manage our time for the project.”

“The students and I considered and set a fixed date and time for the weekly meetings together so that every member could manage their time. For example, group 5 decided to have a meeting on Tuesday from 4.30 pm to 5.30 pm, while group 4 set on the same day from 5.30 pm to 6.30 pm.”

The above extracts revealed that besides providing the participants a project timeline, the teacher also gave them a chance to set the meeting date and time at their convenience. This solution was beneficial for both the teacher and the students since both of them were able to manage their time more easily and effectively.

In addition to the challenge about extra work hours described previously, another challenge was related to the fixed contents of the English I course that every group needed to integrate into the project. In order to provide the maximum benefits for the students, who were taking the English I course, the teacher had to work a little bit more to make sure that the fixed contents from the course were incorporated into the project. In other words, whenever it was found that the students did not integrate the contents in English I into their project, the teacher would request them to revise their work as well as provide some guidelines. The teacher’s response below was found in the teacher’s diary.

“Some groups didn’t try to apply the contents they had learned in class to their project, so I suggested them to revise the work. Also, I showed them some examples of how to integrate them into their work in order to generate their ideas about it. Although

it took time, it could help the students understand more on the topics they had learned in class.”

Even though the above solutions might take longer time to accomplish each task, it was worthwhile because the participants get more chances to use what they had learned in class in real situations.

▪ **The Students’ Reluctance to Speaking English**

Another major barrier was about the reluctance of the participants to speak English. Ideally, in the PBL approach, the students are expected to listen, speak, read, and write with the target language most of the time. However, it was discovered that a number of participants lacked confidence in speaking English during the group discussion. Subsequently, they either switched to speak in Thai or kept silence. The teacher repeatedly mentioned about this problem in the diary as follows:

“When I asked the students some questions in English, some of them didn’t reply to me. They just smiled.”

“Some students tried to discuss with the members in English, but some seemed very shy to speak English.”

To encourage the participants to discuss in English, the teacher tried to speak English with them as much as possible. Moreover, the teacher gave the students a safe environment to try out their idea before sharing with the group. That is, in order to make the students felt more relaxed and comfortable, the teacher discussed with them personally about their ideas before sharing them to the whole group as indicated in the extract below

“I tried to talk to the students as much as possible. I always used easy words and spoke quite slowly in order to make sure that they could understand what I said. In addition, I sometimes talked to shy or low confident students and tried to get their ideas about the work before sharing their ideas to the other members”

Although the solutions mentioned above might not be to change a low confident student to be a high confident one, at least they could help them improve it.

▪ **Misuse of Technology**

Whereas technology has provided a lot of advantages, it also has drawbacks. One of the technological drawbacks was found in the steps of the script writing. The finding revealed that a number of the participants made a few attempts to construct the video script on their own. Instead, they used “Google Translate”, a free translation program provided on the Internet, to do the job. This problem was mentioned in the teacher’s diary as shown below.

“I had noticed that many of the students used Google Translate to prepare their video script, instead of constructing each sentence themselves. I found a lot of mistakes in their work. And when I asked them if they had used Google Translate, they admitted that they had used it because it was faster.”

However, the teacher handled this problem by asking the students to rewrite their script by themselves without using a translation program. Furthermore, to facilitate the students to write script, the teacher’s explanations as well as some examples were provided to them. The methods that the teacher employed to overcome this obstacle were indicated in the responses below.

“I asked the students to rewrite the scripts when I found that they prepared them by using Google Translate.”

“At the beginning, I and the students helped one another to construct the sentences. I helped them at the beginning because I wanted to make them have some ideas about writing first. Then, they could continue their writing by themselves. However, after they had tried to write by themselves, I revised it and gave them comments.”

From the above discussion, it can be concluded that technology is a very useful tool for students only if they used it properly; otherwise, it might provide a negative effect as discussed above.

- **Lack of Interest**

The last problem found was about the participants lacked interest or motivation in doing the project. While most of the participants showed their enthusiasm to engage in the project work, a few of them did not seem concerned about it or excited about being part of a team. These students rarely attended the group meetings. The teacher also pointed out this problem in the teacher's diary.

“In the meetings of some groups (e.g. group 4 and group 6), some members rarely came to join. The members who appeared at the meetings kept informing me that they had tried many times to contact them but they failed. Moreover, sometimes they agreed to join the meetings but finally they didn't come.”

However, the findings revealed that the teacher had tried to convince and explain to them about an importance of teamwork as well as an impact on the whole group. Furthermore, some responsibilities were shared to them in order to allow them to be a part of the team. These solutions were quite effective since those students seemed to understand and showed some improvement as indicated below.

“After I had talked to the students who rarely joined the group meetings, they seemed to improve and pay more attention to their work. These students were assigned tasks in the latter process. For example, one student who seldom attended the meeting was assigned to be responsible for the process of cutting and editing the video. During the editing process, he came and consulted me several times about his work.”

The above response revealed that the explanation was necessary to make the students have better understanding about their roles and responsibility. Although there were only a few students who lacked interest in doing the project, it was necessary to resolve it. It was because whenever these students gain more understanding about their roles and duties as team players, it will benefit them in the future. In sum, although some challenges arose during the implementation of PBL, it is worth implementing since it can provide the students with enormous benefits as discussed earlier in this chapter.

4.4 Summary

The findings from the present study indicated that the PBL lessons helped improve the overall language skills of first-year SUT students in terms of language ability and learning process. However, although there were some problems occurred during the PBL implementation, both the students and the teacher had positive feelings towards it. In the next chapter, the discussion of the research findings including the summary of the main findings will be presented. Additionally, the implications, limitations and some recommendations for further research will be revealed.



CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

This chapter reviews and interprets the results of the study presented in the previous chapters. It includes four parts. The first part provides a brief summary of the study findings. The second part discusses the important issues found in the study in relation to theories and relevant background literature. The third part describes the implications of the findings, and the final part presents recommendations for further research.

5.1 Summary of the Results of the Study

Research Question 1 was to examine the effects of the PBL lessons on the overall language skills of first-year students at SUT in terms of language ability and learning process. The results of the quantitative data obtaining from the written and speaking tests revealed that the overall English language ability of the participants including listening, speaking, vocabulary, grammar, and reading, significantly improved after participating in the PBL lessons. As for the qualitative data gained from the student diaries, the portfolios, and the semi-structured interviews, it was found that the participants perceived their English language skills had improved after participating in the PBL approach. This finding was consistent with the findings from the quantitative analysis. Additionally, it was found that the participants had learned and developed

their skills through a variety of activities in the PBL lessons which included: (1) use of internet; (2) peer interaction; (3) self-study from the course book; (4) self-practice; (5) teacher consultation; and (6) interaction with foreigners.

Research Question 2 was to further explore the students' opinions on the implementation of the PBL approach in learning English and the problems encountered while engaging in it. The results indicated that most of the participants were satisfied with the activities of the PBL lessons. Based on the student diaries and the semi-structured interviews, many of the participants stated that working on the project allowed them to develop their interpersonal and teamwork skills. Apart from getting a chance to make new friends from different faculties, the students were able to work together harmoniously. They also found the tasks and activities provided in the PBL lessons were challenging and exciting. Furthermore, the lessons yielded them more opportunities to learn and improve their English language ability. Apart from the English language skills, they felt that their skills, such as teamwork and problem-solving skills were developed.

With regard to the PBL procedure, most of the participants felt that it was appropriate in terms of steps, duration, and the number of students in each group. In addition, among all of the steps, the step of production was reported to be the most enjoyable and exciting, although the participants also found it the most challenging for them. Apart from the language skills, the findings also revealed other positive effects of the PBL lessons on the students' skills and abilities including teamwork, technology, leadership, management, self-confidence, and creativity.

Whereas the PBL lessons provided a lot of benefits to the students, its challenges included difficulties of time management, insufficient knowledge of English

language, lack of original ideas and disagreements among group members were reported by the participants.

Research Question 3 was to investigate the teacher's opinions on the implementation of the PBL approach in teaching English and the problems encountered while using the PBL approach. According to the teacher's diary, the findings revealed that the teacher found PBL was a useful and satisfying approach because of the following reasons. First, it allowed her to work closely with a small group of students. Second, the students' progress and improvement could be observed in every step. Third, the designed procedure could facilitate the students to accomplish their project. Finally, the teacher perceived that most of the students enjoyed and were happy with the project. However, the teacher's difficulties involved a heavy workload, students' reluctance to speak English, misuse of technology, and students' lack of interest were also mentioned in the diary as challenges of the PBL implementation.

5.2 Discussions of Findings

According to the initial statements of the problems of this study, one obvious weakness of most Thai students is inadequate English skills. The main reasons include ineffective English teaching methods in Thailand, limited opportunities to use English in a natural context, and unqualified language teachers in Thailand. The PBL lessons, then, were developed in order to alleviate these problems as well as to enhance the overall language skills of the students in terms of language ability and the learning process. However, after implementing the PBL lessons, two issues, including (1) the effects of the PBL lessons on the participants' improvement and (2) the design of the PBL lessons are particularly important and will be discussed below:

5.2.1 Effects of the PBL Lessons on the Participants' Language

Improvement

From the results of the study, the participants' improvement could be viewed from two aspects: (1) English language skills including listening, speaking, reading, writing, grammar and vocabulary and (2) learning and working skills.

5.2.1.1 Improvement in English Language Skills

As mentioned earlier in the previous chapter, the results of the comparison between the pretest and posttest scores showed that the overall language skills of the participants including listening, speaking, reading, writing, grammar and vocabulary increased with statistical significance after engaging in the project work.

The first reason for the increase in the participants' posttest scores is a result of learner autonomy. In the PBL approach the students were required to be autonomous learners, who take responsibility for their own learning process (Benson, 2001; Stoller, 2006). In this study, the students attempted to take control of their own learning in several ways in order to improve their English. It was discovered that the students actively learned by themselves through the use of Internet. They employed it as a tool to search for information and learn about the English language, for example, the language rules and the grammar. Also, they practiced their language skills, like listening and speaking, through the computer programs available on the Internet. Additionally, due to the project criteria requiring the students to integrate the content of the English I course into the project, the students needed to study the course book in depth in particular points such as vocabulary, speaking, grammar, and reading, so that they could use them properly in their project.

Thus, it was evident that learner autonomy played a crucial role in the English improvement of the students. These findings support the findings of Gu (2002), who reported that the Web-based project learning involving 20 Chinese students who worked with 28 American students helped encourage them to take responsibility for their own learning. As a result, their performance in writing and communication were greatly improved. Additionally, Sudrung (2004) believed that the autonomous learning setting of the PBL approach was one of the factors helping promote the four major English language skills (i.e. listening, speaking, reading, and writing) of upper secondary school students in Thailand.

The second reason concerns the assistance provided by teachers. In this study, it was found that the students were able to deal with their problems under adequate guidance in various cases. The results from the student diaries, the teacher's diary, and the semi-structured interviews consistently indicated that the students in PBL needed support from their teacher in almost every step. For instance, in the beginning stages the students needed detailed directions on how to develop the project. Meanwhile, in the writing stages they needed comments and suggestions for their writing. The results of this study revealed that after the students received some advice and guidance from the teacher in the former stages of writing, there was a noticeable improvement in writing, grammar, and vocabulary particularly in the latter stages. Similar findings were reported in the study of Simpson (2011) which indicated that teacher feedback on different language skills such as grammar or pronunciation not only enhanced student achievement in English language skills, but also maintained their enthusiasm for learning.

The last reason is about authentic use of language. The PBL approach functions as a bridge between learning English in classroom and using it in real-life situations outside class (Fried-Booth, 2002). It helps place the students in situations that require authentic use of language (Moss and Van Duzer, 1998). As found from this study, each group of students had an opportunity to apply the contents learned in the English I course for use in a real-world environment. For example, one group decided to interview their teammates while another group interviewed foreigners. These two groups applied the forms of the present perfect tense that they had learned in class to create the interview questions. Another group produced the video sharing their embarrassing experiences by integrating past simple tense into their script. These revealed that the PBL approach could enable the students to connect English in the classroom to real-life situations resulting in enhancement of English language skills. These findings correspond to the recent findings of Ke (2010), who employed the PBL approach to teach non-English major students (i.e. Geography and Tourism Departments). In order to make the language skills transferable to work in geography and tourism management, he designed a project-based college English course that combined oral English with practical experience related to the students' majors. The results revealed that this course gave the students opportunities to use English in authentic situations, unlike in the past when they usually spent most of their time only on textbooks.

From the above mentioned reasons, it can be seen that the characteristics of PBL approach enabled the improvement of the students' overall language skills. In this study, not only the four major language skills (i.e. listening, speaking, reading, and writing) were found to have developed, but also grammar and vocabulary skills were

developed resulting from the design of the PBL lessons which will be discussed in the next section (5.2.2 *Design of the PBL lessons*). However, it was discovered that not all the project aims enhanced all of the language skills. For instance, Siritararath (2007) decided not to include grammar lessons in the project work instruction because her study focused on promoting the students' communicative competence, not the correctness of forms or grammar features. Moreover, her participants were assumed to have enough knowledge of grammar since they had already taken three English foundation courses. Therefore, it was found that a number of the participants in this study were unable to detect their improvement in grammar after engaging in the PBL instruction as reported in their learner logs.

5.2.1.2 Improvement on Learning and Working Skills

In addition to enhancement of language skills, the PBL approach has been advocated as an effective means for promoting learning and working skills (Stoller, 2006). As reported in chapter 4, the PBL lessons not only helped foster the overall language skills of the students, but also provided other positive effects on their learning and work process.

One plausible explanation is that the PBL approach creates conditions necessary for self-directed learning such as real choices, opportunities to take on management roles, and responsibility for their own learning (Stoller, 2006). In this study, the PBL lessons engaged the students in a variety of activities, which included selecting their own topic, creating a plan, conducting independent work both individually and in groups, selecting their own source of materials, and presenting the final product. These activities mainly required the students to take control of their own learning while the teacher acted as a facilitator who supported them. It was clearly seen

from the findings that the students took the responsibility for their own learning by employing different methods. For example, they sought for information and learned by themselves through the use of the Internet as well as carefully studying the contents in the course book. In addition, they sometimes tried to improve their work by consulting the teacher and friends and this enhanced their skills through practice. It can be concluded that the PBL lessons not only helped enhance self-directed learning skills, but that it also had positive effects on other skills, such as technology and creative thinking, as reported in the previous chapter. These findings were basically in line with Inthanu's study (2011) which found that a video project enabled the first-year students at The Civil Aviation Training Center (CATC) to improve their self-directed learning skills. It was explained by the researcher that despite the new knowledge acquired, like the methods of using an editing program which were not included in the instruction, the students were able to acquire that knowledge on their own.

Another reason concerns the collaborative working environment of the PBL lessons. According to the *Zone of Proximal Development (ZPD)* concept in social constructivism, Vygotsky (1978) describes how when learners encounter a task that is more complex than they can handle on their own, appropriate assistance given by a more knowledgeable person will help them achieve the task. This study confirmed the concept of ZPD that the ability of the less competent students could be developed by help from more skillful peers. As found from the results of this study, it was found that collaborative activities in PBL enabled the students to support and encourage one another among teams to accomplish shared goals. For instance, the students tried to improve and gain more confidence in their speaking and pronunciation by rehearsing their dialogue with their teammates. Consequently, the students' anxiety was reduced

and they became more confident. These findings were in congruence with those reported by Simpson (2011) in that her students were able to improve not only their language, but also learning skills through collaborative learning environment in the PBL approach. She explained that peer feedback played an important role in the students' improvement.

The last reason is that the multiple steps in project work provide several opportunities to recycle and practice key skills such as teamwork, technology, leadership, management, and problem-solving skills throughout the process of project work as reported in the previous chapter. These skills are absolutely essential for the rapidly changing challenges of life, learning and work in the modern world. Similar results were found by Nikitina (2011) who revealed that a project involving the students in the production of a short movie could enhance their social aptitudes and life skills. For instance, some students mentioned that they had learned how to become an efficient team member while others reported that they had learned how to manage time and deal with problems. In addition, Musa et al. (2011) discovered that PBL facilitated the growth of learners in acquiring employability skills including the ability to work well with others, manage interpersonal conflicts, make good decisions, and deal with complex problems.

Whereas many research studies reported tremendous benefits gained from the implementation of the PBL approach, the successful use of it crucially depends on the design or framework. In the next section, the various components which worked together to promote the overall language skills of the students are explained.

5.2.2 Design of the PBL Lessons

As suggested by Stoller (2002), project work can take on a variety of configurations. The most suitable design for a given context depends on many factors, such as curricular objectives, course expectations, students' proficiency levels, student interests, time constraints, and availability of materials. In this study, the design of the PBL lessons comprised a variety of components. Five main components including content and procedure, role of technology, role of mixed-ability grouping, role of teacher, and a type of a final product are discussed below in detail.

5.2.2.1 Content and Procedure

It is important to note that the content and procedure used in this study were purposefully designed for incorporation into the English I course as well as supporting it to achieve the course goals. Thus, in order to strengthen English language learning, the project should create an opportunity for the students to apply the language functions learned in the classroom in new authentic situations outside the classroom. This idea is consistent with the learning concept of *Bloom's Taxonomy* at *application* level in the cognitive domain, which claims that learners will have a better understanding if they have the opportunity to apply the rules or concepts of what they have learned in new and concrete situations. In other words, learning outcomes in this area require a higher level of understanding than those at the *comprehension* level. In this study, one of the requirements was to integrate some parts of the content in the English I into the project. It was found that this method not only provided opportunities for the students to use their knowledge in new situations, but also motivated them to study it in detail because they wanted to use it correctly and appropriately in the project.

As for the procedure, PBL requires multiple stages of development. It may vary from a few stages to many stages depending on the design of each practitioner. Some are highly structured projects, which are determined, specified, and organized by the teacher in terms of topic, materials, methodology and presentation, while some are unstructured projects, which are largely determined by the students themselves. For the current study, the project was semi-structured, which was defined and organized by both the teacher and the students. Initially, the teacher proposed a ten-step sequence of activities along with the timeline. This helped the students to have a rough idea about the project. After that, each group selected the topic and planned the project by themselves.

The results of the research revealed that most of the students were satisfied with this procedure because it facilitated their work on the project step by step. However, some students recommended extending the stage of production to be longer than two weeks because they faced some problems and needed more time to resolve them. According to this comment, it is evident that some students might misunderstand the purpose of this procedure. It was, in fact, flexible and it could be adjusted by the students themselves. Therefore, it is recommended that all the project conditions should be carefully explained at an early stage.

Roza (2011) investigated whether project work incorporated at the end of an instructional unit in Algerian secondary school textbooks was the means to acquire or re-invest English language. Her study is similar to the current study in that the students were required to conduct a project in which they built on what they had already learned. The project work was integrated as a tool for reinvesting their knowledge obtained from classroom and textbooks. The results of her study indicated that project

work not only encouraged learning by doing, but also emphasized both the process and the product.

However, a difference was found in that the project procedure in Roza's study was more structured than that of the present study. This is because the topic, materials, methodology and presentation were mostly determined and organized by the textbook designers. Roza (2011) found that the teacher and the students preferred the structured projects rather than the semi-structured and unstructured types in terms of the degree of responsibility for taking decisions on the nature and sequencing of project-related activities. However, she recommended that some projects may need to be semi-structured or unstructured so that the students will have the opportunity to design their own project outcomes as well as to make their own decisions on the methods and materials they employ. In this way, the students would be able to develop a sense of ownership and pride in their engagement with the project.

5.2.2.2 Role of Technology

Technology plays a powerful role in helping students and teachers implement projects. Its benefits include access to information, enhancing students' interest, aiding production, active representation, managing complexity, and so on (Blumenfeld, Soloway, Marx, Krajcik, Guzdial, & Palincsar, 1991). Due to these great advantages of technology, a number of teachers gradually integrate it to improve their courses and lessons. As for the present study, the results confirmed that technology provided a lot of benefits for both the teacher and the students. Firstly, it provided opportunity to access rich resources of authentic materials via the Internet, CD-ROM or DVD. That is, during the project both the teacher and students searched the information and studied about English through these rich resources. Secondly, it

enabled them to communication through email or social media like *Facebook*. They could consult and discuss together whenever they wanted via these applications. Lastly, it offered a wide range of multimedia resources which can combine text, images, audio and video in interesting ways for presentation. As can be seen from the students' final products, every group produced their video by combining a variety of resources such as short video clips, audio, and animation. Furthermore, it also found that when technology is effectively integrated into subject areas, teachers are able to adjust their roles to be advisers, content experts, or coaches.

Nevertheless, while the use of technology provided enormous advantages, some disadvantages were found in this study. For example, some of the students used a translation program named *Google Translate* to produce a video script without thoroughly reviewing it, consequently, a lot of mistakes were found in their writing. To solve this problem, the teacher should have explained to the students about the limitations of *the Google Translate* program. Since it is a machine, it is unable to understand or accurately convey all of the ideas that students may want to express.

5.2.2.3 Role of Mixed Ability Grouping

According to Davis (1999), collaborative groups of between 4 to 10 students with different abilities, interests, and styles seem to function successfully. She further explained that, although allowing students to select their own group members might work well in small classes, it runs the risk of isolating some students or creating cliques within the class. In this study, mixed-ability grouping was employed as mentioned earlier in chapter 3 (*3.4.1 Project-Based Learning (PBL) Lessons*). In mixed ability groups there are some students that are more proficient than others. The main aim of setting up mixed ability groups is to increase interaction across students with

different abilities. The results indicated that the more capable students obtained benefits through giving help to their teammates. This means that during the project the more capable students had the opportunity to develop their leadership skills and enhance their self-esteem. Moreover, they improved their cognitive skills by sharing their knowledge or instructing their less capable friends. As for the less capable students, they gained advantages by being stimulated and guided by more capable peers.

Using a different method for grouping, Simpson (2011) formed groups of students based on close relationships with one another and common interests. The main purpose was to make them feel comfortable in using the English language in front of their group members. However, although the students' groups were formed by this method, it was found that in fact each group consisted of mixed ability students. Her findings, which were consistent with the present study, indicated that the students at all levels of proficiency (i.e. high, medium and low) received great benefits from collaborative learning.

5.2.2.4 Role of Teacher

As predicted by the literature, teachers are expected to adjust their roles during the use of the PBL approach for teaching. For this study, the obvious roles of the teacher could be categorized into three major aspects. First, the teacher acted as a facilitator who engaged in negotiation as well as stimulating and monitoring group discussion. For example, the teacher needed to stimulate the students to speak English by talking to them in English during the group discussion. Second, the teacher acted as a mentor who helped them figure out how to complete their project following a model and how to explain what they wanted. Without guidelines or models, the students might struggle with their work. The findings indicated that advice and encouragement from

the teacher was needed at every step of the project. Lastly, the teacher acted as a co-learner with the students as they explore new topics. Thus, the teacher was willing to take risks to explore areas outside her expertise. During the project, it was found that the teacher needed to search for a variety of materials by herself first and then encourage the students to do the same for themselves.

Additionally, teacher personality is considered important because it plays a major role in making the students feel safe and comfortable while working. Teachers using the PBL approach should be patient, enthusiastic, understanding, caring, and available to talk. As can be seen from the results of this study, during the process of the project work the students faced various obstacles. Hence, the students might need not only guidance and suggestions, but empathy, caring, and the understanding of teachers were necessary for them. One of several examples of this occurred when some students showed a lack of interest and motivation in doing the project and rarely attended the group meetings. It was necessary for the teacher to talk to them, listen to them and understand their situation. Consequently, the teacher needed to make them understand their roles and responsibilities in being a part of a team.

However, Doherty and Eyring (2006), who studied instructor experiences with project work in the adult ESL classroom, warned PBL teachers not to interfere excessively during the working process. They further explained that the students' struggles can help them to develop their decision making and problem solving skills.

5.2.2.5 Type of Final Product

It is interesting to note that the type of the final product also plays an important part in the students' learning process. As noticed from the participants' responses in this study, it can be seen that different types of the final product created

different opportunities for the students to learn. After comparing the final products of every group, it was discovered that some of them led to relatively simple tasks and activities while others engaged the students in more complex and challenging activities. For instance, two groups of the students decided to work on interviewing projects. The first group carried out the interviews among group members asking about their experiences in playing sports whereas the other group conducted the interviews with foreigners outside the university asking about their opinions about Thailand.

After comparing the results, it was found that the latter group was engaged in the more complex tasks resulting in more opportunities for learning. Firstly, the latter group needed to plan how to go to various places to interview foreigners on a limited budget. Secondly, they needed to consider the places where they could find foreigners for the interviews. Lastly, this type of interview could be done only on one occasion because it had to be a live interview.

Apart from having to take more steps, this group encountered more obstacles. The obstacles included technical problems such as running out of a video battery and a sound system failure, permission needed in using the location for a tape-recording, and language problems such as the foreigners speaking too fast. These challenging and complex tasks positively influenced the students' learning process because they were able to develop a variety of skills at the same time. It can be concluded that the step of determining the final product is crucial. Therefore, both the teacher and the students need to carefully take it into consideration from the beginning.

5.3 Pedagogical Implications

The research findings reported earlier demonstrate that the PBL lessons had strong effects on the students' English language skills. Several implications may be made from these PBL lessons as supported by the findings.

Firstly, before starting to implement the project it is necessary for teachers to introduce the PBL approach to students in order to make them see the value of the PBL lessons. As pointed out by Beckett (2002), this approach may not be appreciated by all students at all times. In other words, some students may not feel comfortable with it for a variety of different reasons, for example, some learners may prefer to work alone or some may feel that project work is too time-consuming. Hence, the introduction step is considered to be very important because it not only helps students understand more about this approach, it also helps them see the benefits they may gain from it. These factors increase their motivation as well as leading to a more positive attitude towards PBL. In addition, some example of final products should be shown to them in order to make them have a clearer picture about the project.

Secondly, PBL is a flexible approach which can be adapted to fit in with a variety of methods and learning situations. Thus, the ten-step procedure proposed in this study can be adapted to different types of classrooms. Nevertheless, it is suggested that the teachers or course designers need to carefully consider all the factors involved, such as the course objectives, the level of the students, students' age ranges, resources, time, and so on. For instance, if teachers have limited time and are unable to have frequent meetings with the students outside the classroom, the teachers may save the last 30 minutes of a regular class period (e.g. 2-hour sessions) for the group meeting in class and each group may continue the meeting after class if there are more issues to be discussed among the group members.

Thirdly, it is recommended to assess the progress or development of students' work for every step of the PBL lessons. Thus, a combination of formative assessments, for example, checklists, rubrics, portfolios, student diaries or teacher observation are useful for obtaining prompt feedback and information which can be used for improving the teaching and learning activities in the following steps.

Fourthly, in the PBL approach, teachers need to plan well and be flexible. In other words, the PBL plans may be more flexible than the ones used for lecture-based instruction which have fixed contents to be taught. For instance, a project timeline may be included in the plan since it can help students identify what will need to be done each week. However, it can be adjusted later according to their progress.

Lastly, PBL is a dynamic approach that requires teachers, regardless of years of experience, to adjust to their new roles (Doherty and Eyring, 2006). The success of the PBL lessons greatly depends on sufficient support, guidance and feedback from teachers. Nevertheless, it is not easy for teachers to help students overcome all the obstacles. Therefore, it is necessary for PBL teachers to be patient and calm and to be determined to succeed. In addition, they should be accessible, enthusiastic and caring so that students can feel at ease when sharing their concerns. These characteristics lead to better communication, understanding and ultimately better results.

5.4 Recommendations for Further Study

Further research studies on the PBL approach are needed to provide more data and confirm or disprove the findings and implications of the current study.

First, the PBL lessons proposed in this study may be adapted for use with different levels of learners such as elementary or advanced learners in order to find out if the results are similar or not.

Second, further studies may incorporate the PBL approach with other approaches. For instance, it may be integrated with the content-based approach in which the language activities are specific to the subject matter being taught, like a business English course or an ESP course for Engineering.

Third, longitudinal studies may be conducted to examine whether the students' improvements achieved in a single term continue to improve over an extended period of time. So research studies should try to investigate the effects of the PBL lessons over several terms.

Finally, further studies may engage students from different places, universities, or countries to work together in a joint project through the use of technology and the internet, using e-mail, chat programs, or web-based conferencing systems. For example, future research can be conducted on the collaboration of students from different AEC member countries on a particular international project. This kind of project would be especially useful for the students who have limited opportunities of exposure to authentic target language use.

5.5 Summary

This chapter summarizes the results of the present study and discusses some important findings which have arisen as well as to refer to previous research studies and theories which are relevant to those findings. In addition, the pedagogical implications and some recommendations for further study are also made.



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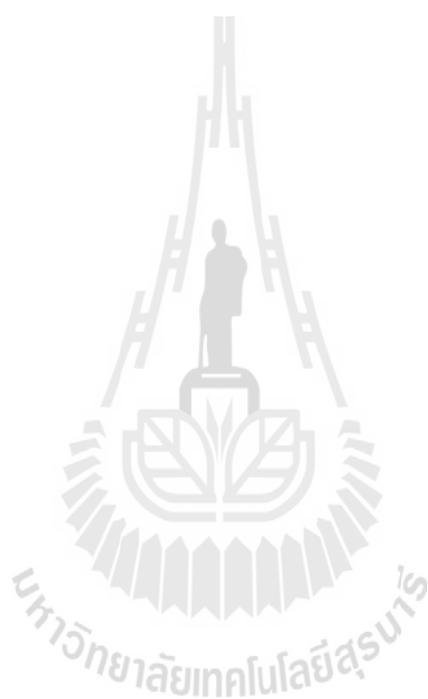
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APPENDIX A

Steps of PBL Implementation

Session	Inside class activities	Outside class activities
<p><i>Week 1</i> 1 (1 hr.)</p>	<ul style="list-style-type: none"> ▪ Class orientation Step1: T. introduces the PBL approach and the project to Ss. ▪ T. introduces PBL to Ss. ▪ T. describes the project criteria. ▪ T. shows some examples of projects. ▪ Ss. form a group. 	
<p><i>Week 1</i> 2 - 3 (2 hrs.)</p>	<ul style="list-style-type: none"> ▪ Ss. take a <u>60-item M/C pretest.</u> 	
<p><i>Week 2</i> 4 (1 hr.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. introduces unit1 (Education) to Ss. ▪ T. implements <u>lesson A (unit1)</u> focusing on: <ul style="list-style-type: none"> - <u>Vocabulary</u>: School subjects - <u>Grammar</u>: Simple present & present continuous - <u>Speaking</u>: Information exchange about school 	<p>Step2: Ss. determine the topic and the final outcome of the project.</p> <ul style="list-style-type: none"> ▪ Ss. determine the topic and the final outcome of the project by using “Our group” form (Appendix H).
<p><i>Week 2</i> 5 - 6 (2 hrs.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson B (Unit1)</u> focusing on: <ul style="list-style-type: none"> - <u>Interactions</u>: Expressing prohibition and obligation - <u>Listening</u>: Office rules - <u>Speaking</u>: List of class rules 	

Session	Inside class activities	Outside class activities
<p>Week 3</p> <p>7 (1hr.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson C (Unit1)</u> focusing on: <ul style="list-style-type: none"> - <u>Vocabulary</u>: Feeling and emotions - <u>Grammar</u>: Zero conditional - <u>Speaking</u>: Information exchange about personal behavior 	<p>Step3: Ss. and T. plan the project.</p> <ul style="list-style-type: none"> ▪ Ss. plan the methods to accomplish the project. ▪ Ss. assign a role for each member. ▪ T. helps and provides suggestion.
<p>Week 3</p> <p>8 - 9 (2 hr.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson D (Unit1)</u> focusing on: <ul style="list-style-type: none"> - <u>Reading</u>: a magazine article - <u>Listening</u>: An interview about homeschooling - <u>Writing</u>: Advantage and disadvantages of distance education - <u>Speaking</u>: Discussion about distance education 	
<p>Week 4</p> <p>10 (1 hr.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. introduces <u>unit2 (personal stories)</u> to Ss. ▪ T. implements lesson A (Unit2) focusing on: <ul style="list-style-type: none"> - <u>Vocabulary</u>: Sentence adverbs - <u>Grammar</u>: Past continuous & simple past - <u>Speaking</u>: Group story about a past event 	<p>Step4: Ss. gather information.</p> <ul style="list-style-type: none"> ▪ Ss. follow their plan and work according to their assigned role. ▪ Ss. begin to search and gather information relevant to the project. ▪ The information obtained is shown to the teacher for suggestions. ▪ Ss. are asked to submit <u>the first diary.</u>

Session	Inside class activities	Outside class activities
<p>Week 4</p> <p>11 -12 (2 hrs.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson B (Unit2)</u> focusing on: <ul style="list-style-type: none"> - <u>Interactions</u>: Announcing news; closing a conversation - <u>Listening</u>: News about other people - <u>Speaking</u>: Celebrity news 	
<p>Week 5</p> <p>13 (1 hr.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson C (Unit2)</u> focusing on: <ul style="list-style-type: none"> - <u>Vocabulary</u>: Verbs to describe reactions 	<p>Step5: Ss. submit the first draft of the project.</p> <ul style="list-style-type: none"> ▪ Each group prepares the first draft of the project and submits it to T. for comments.
<p>Week 5</p> <p>14 -15 (2 hrs.)</p>	<ul style="list-style-type: none"> - <u>Grammar</u>: Participial adjective - <u>Speaking</u>: Personal stories and anecdotes 	<ul style="list-style-type: none"> ▪ Ss. revise and prepare the second draft according to T.'s comments.
<p>Week 6</p> <p>16 (1 hr.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson D (Unit2)</u> focusing on: <ul style="list-style-type: none"> - <u>Reading</u>: Embarrassing Experience (an article) 	<p>Step6: Ss. submit the second draft of the project.</p> <ul style="list-style-type: none"> ▪ The second draft is submitted for suggestions.
<p>Week 6</p> <p>17-18 (2 hrs.)</p>	<ul style="list-style-type: none"> - <u>Writing</u>: Embarrassing moment - <u>Speaking</u>: Descriptions of embarrassing moments 	<ul style="list-style-type: none"> ▪ T. reviews the second draft. ▪ Ss. revise it and prepare the final draft.

Session	Inside class activities	Outside class activities
Week 7	Mid-term Exam Week	
Week 8 19 (1hr.)	T. prepares language needed for the project. <ul style="list-style-type: none"> ▪ T. introduces <u>unit4 (Interesting lives)</u> to Ss. ▪ T. implements <u>lesson A (unit4)</u> focusing on: <ul style="list-style-type: none"> - <u>Vocabulary</u>: Experiences - <u>Grammar</u>: Present perfect - <u>Speaking</u>: Interviews about experiences 	Step7: Ss. submit the final draft of the project. <ul style="list-style-type: none"> ▪ Ss. submit the final draft to T. for approval. ▪ Ss. are asked to submit <u>the second diary</u>.
Week 8 20 - 21 (2 hrs.)		
Week 9 22 (1hr.)	T. prepares language needed for the project. <ul style="list-style-type: none"> ▪ T. implements <u>lesson B (Unit4)</u> focusing on: <ul style="list-style-type: none"> - <u>Interactions</u>: Checking and clarifying meaning - <u>Listening</u>: Unusual habits - <u>Speaking</u>: Information exchange about unusual habits 	Step8: Ss. prepare themselves and rehearse before producing the final product. <ul style="list-style-type: none"> ▪ Ss. prepare themselves for the production step. ▪ Ss. conduct a rehearsal among group members. ▪ Ss. make an appointment with the parties involved before the production.
Week 9 23 - 24 (2 hr.)	T. prepares language needed for the project. <ul style="list-style-type: none"> ▪ T. implements <u>lesson C (Unit4)</u> focusing on: <ul style="list-style-type: none"> - <u>Vocabulary</u>: Fun things to do - <u>Grammar</u>: Present perfect & simple past - <u>Speaking</u>: True and false information about life experience 	

Session	Inside class activities	Outside class activities
<p>Week 10</p> <p>25 (1 hr.)</p>	<p>T. prepares language needed for the project</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson D. (Unit4)</u> focusing on: <ul style="list-style-type: none"> - <u>Reading</u>: The Life of Astronaut - <u>Listening</u>: An interview about a grandmother - <u>Writing</u>: Interesting people, places, or things - <u>Speaking</u>: Description of an interesting person or place 	<p>Step9: Ss. produce the final product.</p> <ul style="list-style-type: none"> ▪ Each group arranges to meet and to help one another to produce the final tangible product. ▪ Ss. work on their own after receiving guidance from the teacher in the previous steps.
<p>Week10</p> <p>26 -27 (2 hrs.)</p>	<p>T. prepares language needed for the projects.</p> <ul style="list-style-type: none"> ▪ T. introduces <u>unit5 (personal stories)</u> to Ss. ▪ T. implements <u>lesson A (Unit5)</u> focusing on: <ul style="list-style-type: none"> - <u>Vocabulary</u>: Human-made wonders - <u>Grammar</u>: Comparatives - <u>Speaking</u>: Comparison of different places 	
<p>Week 11</p> <p>28 (1 hr.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson B (Unit5)</u> focusing on: <ul style="list-style-type: none"> - <u>Interactions</u>: Expressing disbelief; saying you don't know - <u>Pronunciation</u>: Intonation in tag questions - <u>Listening</u>: An interesting city - <u>Speaking</u>: Information exchange about human-made structures 	

Session	Inside class activities	Outside class activities
<p><i>Week 11</i></p> <p>29-30 (2 hrs.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson C (Unit5)</u> focusing on: <ul style="list-style-type: none"> - <u>Vocabulary</u>: Geographical features - <u>Grammar</u>: Superlatives - <u>Speaking</u>: Discussion about experiences in different places 	
<p><i>Week 12</i></p> <p>31 (1 hr.)</p>	<p>T. prepares language needed for the project.</p> <ul style="list-style-type: none"> ▪ T. implements <u>lesson D (Unit5)</u> focusing on: <ul style="list-style-type: none"> - <u>Reading</u>: “Seven Wonders of the Natural World” - <u>Listening</u>: The Great Barrier Reef - <u>Writing</u>: A natural wonder - <u>Speaking</u>: List of the most wonderful places in the country 	
<p><i>Week 12</i></p> <p>32-33 (2 hrs.)</p>	<p>Step 10: Ss. present the final product.</p> <ul style="list-style-type: none"> ▪ Ss. present their final products. ▪ The final products are assessed and evaluated by the teacher, peers, the students themselves according to the final product evaluation rubric (Appendix I). ▪ Ss. are asked to submit <u>the third diary.</u> 	
<p><i>Week 13</i></p> <p>34-36 (3 hrs.)</p>	<p>Final Exam Week</p> <ul style="list-style-type: none"> ▪ Ss. take a 60-item M/C posttest & a speaking posttest. ▪ The randomly selected students will be participated in <u>the semi-structured interviews.</u> 	

APPENDIX B

Section One: Listening (Questions 1-15)

Instructions: First read the questions. Next listen to the dialogues. Then choose the best answers. You will hear each dialogue twice.

Conversation 1 (Questions 1-3)

1. Who is Fei?
 1. Justin's teacher
 2. Justin's roommate
 3. Justin's classmate
 4. Justin's girlfriend

2. What is **NOT** a rule of the class?
 1. Students are not allowed to talk in class
 2. Students are not permitted to eat in class.
 3. Students are not supposed to drink in class.
 4. Students are required to use cell phone in class.

3. What can students do in the class?
 1. They can do homework.
 2. They can read books.
 3. They can sit anywhere they want.
 4. They can choose their speaking partners.

Conversation 2 (Questions 4-6)

4. What frightened Paul?
 1. The song from the movie
 2. The noise outside his house
 3. A strange noise from the radio
 4. His neighbor's pets

5. What kind of movie was Paul seeing?

1. Horror movie
2. Romantic movie
3. Sci-fi movie
4. Action movie

6. Why was his roommate at the window?

1. To scare people in the house.
2. To say good-bye to his friends.
3. To see the movie.
4. To get the house key.

Conversation 3 (Questions 7-9)

7. Where is a Mexican restaurant that the woman is talking about?

1. In the same area as the school
2. Close to French restaurant
3. Far from the school
4. Near the bank

8. Which statement is correct?

1. Sam has tried a Mexican restaurant once.
2. Sam thinks eating at a restaurant is cheap.
3. Sam likes to eat peanuts.
4. Sam does not often eat out.

9. When does Sam's skin get red and itchy? It gets red when_____.

1. he eats out.
2. he gets sick.
3. he eats peanuts.
4. he goes to restaurants.

Conversation 4 (Questions 10-12)

10. What can they do in the fancy restaurant?

1. They can try a variety of fruits.
2. They can try a lot of strange food.
3. They can see many kinds of frogs.
4. They can cook a lot of delicious dishes.

11. When did her brother try frog legs?
1. A couple years ago
 2. A few days ago
 3. A month ago
 4. Last year
12. How did her brother feel after eating frog legs?
1. He wants to try them again.
 2. He got a headache.
 3. He liked them.
 4. He didn't feel well.

Conversation 5 (Questions 13-15)

13. How many statues did they find?
1. over 500
 2. exactly 750
 3. nearly 900
 4. more than 9000
14. Which direction do most of the statues turn their face to?
1. another island
 2. the mountain
 3. the ocean
 4. inland
15. Which question can't the woman answer?
1. What is on Easter Island?
 2. The statues look so heavy, don't they?
 3. How did the Easter Islanders move the statues?
 4. When did the Easter Islanders make the statues?

End of the Listening Section

Section Two: Dialogue Completion (Questions 16-25)

Instructions: Read the following dialogues. Then choose the best response to complete each dialogue.

Dialogue 1 (Questions 16-20)

Ms. Jones and Mr. Okada are talking at the office.

Ms. Jones: Welcome to Akron Accounting. This is your new office.

_____ 16 _____

Mr. Okada: Yes. Can I make personal phone calls at work?

Ms. Jones: _____ 17 _____. You can't use your cell phone in the office.
You can make personal calls at lunch.

Mr. Okada: OK. What time is lunch?

Ms. Jones: It's from 1.00 to 2.00.

_____ 18 _____.

Mr. Okada: Can I have lunch at my desk?

Ms. Jones: No, I'm sorry. _____ 19 _____.

You can have lunch in our café, or you can go out to eat. There are a lot of good restaurants on Pine Street.

Mr. Okada: OK. Thanks. Is there anything else I need to know?

Ms. Jones: Yes. _____ 20 _____.

We try to dress for business here.

Mr. Okada: No problem.

16. 1. I am glad to meet you.
2. Do you have any problems?
3. Do you have any questions?
4. Could you introduce yourself?
17. 1. Yes, of course.
2. No, I'm sorry.
3. I am not sure.
4. I have no idea.
18. 1. We need to have lunch together.
2. You have to come to work by 9.00.
3. You need to have lunch in the office.
4. You need to have lunch at that time.
19. 1. You are not allowed to have lunch.
2. You are not permitted to eat in your office.
3. You can bring your own food to the office.
4. You can eat at home.

20. 1. You must always wear a suit to work.
 2. You can wear casual outfits to work.
 3. You are allowed to wear jeans to work.
 4. You are not allowed to wear a jacket to work.

Dialogue 2 (Questions 21-25)

Jane and Anna are talking about their sleep.

Jane: I'm really sleepy.

Anna: Really? Why?

Jane: I didn't sleep well last night.

Anna: _____ 21 _____ you didn't get any sleep?

Jane: Well, no. What I mean is, I didn't get much sleep

Anna: _____ 22 _____. It was better for me. I couldn't stay awake!

Jane: Are you saying that normally you slept a lot?

Anna: Well, yes. I mean I slept all night... for about eight hours.

Jane: Oh. _____ 23 _____

Anna: I go to bed about 10.00 p.m., and I never use an alarm clock in the morning.

Jane: Does that mean you get up late in the morning?

Amy: No, _____ 24 _____, I wake up early. I always wake up at 6.00 a.m.
 I don't need an alarm.

Jane: _____ 25 _____. I never wake up early without an alarm

21. 1. What I mean is,
 2. Do you mean
 3. Do you know what
 4. What I'm saying is,
22. 1. That's great.
 2. I can't believe.
 3. That's too bad.
 4. I don't think so.
23. 1. What do you mean?
 2. What did you do last night?
 3. When did you have dinner last night?
 4. What time do you usually go to bed?
24. 1. What I'm saying is,
 2. Are you saying
 3. What you mean
 4. Do I mean

25. 1. I don't believe.
2. That's nice.
3. No way!
4. Why not?

Section Three: Vocabulary (Questions 26-35)

26. I work in an office, and I take English classes three evenings a week, so I'm very _____ this year.
1. busy
 2. angry
 3. happy
 4. lonely
27. Miguel wants some water. He's _____.
1. empty
 2. hungry
 3. thirsty
 4. starving
28. We are having a great vacation, but _____, school begins again soon.
1. amazingly
 2. strangely
 3. luckily
 4. sadly
29. When Peggy came home last night, her front door was open. She was _____ and called the police.
1. upset
 2. scared
 3. nervous
 4. jealous
30. A: Do you like to eat oysters?
B: No, I don't. They are _____.
1. disgusting
 2. interesting
 3. frightening
 4. embarrassing

31. Last month, I took a cruise trip in Hong Kong.
I got _____, so I had to go up on its deck for some fresh air.
1. on TV
 2. an award
 3. in a play
 4. seasick



32. We are _____ in a play.
1. doing
 2. acting
 3. showing
 4. making

33. I am going to an amusement park in California. I can't wait to _____ the roller coasters.
1. get
 2. sit
 3. ride
 4. have

34. _____ is a low area of land between mountains or hills, usually with a river flowing through it.
1. Desert
 2. Tunnel
 3. Valley
 4. Rain forest

35. The new _____ will cross the Thames River at this point.
1. bridge
 2. tower
 3. skyscraper
 4. subway

Section Four: Grammar (Questions 36-45)**Instructions: Choose the best answer for each of these questions.**

36. My father _____ the 8.15 train into the city every weekday morning.
1. take
 2. took
 3. takes
 4. is taking
37. It _____ to rain while Amanda and I _____ to school yesterday.
1. began / walked
 2. is beginning / walk
 3. began / were walking
 4. is beginning / were walking
38. What _____ you _____ when the electricity went off?
1. do / do
 2. did / did
 3. have / done
 4. were / doing
39. While I _____ dishes, I _____ a plate and _____ it.
1. was washing / dropped / broke
 2. was washed / was dropped / breaking
 3. washed / dropped / broke
 4. was washing / was dropping / broke
40. If I _____ sleepy in class, I _____ some water.
1. get / drink
 2. got / drank
 3. am getting / drink
 4. am getting / am drinking

41. A: Do you know any good restaurants in Japan?
B: No, I don't. I _____ there.
1. was never going
 2. was not been
 3. have ever been
 4. have never been
42. A: _____ you _____ your wallet?
B: Yes, I had to report to the police about the case.
1. Have / ever lost
 2. Has / ever lose
 3. Have / ever lessened
 4. Has / ever bought
43. I _____ another test yesterday. I _____ lots of tests in my life as a student.
1. took / took
 2. have taken / have taken
 3. took / have taken
 4. have taken / took
44. The average temperature in Moscow is _____ than the average temperature in Hong Kong.
1. cold more
 2. the coldest
 3. as cold
 4. colder
45. That was _____ meal I've ever eaten.
1. the worse
 2. the worst
 3. the badest
 4. badder than

Section Five: Reading (Question 46-60)**Instructions: Read the texts and choose the best answer for each question.****Text 1 (Questions 46-50)****Homeschooling**

1. Homeschooling is a choice made by some parents to provide education to their children in their own homes. It's popular in the United States, and it is becoming more popular in the United Kingdom, Australia, South Africa, and Japan.

2. There are several advantages to homeschooling. For example, parents choose what their children learn. Because parents can teach their children one on one, they often understand the curriculum better and more quickly, too. On the other hand, if their children need more time to learn something, parents can work with them at a slower **pace**. Parents also like to spend more time together as a family, and children feel safe at home. A safe environment often leads to better learning.

3. There are disadvantages as well. Homeschooled students often feel lonely because they don't spend as much time with other kids their age. They don't get to talk with classmates about things like parents and homework. Parents also feel lonely because they must spend time teaching children and don't get to talk with other adults at work. In addition, homeschooled students sometimes cannot play school sports or participate in other activities and programs available to people in a school.

4. Only you can decide if homeschooling is right for you and your family. Take the time to do the research and consider the pros and cons.

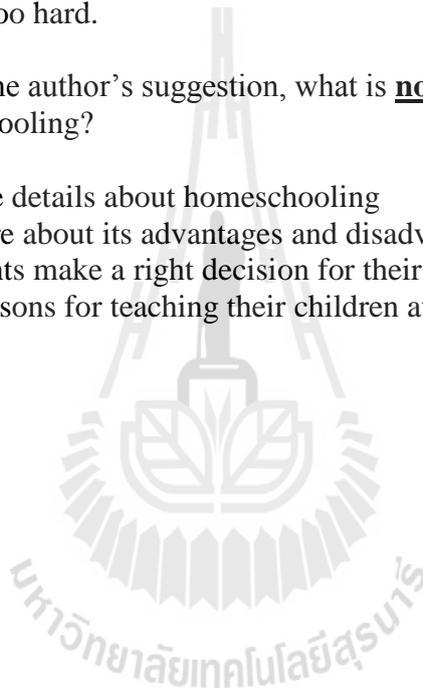
46. What is homeschooling?

1. A school which is popular in the United States.
2. A place designed for teaching students in their hometown.
3. An educational method of teaching children.
4. Parents' choice to take care of their children.

47. The word "pace" in paragraph 2 refers to _____.

1. talk
2. speed
3. treat
4. care

48. According to the passage, what is **not** a disadvantage of homeschooling?
1. Parents cannot share with other adults.
 2. Students can't do the sports and activities available in a school.
 3. Homeschooling is a waste of time because parents don't know what to do.
 4. Kids have no chance to talk with classmates about things.
49. Why do parents feel lonely when they teach their children at home?
1. They don't have a chance to talk with friends.
 2. They don't have much time for their family.
 3. They cannot play sports or other activities.
 4. They work too hard.
50. According to the author's suggestion, what is **not** a reason to do the research about homeschooling?
1. to have more details about homeschooling
 2. to know more about its advantages and disadvantages
 3. to help parents make a right decision for their family
 4. to get the lessons for teaching their children at home



Text 2 (Questions 51-55)

THE LIFE OF AN ASTRONAUT

Dr. Donald Pettit is a NASA astronaut.

- Interviewer:** I'm sure people ask you this question all of the time, Dr. Pettit, but I have to ask it: Have you ever been to space?
- Dr. Pettit:** Yes, I have. I was a crew member of *Expedition 6*, and I spent five and a half months at the International Space Station. We call it the ISS.
- 5 Interviewer:** How many times have you gone up on the space shuttle?
- Dr. Pettit:** I've ridden the space shuttle to the ISS twice.
- Interviewer:** And what was the best part about being in space?
- Dr. Pettit:** Being able to float. It was the worst part, too.
- 10 Interviewer:** Have you visited any other interesting places while working for NASA?
- Dr. Pettit:** Well, I lived in Russia for about two years while I was training to fly to the ISS. I've also been to Antarctica.
- Interviewer:** Not many people can say that! I understand that you like to work with tools. Have you ever **invented** anything?
- 15 Dr. Pettit:** Yes. During my second trip into space, I made a special coffee cup so we could drink in space, much like we do here on earth. I just couldn't get used to drinking coffee out of a small bag through a straw!
- Interviewer:** I don't think I could get used to that, either. But why did you have to drink coffee that way before?
- 20 Dr. Pettit:** Without the bag or my special cup, the coffee floats in space, too.
- Interviewer:** Of course! Well, you've **accomplished** so much, Dr. Pettit, Considering all of it, what's the most exciting thing that you've experienced:
- Dr. Pettit:** Seeing the birth of my twin boys.
- Interviewer:** Wow, what a life! Thanks so much for sharing, Dr. Pettit.

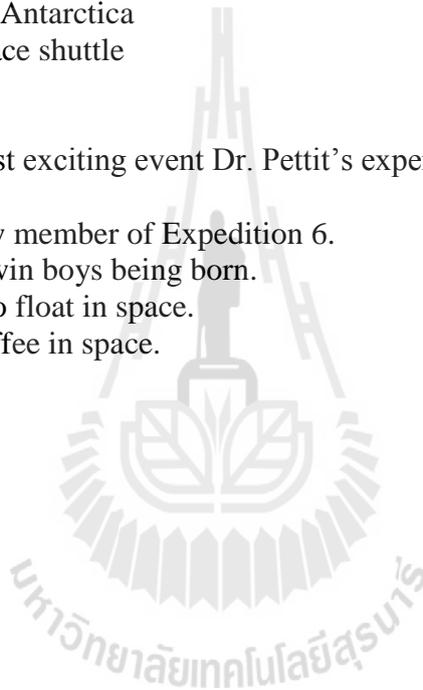
51. The word "invented" in line 14 is closest in meaning to _____.

1. cooked
2. worked
3. designed
4. consumed

52. What does "accomplished" in line 21 refer to?

1. worked
2. succeeded
3. travelled
4. discovered

53. What is the worst part about being in space?
1. Getting sick
 2. Hearing loss
 3. Being in the space shuttle
 4. Being able to float
54. According to the passage, what activity did Dr. Pettit not have chance to do?
1. Walked on the moon
 2. Invented something
 3. Travelled to Antarctica
 4. Rode the space shuttle
55. What's the most exciting event Dr. Pettit's experienced?
1. Being a crew member of Expedition 6.
 2. Seeing his twin boys being born.
 3. Being able to float in space.
 4. Drinking coffee in space.



Text 3 (Questions 55-60)

Canada's Seven Wonders

In 2007, the CBC TV and radio stations had a contest to choose the Seven Wonders of Canada. People sent their ideas to a website and voted for their favorites.

People's Choices	Votes
Sleeping Giant: This is a long peninsula in Lake Superior, which means it has water on three sides. From across the lake, it looks like a big, sleeping person!	177,305
Niagara Falls: These amazing waterfalls are on the border of Canada and the United States. There are three waterfalls, but the largest and most beautiful is called Horseshoe Falls, and most of it is in Canada.	81,818
Bay of Fundy: This is a large body of water where the Atlantic Ocean meets part of Canada. It has the highest tides in the world. The water from the ocean comes in 17 meters higher than when it goes out!	67,670
Nahanni National Park Reserve: This beautiful national park in northern Canada has rivers, waterfalls, mountains, forests, birds, fish, and other animals.	64,920
Northern Lights: These are colorful moving lights in the sky. The best time to see them is on very dark, cool nights in March, April, September, and October.	61,417
The Rockies: The Canadian Rockies are beautiful, high mountains that have sharp peaks and wide valleys. They are cool and wet, but the tops have no trees because it is too cold and rocky for them to grow.	55,630
Cabot Trail: This 950-kilometer hiking trail through part of the Rockies has some of the most beautiful views in Canada. It is named after John Cabot, an Italian man who explored the land in 1497.	44,073

56. How could people vote for their favorite places?
1. Online
 2. Through mobile phones
 3. Through television and radio
 4. All of the above
57. According to this passage, which one is the least popular among Canada's seven wonders?
1. Sleeping Giant
 2. Bay of Fundy
 3. Northern lights
 4. Cabot Trial
58. Votes for Sleeping Giant almost double votes for _____.
1. Northern lights
 2. Niagara Falls
 3. Bay of Fundy
 4. Cabot Trial
59. According to the passage, which statement is **NOT** true?
1. Horseshoe Falls is one of the three waterfalls in Niagara Falls.
 2. Horseshoe Falls is the largest among the three waterfalls.
 3. Horseshoe Falls is the most beautiful among the three waterfalls.
 4. Most of the Horseshoe Falls is in the United States.
60. According to the passage, which of these statements is **TRUE**?
1. The *world's highest tides* occur in the *Bay of Fundy*.
 2. Sleeping Giant is completely surrounded by water.
 3. The best time to see Northern Lights is in summer.
 4. There are some plants on the tops of the Rockies.
-

APPENDIX C



My diary

Name _____ ID _____

Step _____ to _____ (ขั้นตอนที่.....ถึง.....)

My activities are (กิจกรรมที่ฉันทำ คือ.....)

How did I feel when working in these steps? Was it difficult or easy? Was it fun or boring? (ฉันรู้สึกอย่างไรบ้างในการทำงานในขั้นตอนเหล่านี้ เช่น ยากหรือง่าย สนุกหรือน่าเบื่อ)

What did I learn in terms of language skills? How did I learn?

(ฉันได้เรียนรู้อะไรบ้างในด้านภาษาอังกฤษและเรียนรู้อย่างไร)

Listening

ฉันได้เรียนรู้เรื่อง _____

ฉันได้เรียน โดยการ _____

Speaking

ฉันได้เรียนรู้เรื่อง _____

ฉันได้เรียน โดยการ _____

Reading

ฉันได้เรียนรู้เรื่อง _____

ฉันได้เรียน โดยการ _____

Writing

ฉันได้เรียนรู้เรื่อง _____

ฉันได้เรียน โดยการ _____

Grammar

ฉันได้เรียนรู้เรื่อง _____

ฉันได้เรียน โดยการ _____

Vocabulary

ฉันได้เรียนรู้คำใหม่ๆ เช่น _____

ฉันได้เรียนจาก _____

**What skills other than English language skills did I develop?
How did it develop? (e.g. teamwork, critical thinking, self-learning,
technology and so on.)**

(มีทักษะใดบ้างที่ฉันได้พัฒนามากขึ้นจากทักษะทางด้านภาษาตัวอย่างเช่น การทำงานเป็นทีม การคิดวิเคราะห์ การเรียนรู้ด้วยตนเอง การใช้เทคโนโลยี และฉันพัฒนาอย่างไร)

What problems have you often faced while working during these stages or in a group? (ปัญหาใดบ้างที่คุณพบบ่อยในการทำงานขั้นตอนนี้หรือในการทำงานเป็นกลุ่ม)

How did you solve the problems? (คุณแก้ปัญหาอย่างไร)



APPENDIX E

Portfolio Evaluation Rubric

Criteria	1	3	5
Language Skills	<p>Make no progress</p> <p>Make no corrections on language mistakes and do not pay attention on those mistakes.</p>	<p>Make some progress</p> <p>Make some corrections on language mistakes and partly understand why they are wrong.</p>	<p>Make some progress</p> <p>Make all corrections on language mistakes and fully understand why they are wrong.</p>
Teamwork Skills	<p>No one works, responsibilities are not equally shared.</p>	<p>Some of the members work together to complete the project.</p>	<p>All of the members work together to complete the project.</p>
Higher-order of thinking skills and Technology use	<p>No effort in integrating higher-order thinking skills or technology in the project.</p>	<p>Have put some effort in integrating higher-order thinking skills or technology in the project.</p>	<p>Have put a lot of effort in integrating higher-order thinking skills or technology in the project.</p>
Progress of the project	<p>No progress from the previous step.</p>	<p>Make some progress.</p>	<p>Make a lot of progress.</p>

Note: The scores range from 1 to 5 (i.e. 1,2,3,4, and 5)

APPENDIX F

Guided Questions for the Semi-structured Interview

1. What do you think about learning through the project-based learning lessons?
2. Could you develop your English language skills (i.e. listening, speaking, reading, writing, vocabulary and grammar) during doing the project? How did you develop them?
3. What skills other than English language did you develop during doing the project? How did you develop them?
4. Which steps did you like most? Why did you like them?
5. Which step did you have problems? How did you solve them?
6. How do you feel about the cooperative learning? Did you have any problems working in a group?
7. In which aspects do the lessons need to be improved?
8. In which aspects do you think this experience will be beneficial for your future?

APPENDIX G

Rubric for Speaking Test

Band	Description
0	Student makes no attempt to communicate with friends.
1	Student has spoken with minimal fluency and intelligibility (slowly and hesitantly), with poor pronunciation and grammar and little use of communication strategies. Student is almost entirely dependent on a prepared script.
2	Student has spoken with occasional fluency and intelligibility but little use of communication strategies. Student is largely dependent on a prepared script.
3	Student has spoken with some fluency and intelligibility and with some limited use of communication strategies. Student has some ability to depart from prepared script.
4	Student has spoken with some fluency and intelligibility and good use of communication strategies. Student can perform (at this basic level) without a prepared script.
5	Student has spoken fluently and intelligibly with good use of communication strategies, and performs well without a prepared script.

Note: Half-band grading was allowed in each band, i.e. 0.5, 1.5, 2.5, 3.5, and 4.5

APPENDIX H

GROUP's name: _____

I. Form a group of six to seven. Each member writes your name, phone number and e-mail address in the blanks below.

1. _____  _____ E-mail _____ (Group leader)
2. _____  _____ E-mail _____ (Vice GL)
3. _____  _____ E-mail _____ (Secretary)
4. _____  _____ E-mail _____
5. _____  _____ E-mail _____
6. _____  _____ E-mail _____
7. _____  _____ E-mail _____

II. Are you interested in Education, Personal stories, Interesting lives or Our world?

Our topic will be related to

III. Indicate the final product

The final product is

Example: Talk show / Newsletter / Campus radio program / Presentation / Website / Blog, and so on.

IV. Meeting time of the group: _____

APPENDIX I

Final Product Evaluation Score Rubric

Criteria	1	3	5
Language use - Level of difficulty - Accuracy	- The language used in the project is not challenging or too easy. -The work includes many errors in grammar, spelling or pronunciation.	-The language used in the project is somewhat appropriate and challenging. -The work includes some errors in grammar, spelling or pronunciation.	-The language used in the project is highly appropriate and challenging. -The work includes no errors in grammar, spelling or pronunciation.
Quality of work - Clarity of the production and interesting content	- The content presented is neither clear nor interesting.	-The content presented is somewhat clear and interesting.	-The content presented is very clear and interesting.
Creativity - Innovation - Usefulness	- The work shows no evidence of new ideas. - The content includes no useful information.	-The work shows some evidence of new ideas. -The content includes some useful information.	-The work shows substantial evidence of new ideas. -The content includes a lot of useful information.
Technology - Appropriate integration of technology use.	- The project shows no well-integration use of technology resources.	- The project shows somewhat well-integrated use of technology resources.	-The project shows well-integrated use of technology resources.

Note: The scores range from 1 to 5 (i.e. 1,2,3,4, and 5)

CURRICULUM VITAE

Nillawan Newprasit was born on November 11th, 1974 in Bangkok. She received her Bachelor's degree in Business Administration from Assumption University, Bangkok, Thailand in 1996. In 1998, she obtained her Master's degree in Science in Marketing from Golden Gate University, California, USA. She has been working in the field of business since 1998. Apart from her interest in doing business, she is also interested in English language studies. She has been teaching English as a tutor since 2009. In 2011, she decided to pursue her Master's Degree in English Language Studies at the School of Foreign languages, Institute of Social Technology, Suranaree University of Technology because she wanted to gain more knowledge about language and learning theories. Her interests include teaching methodology, especially a project-based approach.

