

Integrating Project-Based Learning in an English Language Tourism Classroom in a Thai University

Submitted by

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Statement of Authorship and Sources

This thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma.

No parts of this thesis have been submitted towards the award of any other degree or diploma in any other tertiary institution.

No other person's work has been used without due acknowledgement in the main text of the thesis.

All research procedures reported in the thesis received the approval of the relevant Ethics Committees (see appendix for approval letters).

Associate Professor Shukri Sanber, Associate Professor Robyn Cox, Associate Professor Jessie Ee, Dr. Aek Phakiti and Dr. Ross Forman have read and have made suggestions with regard to the final text preparation.

The thesis has been professionally proofread by Ginny Moore.

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Abstract

This empirical study provided an in-depth examination of Thai students' English language proficiency, their learning skills and their self-confidence during the application of project-based learning (PBL) in an EFL learning context. The study examined whether PBL could enhance Thai university students' English language proficiency, their learning skills and self-confidence. The method of teaching and learning English language through PBL was a contrast to the current teaching of English in Thailand where it is treated as a subject, not a medium of communication.

This is a mixed research study utilising both quantitative and qualitative instruments to collect data from participants. The study was conducted in an EFL classroom in a major regional Thai university. Data were collected from 26 third year students majoring in English enrolled in *English for Tourism* course. The data were derived from four quantitative instruments including TOEFL® PBT, a writing test, a speaking test and an observation schedule and the rich information was obtained from five qualitative instruments including student surveys, project diaries, open-ended questionnaires, field notes and work-in-progress discussions. The research instruments were utilised for one semester. To investigate the English proficiency of different levels of students, the students were divided into three groups (high, medium and low groups) based on the raw scores collected from the overall results of the three pre-tests (TOEFL® PBT, a writing test and a speaking test).

The results of the study showed that PBL had a statistically significant effect on the development of low and medium achievers' English language skills, with exception of the structure and written expression of the low achievers. The high achieving students showed progress in speaking and writing but their listening and reading skills showed no statistically significant improvement at the end of the study. Findings for high achievers are equivocal because the finding from the TOEFL tests, that no significant gains were made, is not supported by the evidence from their diaries, discussions with the teacher and the observer's field notes. It should be noted that even though the nature of the TOEFL test can distinguish the English abilities among test takers, it is generally used by many universities and institutions for making admissions decisions (ETS, 2010). The findings

indicated that PBL enhanced their learning skills (teamwork, higher-order thinking and presentation skills) together with self-confidence. Their overall improvement in English proficiency is a worthwhile achievement, particularly when it is linked to significant improvements in the students' learning skills and self-confidence in the use of English.

The study concluded that PBL could be an effective means of teaching English as a foreign language; and that it can be successfully employed with students who have only ever been exposed and subjected to a background of traditional forms of teaching and learning. The implementation of learner autonomy focusing on the process of learning, problem solving and building knowledge will contribute to a successful learning outcome for Thai students. Given the culture and classroom behaviour of Thai students, PBL requires a gradual shift in teaching methodology designed to suit the background of both the teacher and learners. These adjustments will enhance the effectiveness in the application and implementation of PBL in a foreign language classroom.

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Chapter 1 - Introduction

1.1 The Place of English in International Communication

English has become the most important international language today, widely used throughout the world. As globalisation influences the world's economy, society, politics, culture and education, English has become the medium for communication and discussion in the world forum. Most governments are accepting that globalisation is necessary to modernise and develop their nations if they wish to focus on international trade and communication and to become part of the world's community. Therefore the demand for a high proficiency in the use of English has become important for many countries, especially those in Asia. This study focuses on the teaching of English for university students in Thailand.

To understand the context of this study, this chapter provides an overview of the importance of English usage in Asian countries and the challenges of English language teaching in Thailand. The chapter begins with a description of the growth of English in Asian countries such as Japan, Malaysia, Vietnam, Laos and China and then explains the need for effective English teaching in Thailand. The disjunction between the Thai Government's policy and educational practice is outlined. Approaches to second language teaching are described as a precursor to the focus of this study on considering Project Based Learning (PBL) as a valid approach to improve the English language proficiency of Thai university students.

1.1.1 Asian Nations.

Influenced by global and national changes, the Japanese nation believes that being able to communicate in English is essential for enhancing Japan's development in the international economic and political sectors. English is taught in all secondary schools and the English score in university entrance examinations is given the highest weight (Butler and Iino, 2005). Yamat (2003) indicates that as a result of globalisation and the development of technology and communication in Malaysia, English language plays an important role in education as it is a tool for Malaysians to be able to listen, speak, read and write fluently in order to have better job opportunities and survive in this competitive world. In Vietnam, English has been considered a vital foreign language for the past 10

years and is now studied by around 90% of students. English enhances the life style of Vietnamese people with greater employment, job promotion, and overseas study opportunities, especially in higher education (Thin, 2006). Laos also recognises the importance of English as a pathway to achieving higher education goals and career success. The Lao government has planned to introduce English into primary schools in 2010 (Bureau of East Asian and Pacific Affairs, 2010). English as a foreign language has been taught from elementary school to university in Indonesia and is considered an important language for global communication (Nurhidayah, 2008). In relation to the importance of the English language to Southeast Asian nations' development, the leaders of each nation agreed to promote the use of the English language as a gateway to their people's prosperity ("How far is ASEAN," 2009).

From the above examples, it is evident that the number of people who study English has been rising and English now has special status in Asian countries. Globalisation has influenced the spread of English not only in basic education but also in regard to economics and politics. McKay (2002) states that many organisations use English as a working language to communicate internationally. As a result, English is a vital tool for countries to discuss and negotiate economic and political matters. Furthermore, English is the most used language in international news media (Graddol, 2006) and also the most used language on the Internet in 2010 with 536.6 million users ("Internet World Users by Language," 2010). English is also the second most widely spoken language in the world behind the various languages spoken in China, where the population is estimated at 1.33 billion ("China," 2010). Today, there are about 600 million native-English speakers and English is the official language of more than 50 countries (Abbas, 2010).

As with economics and politics, higher education is now becoming globalised with English as one of the key components. This is due to the dominance of English speaking universities. According to the Shanghai Jiao Tong University Institute, it was found that in 2005 "two-thirds of the world's top 100 universities are in English-speaking countries" (Graddol, 2006, p. 74). Over one third of international students throughout the world travel to the USA and/or the UK to study (Graddol, 2006), and in 2009 nearly 80% of Australia's international students came from Asian countries for further higher education ("Export income," 2009). It is clear that the acceptance and use of English in international education is widespread.

The above phenomenon further reinforces the need for workforces, politicians, business persons, and students to be proficient in English. English is now a universal language and the ability to communicate in it is of particular importance when studying, negotiating social issues, trading, conducting business and travelling to other countries.

1.1.2 China.

China is a prime example of an Asian nation acknowledging the importance of its citizens being educated in English as well as Chinese. Hu (2005) shows that during the era of modernisation in China, with its associated political, economic, social and educational development and the increasing demand for educated employees, the reform of the teaching of English in its basic educational system commenced in 1985. Between 1985 and 1997, the Chinese developed their own English curriculum and textbooks for primary and secondary schools. Throughout 2001 and beyond, English has been regulated and taught from Grade 3 in China while it has been introduced to Grade 1 students in major cities such as Beijing and Shanghai. In addition, English courses are compulsory for non-English major students during the first one or two years of university (Liu, 2007). More people are learning English in China than in any other country. In 2008, more than 100 million Chinese students were studying English from elementary school to college level. Under the new educational policy, it is believed that more than 20 million learners of English are produced each year in China (Graddol, 2006).

The demand for high levels of proficiency in the English language is not only applicable to mainland China but also to Hong Kong, which is recognised as the Asian centre of international competitive commerce and finance. Berry and McNeill (2005) point out that the Hong Kong government and community believe that along with Mandarin, the national language, proficiency in English is necessary. The Hong Kong government worked extremely hard to set English competency assessments for primary schools in 2003 and for secondary schools in 2004. In higher education, English oral examinations have been used since 2007 to assess the English language proficiency of learners and to be a guideline to improve the language standard.

1.1.3 English in Thailand.

The need to accelerate the teaching of English is a challenge for the present and near future in many non-English speaking countries. As in other parts of the world, the use of English language in Thailand is now essential. Being able to speak English is the means to taking part more fully in international activities. As global companies strive to maintain their competitive advantage, many have established outsourcing centres in countries where wages are lower. Thailand is ranked by the World Bank as the number two country in the ASEAN region attracting English-speaking businesses investing resources (“Thailand”, 2010), and today Thailand aims to attract more foreign investors by exempting corporate income tax for 15 years from June, 2010 (“Huge tax exemption,” 2010). This remarkable feature of globalisation has accelerated Thailand’s need to upgrade its citizens’ English language skills so as to be ready for the opportunity to be involved in future business ventures and outsourcing centres, which will increase and develop the nation’s economic opportunities.

English has become a necessity and is now a compulsory subject in Thai schools. English is used in many areas such as: (a) international business negotiations, (b) international cable TV programs, (c) advertising of universally used products, (d) academic journals, (e) technical terminology in education, (f) Internet correspondence and (g) tourism. English is essential for Thais, especially in the rapidly expanding tourism industry. This can be observed in employment advertisements in both Thai and English newspapers requiring applicants to have a good command of English (Foley, 2005). Clearly, being able to use English effectively provides greater opportunity for Thai people to obtain work or academic promotion, to enter higher education, to search for knowledge, to negotiate business and to participate in social discussions in any international forum.

It was realised long ago in Thailand that English was important. In 1895, English was introduced as a core subject into the Thai Education curriculum. In 1921, English became a compulsory subject from Grade 5 onwards. However, in 1982 it was decided that English would revert to being an elective subject in the national curriculum in the belief that students could choose what they wanted to learn according to their own ability and interest. Around this period, attempts were made to launch a communicative approach to English language teaching in Thailand and simultaneously the British Council became

involved in organising language training to improve the teaching of English in Thailand (Foley, 2005).

In 1996, there was a major change when the Ministry of Education stipulated that English was to become a compulsory subject from grades 1 to 12. The aim of studying English for at least twelve years was to equip students with the ability to effectively communicate with foreigners, with competence in listening, speaking, reading and writing. Students now had the opportunity to continue their English education without interruption throughout their school years and beyond (Ministry of Education, 1996).

To further emphasise the importance of learning English effectively and efficiently, the National Education Act B.E. 2542 (1999) states that a major goal of Thai education is to be “learner centred”, focusing on the students’ learning with an increased sense of autonomy in the learner. In this approach, students can choose what they want to study and the ways in which they will achieve this. This concept of a learner centred approach is emphasised so that students understand that they have choices in their learning. Benson (2001) describes autonomy as learning by doing, where learners determine their own objectives, progress and evaluation with the capacity to take control of their own learning. Learners use their own experience and prior knowledge to design the learning process and the outcomes. This process is achieved through negotiation with the teacher.

In Thailand, the majority of English teachers are Thai who are not qualified to teach English (Yunibandhu, 2004). Teachers rely heavily on textbooks, employ inappropriate teaching styles and do not establish meaningful and authentic learning (Khamkhien, 2010). This learning situation requires students to use memorisation as a tool for learning (Nguyen, nd) . As a result, many Thai students who score well in their English exams encounter severe problems with writing and speaking when studying further overseas (Kaewmorakot, 2005). Mackenzie (2002) explains that the technique commonly used in English classrooms is teacher-centred and focuses only on accuracy of grammar and vocabulary. Therefore, Thai students are not encouraged to be vocal or inquisitive, their only goal being to pass the English exam. However, as passing the English exam is considered a prerequisite for “promotion or graduation” being educated in English becomes stressful and may not lead to a successful outcome in improving the proficiency

of English (Graddol, 2006, p. 84). As a result, after studying English for 12 years, the majority of Thai students are incapable of using effective communicative English.

In 2003, a strategic plan was introduced to improve the teaching and learning techniques for English (Ministry of Education, 2006). The plan was to promote and expand the teaching of English in international schools and to develop selected government schools as “special schools”. Regulated by the Curriculum and Instruction Development Department, Ministry of Education, such schools used English as a medium for the teaching of other subjects. In addition, many projects and training schemes were made available to develop the English skills of teachers in primary, secondary, and vocational schools. This decision was enhanced by increasing the number of English Resources and Instruction Centres (ERIC) from 88 to 175 to cover all education areas (Ministry of Education, 2006). The Government also provided scholarships for teachers to be trained in Thailand and overseas and promoted the following support facilities: (a) the Educational Television Station (ETV), (b) satellite Educational Television, (c) e-learning, (d) Internet, and (e) self-produced and developed educational media (Ministry of Education, 2006). Besides the teacher training scheme, the new educational policy announced the shift from traditional teaching to communicative methodology (Graddol, 2006).

Even though these measures were launched to assist teachers, the method of teaching has not improved. Donart (2006) indicates that Thai teachers teach English using Thai language as their method of communication, and only focus on English grammar which is drilled every day. The main aim is for students to pass a written exam to gain entry to university, as English forms part of a national entrance examination. The author further commented that the teachers did not, or could not, offer enough input for students to listen to, speak, or discuss any part of the lessons in English, the result being that the English skills of students have shown little improvement. The Bureau of Education Testing (2007) found that in the 2004 academic year (June 2004 - May 2005), students in grades 6, 9 and 12 across the whole country had low academic achievement in the English subject. Their average scores out of 100 were 37.34, 32.28, and 32.45 respectively. This was the lowest average score when compared to the other main subjects such as Thai language, Maths, Science and Social Science. Similarly, the average score for English language in national university entrance examinations from March 2002 - March 2005 was under 50% and in a

2006 national university English language entrance examination, the mean score was only 32.37%. The scores for English declined even further in 2007 with a mean score of 30.93%, 2008 with 30.68%, and 2009 with 23.98%. It was found that among eight subjects in the national entrance examination in 2009, English had the lowest score of all subjects (“O-NET”, 2009). The alarmingly low mean score of the subject English in the 2010 result of the ordinary national educational tests for the university admissions system was 19.22 % (National Institute of Educational Testing Service, 2011).

It is not only primary and secondary school students who have low proficiency in English but also students studying in higher education. Wongsothorn’s (2001) investigation into English skill levels for Thai university students indicated that their integrative skills in reading and writing, as well as their comprehension skills, were very poor and that they only had a medium level of skill in both sound and graphic modalities. In addition, an investigation into the English proficiency of Thai graduates who undertook the standard and reliable test entitled ‘Chulalongkorn University Test of English Proficiency’ (CU-TEP)¹ was undertaken. It was found that the majority of Thai graduates could not meet the standard required to study at the Graduate School at Chulalongkorn University. When Thai graduates’ TOEFL (Test of English as a Foreign Language) scores were compared with other Asian graduates applying to study in the international graduate programs at Chulalongkorn University, Thai graduates’ average TOEFL scores were below 500, compared to graduates from Singapore, the Philippines, Malaysia, Indonesia, Burma, Vietnam and Cambodia whose scores were above 500 (Prapphal, 2001).

From this study, it seemed that the majority of Thai graduates were not qualified to study at the graduate level in international graduate programs in Thailand or in overseas universities. Fredrickson (2003a) also found that the level of English proficiency of Thai university graduates was surprisingly low. Many Thai graduates were graded as band five on the IELTS (International English Language Testing System) test used by students wishing to study overseas. This means they were modest users who “have partial command of the language, coping with overall meaning in most situations, though are likely to make many mistakes but should be able to handle basic communication in their own field ” (British Council, 2006, ¶ 2). Some were graded as band four meaning that

¹ CU-TEP equates with the Test of English as a Foreign Language – TOEFL.

they were limited users who “have frequent problems in understanding and expression and are not able to use complex language” (British Council, 2006, ¶ 2). It seemed that the majority of Thai graduates were not successful in English after studying for more than twelve years.

In 2007, it was found that 50.9% of Thai students who graduated from Australian universities did not have sufficient English to meet the standard and should not have been permitted to study. Basically, they were “not capable of conducting a sophisticated discourse at a professional level” (“Foreign Students”, 2007, ¶ 11). This comment has been shown to represent the level of English proficiency of Thai students who are the products of the Thai educational system. Covey (2007) examines the level of English proficiency of adult learners of English as a foreign language, adult students from an extension program, university students and English teachers from rural schools. Although all had studied the English language for over 1,000 hours, it was found that the average competency of English was at beginner’s level.

It is obvious that after studying the English language at elementary and secondary school level for 12 years and for another 2 to 4 years in higher education, the majority of Thai learners are not capable of using English at anything other than a very basic level, and cannot handle complex language nor understand basic details. The Commission of Higher Education (2007) considers the situation of teaching English in higher education (university level) to be in crisis because of the rote memorisation and the over-emphasis on accuracy found in the current teaching process. Without the chance to practice the language verbally and in authentic situations, Thai graduates are unable to communicate in English despite spending years learning the language. This shows an obvious failure in language teaching in Thailand (Kaewmorakot, 2005).

1.1.4 English of Thai Tourism Industry Graduates.

English is not only important to education and business but also to tourism as it is one of the major revenues sources in Thailand. As the number of native-English speaking and tourists with some English language skills increases dramatically in line with the Thai government promotion to increase tourists to Thailand (Tourism Authority of Thailand, 2006), English language skills become essential for the Thai travel industry (Diethelm travels, 2006). It is vital that universities and the government concentrate on training Thai

graduates to meet the increasing demand for quality English language learning in Thailand. There has been a national standardised exam introduced in the tourism industry for tourist guides to test their English language skills however, according to Wiriyachitra, (2002), it seems that Thai students' English proficiency was below the level set by this test. Mawan et al. (2004) study the problems of learning English for 181 students majoring in the Tourism Industry at Rajabhat Mahasarakham University, Mahasarakham Province, Thailand. It was found that the students knew little about tourism vocabulary, were shy to speak English and did not understand complex sentences. From a survey on the needs of the students, it was found that they wanted more practice in speaking and listening to English outside the classroom and that they also wanted to practise English with native-English speakers in authentic environments.

According to the Academic Training Section of the Tourist Authority of Thailand, it was found that Thai graduates working in the tourism industry have a low proficiency in English and this reflects "a misunderstanding and a negative attitude towards Thailand" (Wiriyachitra, 2002). Suwatthigul and Srichai (2004) study the English language needs of the Thai tourism industry and indicated that problems of communicating in English, specifically communication strategies and intercultural communication, existed. The current tourism courses and syllabus need to be developed and improved to help the Thai tourism industry to be more successful.

It can be concluded that the English of Thai tourism students needs to be improved, and with the emphasis on communicative competence, communication should be authentic and meaningful. Class interactions should be realistic and supportive so that students are helped to generate the target language and interact successfully.

1.2 Problems of Teaching English in Thailand

Low achievement in English language proficiency is not only a problem for students but also for Thai teachers of English. In March 2004, 15,000 teachers from 80 educational service areas covering 30 of the 76 Thai provinces undertook an English Language Competency Test given by the Office of the Basic Education Commission and Ramkhamhaeng University. The test measured their English language proficiency in general and it was found that 75% of them were in the beginning level, 15% in the

intermediate level and only 10% in the advanced level. The maximum score was 90 and the minimum score was 2 out of 100 (*“Poor English”*, 2004). The Education Minister, Adisai Bodharamik, pointed out that even though there were English teachers who could speak and understand some English, many could not. It was found that 80 - 90% of students did not want to study English because the teaching and learning styles were boring and lifeless (*“English Language”*, 2004). Problems in the teaching and learning of English became evident during an investigation by the Ministry of Education in 2006: These were:

- Problems with teaching and learning procedures
- Lack of knowledge and skills

1.2.1 Problems with teaching and learning procedures.

There is no integration of the four skills (listening, speaking, reading, and writing) and insufficient practice time allowed, if any, during class time. Teachers lack training in the practical skills of teaching English to English as a Foreign Language (EFL) learners. In addition, there is no variety in the teaching and learning styles, and what is taught is not compatible with or relevant to the students' background. Furthermore, it is not unusual for there to be more than 50 students in a class; even well trained teachers find it difficult to manage their teaching effectively with classes of this size.

1.2.2 Lack of knowledge and skills.

It was found that 80% of primary school teachers teaching English did not major in English (Ministry of Education, 2006), and that while most Thai teachers of English have some basic grammar skills, their ability to speak it is poor. As teachers are not proficient in English, students have no opportunity to experience real life usage of the language. Furthermore, it was found that the majority of teachers only follow a textbook and only choose activities that they can teach or feel confident to teach (Silapasatham, 2007). Additionally, most teachers lack a positive attitude towards teaching because of their own feelings of inadequacy with English, especially communicative skills and English teaching skills. Furthermore, poor pay scales mean there is little motivation for teachers to improve their skills. Therefore, the expectation for teachers to prepare an effective course syllabus, produce appropriate learning and teaching media and methods of teaching is very low.

As a result of this, ongoing teacher development in terms of language ability and pedagogical practices are needed to help teachers deal with the demands of the national plan. Even though the National Education Act B.E. 2542 (1999), Amendment (2002) includes the ideal reforms and plans for Thai education, it is merely a broad and general guideline for teachers and administrators to design and establish their local curriculum for appropriate student development and to reflect the national standards, goals and local needs.

From the low level of English competency in Thai students, it is obvious that universities and schools do not know how to deal with the new education reforms or develop their teaching to meet the curricular aims. Therefore, they cannot offer an effective curriculum for students to prepare themselves to be competitive in their higher education or in their careers. In addition, without an effective teaching and learning procedure, schools fail to enhance and develop students' performance and proficiency in English. It can be seen that there is a gap between the policy of the National Education Act and the practice in Thai educational situations.

1.3 Problem of poor learning skills and low confidence in the Thai educational culture

As mentioned earlier in section 1.1.3, the nature of learning styles in Thai classrooms is generally teacher-directed with students as passive learning. The students quietly listen to their teachers, behave well and follow their teachers' instructions. The teachers are considered as 'respectable persons' along side their parents. This style of learning is influenced by Thai culture which has a high social and cultural values status (Noytim, 2006; Prpic & Kanjanapanyakom, 2004). According to Hofstede (2001), Thailand has a "high power distance" (p. 87), that is, inequality in power between people has been accepted in society. Thai people learn to identify their social status in relation to others (e.g. seniors, juniors, colleagues, or friends) very early in life. Therefore, the way to express themselves through language and their social behaviour and performance are different depending on their social status (Hallinger & Kantamara, 1999). In practice, a younger person is normally quiet and rarely shows any expressions even though he/she may disagree with an older person (Prpic & Kanjanapanyakom, 2004). This social structure means that the norm in Thai classroom is for Thai teachers to give a lecture and direct the class while their students attentively listen and take notes. Students speak or ask

questions only when they are allowed (Noytim, 2006). They accept their role as passive learners and feel comfortable to follow the direction and control of their teachers (Thongprasert & Burn, 2003).

In addition, Thailand is considered a country with a high-context culture (Christopher et al, 2004). In high context cultures, factors including context of communication (which message needs to be deciphered), non-verbal communication, and confrontation give an impact not only in intercultural communication but also to teaching and learning (Prpic & Kanjanapanyakom, 2004; Witsel, 2003). Thus in Thai society, interpretation of a message is required as Thais conceal their true expression. The tendency is to avoid confrontation and not to cause others to lose face or feel embarrassed (Deveney, 2005). Thai learners prefer keeping their feelings to themselves (e.g. curiosity and disagreement between themselves and friends or teachers) to avoid confrontation (Thongprasert & Burn, 2003). Interestingly, Thai students like to work in groups but teamwork can be ineffective as they have a fear of standing out as a leader or as an outspoken team member. This behaviour can turn them into outcasts who are not welcome in the group (Brody, 2007). Noytim (2006) further pointed out that these cultural features have a great influence on teaching and learning in Thailand as it leads to “many Thai teachers and students feeling comfortable with a teacher-centred approach. This is incompatible with the communicative approach as proposed by the Thai government” (p. 23).

It is clear that the strong tradition of a teacher-centred approach (as shown in 1.1.3) together with the impact of cultural factors do not support the Thai government’s requirements related to teaching and learning English in Thailand. Students are dependent on their teachers who teach prepared texts direct all classroom activities and set tests based on the prepared texts. The Thai students feel comfortable with this type of learning and have no real reason for learning English except to pass the exam (Noytim, 2006).

As a result of traditional forms of teaching and learning in Thailand, it is not surprising that besides the low level of basic language skills, previous research has highlighted the failure in learning skills and self-confidence in English classrooms. Nantachaipan’s (2004) investigation into the Thai undergraduate students’ English oral presentation skills indicated that their oral presentation skills were below satisfactory level, however, their performance improved after integrating an autonomous learning approach. Samanpan,

Loipha, Sintoovongse, and Potjananont (2006) found that secondary school students did not pass the criterion for critical reading ability in English as many teachers had translated the English text to Thai and controlled activities by asking prepared questions instead of encouraging their students to think, discuss and share ideas with each other. This finding is supported by the study of Johnson (2008), who found that Thai graduates lacked critical thinking skills. Graham (2009) stated that the majority of students in a Thai university were not confident in using English. This finding is close to the study of Songsiri (2007), who found that Thai university students from various classes lacked confidence in speaking English. Having low confidence in using English, coupled with Thai culture affected the students' communication behaviour. Thai students received the lowest scores on willingness to communicate in English when compared to Chinese and the Dutch students (Kamprasertwong, 2010). Christopher et al. (2004) found that when it comes to problem-solving skills, Thai students "prefer not to take the initiative to promote discussion, for fear of giving offence" (p.7). Besides the impact of Thai culture, a teaching method which reinforces rote-learning in Thailand does not cultivate problem-solving skills for Thai students (Richmond, 2007). It is clear that teaching and learning English in Thailand causes major problems: limited English proficiency, the lack of learning skills and self-confidence in using English.

In an important study, Wongwanit and Wiratchai (2005) report on the follow up and evaluation of educational reform based on the Government's Fundamental Policy and National Education Act B.E. 2542 (1999), Amendment (2002). They found that the ability to transform the paradigm from a teacher-centred to learner-centred curriculum has not been successful. Furthermore, no difference was found in the learning achievement of students before and after the educational reform plan. It will not be an easy mission for the Thai government to reform the educational process. There are many changes to be made, especially to the quality of education, the curriculum, teaching and learning procedures, teachers' qualifications and the amount of research needed.

There is a need to bridge the gap between the policy of the national education plan and the practice in reality, and it is important for educational institutions to meet the pedagogic guidelines of the recent national curriculum and the national educational plan below:

Education shall be based on the principle that all learners are capable of learning and self-development, and are regarded as being most important.

The teaching-learning process shall aim at enabling the learners to develop themselves by:

- (1) providing substance and arranging activities in line with the learners' interests and aptitudes;*
- (2) providing training in thinking process, management, how to face various situations and application of knowledge for obviating and solving problems;*
- (3) organising activities for learners to draw from authentic experience using practical work, to think critically and acquire reading habit and continuous thirst for knowledge;*
- (4) enabling individuals to learn at all times and in all places.*

(Office of the National Education Commission: 2003)

The current educational goals place great weight on communicative approaches, self-development, student-centred learning, critical thinking and problem-solving skills, lifelong learning and hands-on activities. These goals determine how teacher roles and responsibilities might change in response to the policy challenge of improving educational outcomes. To make a connection between the policy and the practice, the problems that are linked to training, low pay, large class size, and the conditions of foreign language learning need to be solved. In relation to teaching English in Thailand, teachers need to adjust their teaching styles to implement the changes and encourage students to be more active in acquiring English language knowledge. Learners should develop creative thinking and skills in social interaction and be aware of what they are doing and why they are doing it.

1.4 Pedagogy for Second Language Teaching

Second language teaching methodology has undergone many changes over the last 60 years, however there is no single best method, and no one method that is best for a particular classroom. Each classroom is unique with different goals and different learners. The best language teaching method depends on learning styles, particular contexts, stages

of the teaching, learning process and the goals of learning (Brown, 2000; Mora, 2002). There are many second language teaching methods which are based on different approaches and used for different purposes. The following table displays the advantages and disadvantages of language teaching methods.

Table 1.1 Advantages and Disadvantages of Language Teaching Methods.

Method	Objectives	Main Features	Advantages	Disadvantages
The Grammar Translation (Johnson, 2001; Mora, 2002).	- Students are able to read literature in the target language.	- Focus on rote memorising of grammar rules, vocabulary, and translation of texts from the target language to the mother tongue and vice versa. - Language used in class is mainly students' native language.	- Students can probably gain reading skills in the target language.	- This method does not prepare learners to use the target language in daily life as it does not develop students' communicative language competence.
The Direct Method (Brown, 2000; Johnson, 2001; Macaro, 1997).	- Students are able to integrate more use of the target language in the classroom.	- Focus on authentic material and a lot of oral interaction with the emphasis on stress and pronunciation. - All instruction is taught in the target language without any translation. - Grammar is taught within the context.	- Students are highly motivated. - Students have a chance to practice the target language in the classroom with teachers and other students.	- This method was not popular and it was difficult to use because of the limitation of budget, time, and classroom size.
The Audio-Lingual Method (Johnson, 2001; Kifuthu, 2002).	- Students are able to use practiced patterns automatically and unthinkingly in the appropriate situation.	- Focus on imitating, drilling, reciting and memorising of sets of language patterns in the target language. - Appropriate responses are followed by reinforcement. - Grammar is taught inductively. - Audiotapes, visual aids and laboratory are used extensively in the classroom.	- Students can reproduce dialogues or sentences correctly and effectively. - Students can pronounce the target language like a native speaker.	- As this method is based on behaviourism and learning is developed through a specific environmental stimulus, students can perform and transfer their knowledge only to identical or similar learning contexts.

		<ul style="list-style-type: none"> - Structural patterns and skills are taught in a particular order. - Content and meaning are ignored. - The use of mother tongue by teacher is permitted but is prohibited among students. 		<ul style="list-style-type: none"> - This method does not promote higher-order thinking and problem-solving skills.
<p>The Silent Way (Reppy & Adames, 2000; Richards & Rodgers, 2001).</p>	<ul style="list-style-type: none"> - Students are able to learn by themselves and become independent, autonomous and responsible learners. 	<ul style="list-style-type: none"> - Focus on discovery-learning process by students. - Teachers use pointers, rods and charts to introduce vocabulary and syntax and create learning situations that allow learners to discover linguistics knowledge. - Teachers do not provide knowledge directly to students but speak a few words to introduce learning situations. If students make mistakes, teachers encourage them to use their prior knowledge, skills and experience to make their own corrections. - Students create the solutions by themselves and gain not only an accurate and deep understanding of the target language but also confidence in their own performance. 	<ul style="list-style-type: none"> - Students become experimental learners. 	<ul style="list-style-type: none"> - Students are distant from teachers and classroom atmosphere does not provide a sense of learning. - Students cannot practice their communicative skills with teachers. - Students sometimes spend too much time discovering aspects of language which could be guided by teachers in a shorter time.
<p>Suggestopedia (Johnson, 2001; Richards & Rodgers, 2001).</p>	<ul style="list-style-type: none"> - Students are better learners than they think they are. 	<ul style="list-style-type: none"> - Focus on environment that affects the work of the learners' brain. - Low lighting, pictures, comfortable chairs and music play important roles in this method. 	<ul style="list-style-type: none"> - While relaxed, students maintain their knowledge in the target language and gain confidence in using the 	<ul style="list-style-type: none"> - There are problems of practicality with using this method in schools where there is a lack of relaxing and soothing amenities.

		<ul style="list-style-type: none"> - Teachers present vocabulary, readings, role-play, and drama in the target language while music is played to create a relaxing atmosphere. 	language.	<ul style="list-style-type: none"> - As this method is teacher-directed learning, there is an argument about memorisation in language learning.
Total Physical Response (Reppy & Adames, 2000; Richards & Rodgers, 2001.).	<ul style="list-style-type: none"> - Students are able to understand and use the target language effectively. 	<ul style="list-style-type: none"> - Focus on listening, comprehension and acting prior to the production. Speaking, reading and writing can be developed later when students feel more confident. - Teachers give commands to students who respond to them by physical movement. - The students are active and eager to learn the target language through fun activities such as games, songs and role playing. 	<ul style="list-style-type: none"> - This approach is suitable for developing speaking skills at beginner levels as it is well suited to teach vocabulary connected to the action. - Students can speak the target language spontaneously after having enough listening time and decoding the language. 	<ul style="list-style-type: none"> - This method can be a challenge for introverted students. - When students become proficient in the target language skills, this method is not as appropriate or effective as it does not allow students to express their own thoughts in a productive way.
Project-Based Learning (PBL) (Eguchi & Eguchi, 2006; Hutchinson, 2001; Ribe & Vidal, 1993).	<ul style="list-style-type: none"> - Students are able to develop their language, content and communicative skills by being involved in projects. 	<ul style="list-style-type: none"> - Focus on the process of learning. - Students set their learning goals, design their own learning and cooperatively work with others through hands-on experience in an authentic and meaningful environment to successfully achieve the end result. - Teachers are facilitators while students are self-directed learners. 	<ul style="list-style-type: none"> - Students gain language proficiency, self-efficacy and self-esteem, increase self-confidence and develop motivation, problem-solving skills and other social skills. 	<ul style="list-style-type: none"> - Students may reject this method due to a cultural belief that teachers are knowledge deliverers and students are knowledge receivers. - Teachers may find that it is difficult to finding time to devote to PBL.

The chronological development of second language methodologies itemised in Table 1 reflects the changes in linguistics and learning theories overtime. In the nineteenth century, the grammar translation method was the key method developed from the traditional approaches to the teaching of Latin and Greek, which encouraged learners to read literary texts (Mora, 2002). With the grammar translation method, learners drill the grammar rules, practise them in new structures and translate them in the target language and vice versa. This instruction focuses on form, not the use of language for communication. Richards and Rodgers (2001) stated that this method lacks the support of justification and theoretical literature. In fact, it is not related to linguistics, psychology or learning theory.

During the nineteenth century, many new language-teaching methods were developed and proposed, and this period became known as “The Age of Methods” (Rodgers, 2001, ¶ 4). The direct method, originated by Charles Berlitz, is among a number of teaching methods based on naturalistic approaches (Brown, 2000). The concept of this method is that the second language is taught the same way that children learn their first language. With this method, students learn vocabulary and everyday language from dialogue, demonstration, and images presented in the target language, without the use of their native language. Learners associate the target language word with the presentation of objects (Johnson, 2001; Macaro, 1997). The teaching style focuses on the question-answer pattern, and lessons take place in small classrooms where students are taught intensively by a second language native speaker. Only the target language is used in the classroom, and writing skills and analysis of grammatical rules are delayed and taught inductively (Brown, 2000; Macaro, 1997). However, this method has its limitations. Johnson (2001) states that in the direct method, the teacher faces problems “when she has to talk about notions that take her beyond the here and now” (p. 169). Therefore, this method is not appropriate for high level students but is much more suited to beginners. Further, it is difficult to use because of the limitation of budget, time, and classroom size (Brown, 2000).

Teaching methods go in and out of style, and during the 1930’s and 1940’s the grammar-translation method returned to American institutions (Brown, 2000). During World War II, a new method was developed called the audio-lingual, or Army method (Kifuthu, 2002). This method is based on linguistic and psychological theory, and is taught by teachers drilling grammar and students repeating and making use of the grammar patterns,

thus developing an automatic habit (Johnson, 2001). Grammar is taught by memorisation through given examples. Students do not need to understand the grammar points and lack the chance to develop communicative skills. The target language is used to drill while being taught. Giving reward and punishment are important in this method.

In the 1960s, other teaching methods based on humanistic approaches were developed, for example, the silent way, total physical response method and Suggestopedia (Johnson, 2001). However, when second and foreign language teaching began to focus on the communicative ability of learners, these methods were rejected in favour of communicative language teaching approaches (Brown, 1994). The goal of communicative language teaching (CLT) is to develop learners' communicative competence (Nunan, 1988). To communicate effectively in one language, Boyd and Maloof (2000) suggest that learners should not memorise or answer in isolated sentences. In other words, it is essential for students to be "actively engaged in constructing and clarifying meaning. Students can learn through talk and students can learn about the target language and through the target language by producing it" (p.165). To achieve the suggested way of learning, CLT encourages learners to communicate and understand language as it is used in a social and meaningful context. This pedagogy focuses on language use instead of language usage. Learners learn a language by engaging in real life communication and are able to communicate fluently and correctly in the target language. They are motivated and encouraged to express their own thinking, feelings and needs. Therefore, many educators believe that "communicative language teaching is, should be, the dominant approach in English language teaching" (McKay, 2002, p.108).

There are several teaching approaches that apply communicative language teaching, for example, Content Based Instruction, Cooperative Language Learning, and Task-Based Instruction (Richards, 2006; Rodgers, 2001). All these methods share the same characteristic which is integrated skill instruction. Learners are allowed to employ the target language in authentic situations. This allows them to learn more quickly which in turn brings academic success, aids in the development of collaborative skills and improves their interpersonal relationships (Holt, 1993; Oxford, 2001).

Among the various methods of communicative language teaching, project-based learning (PBL) has been found to be an effective method in enhancing students' motivation. It

allows students to actively explore, create authentic language and use language in real life situations. This approach encourages student-centred classes that focus on developing skills for lifelong learning and collaboration among students working in either small groups or as a class (Eguchi & Eguchi, 2006; Hutchinson, 2001).

The shift in pedagogy, as itemised in Table 1, shows that language teaching methods are constantly evolving. The Language lab has now changed to a multimedia centre. Learning can occur inside or outside the classroom that is connected to society, the community and the world. Teachers and students use textbooks and the Internet as teaching and learning resources. Educational software is a part of the learning system; how learners experience information, seek and create target language in meaningful contexts is focused (Kern, 2000; Richards, 2006).

1.5 Purpose of the Study

The role of English in Thailand is important at all levels of Thai society, with this study particularly interested in education and tourism. Since the current national curriculum and national education plan of Thailand places a strong emphasis on lifelong learning, learner-centred approaches and communicative competence in the meaningful use of the target language, it is vital to investigate a change in the way English is taught and how students can learn English more effectively, especially at university where *English for Tourism* has been introduced for Thai EFL students.

The purpose of this study is to look at a way of overcoming the problems of English proficiency, learning skills and self-confidence (see in 1.1.3 & 1.3) by changing the method of teaching and learning in line with the Thai Ministry of Education's requirements. Therefore, this study focuses on the implementation of project-based learning (PBL) as a teaching method for Thai EFL university learners and investigates how PBL can enhance the students' English language proficiency, learning skills, and self-confidence when applied to an *English for Tourism* class.

The results of this study provide valuable support for the Thai educational reform movement. They also provide an insight into the nature of PBL and the factors that enhance English learning for teachers teaching English in Thailand or in similar

educational contexts. Furthermore, the information may also give educators in the Ministry of Education the impetus to introduce new ideas and PBL into English learning at all levels of education from primary school to university.

While the effects of integrating PBL into EFL language learning are examined, it is crucial to understand the aspects of learning theory, to investigate the power of project-based learning as a teaching method and how it is implemented, and how the Thai students take part in the project. This is discussed in the following chapter.

Chapter 2 - Review of the Literature

2.1 Introduction

Teaching methodology for second language learners has been influenced by various learning theories that have been developed during the twentieth century. While constructivist and social constructivist learning theories have been well established for some time, teaching methods in many contexts have not changed. As shown in the previous chapter, for example, the teaching of English in Thai Universities has been predominantly based on behaviourist theories of learning. For this study of teaching English to Thai students, an understanding of the relationship between second language teaching methodology and learning theories is crucial.

The recent national curriculum and national education plan for Thailand is based on the principle that learners are capable of learning and self-development; learners have responsibility for their own learning; learners not only develop problem-solving skills and higher-order thinking skills but also have a chance to experience authentic and meaningful learning as a part of learning (Office of the National Education Commission, 2003). Therefore, this study investigates the power of project-based learning which focuses on lifelong learning, collaboration among students, meaningful and hands-on learning together with higher-order thinking skills (Eguchi & Eguchi, 2006; Hutchinson, 2001). This teaching methodology has been shown to be a promising teaching pedagogy that reflects a new understanding of teaching and learning and addresses the major changes in the purposes and needs of the national plan.

As a result, this literature review examines a conceptual framework that combines a focus on aspects of learning theory and second language teaching methodology. Constructivist theory, social constructivist theory, communicative approach and multiple intelligences theory are described to explain the paradigm of project-based learning. In addition, a detailed definition of project-based learning, its principal features and the flexible process for project-based learning instruction are discussed. Also, the benefits and challenges of student engagement with project-based learning, including positive and negative aspects of project-based learning in second and foreign language settings and in other disciplines, are examined. Towards the end, this chapter presents a description of a framework of

learner autonomy and cooperative learning theories related to the implementation of project-based learning.

2.2 Theories of Learning: Pedagogical Approaches

2.2.1 Behaviourist learning theory.

Learning is described and viewed differently by many prominent philosophers and practitioners, depending on the setting of their work and other factors influencing their thinking at the time. The behaviourist theory, which is one of the earliest learning theories, played a major role in the early years of the twentieth century.

The behaviourist approach emphasises an observable behaviour which can be changed by positive and negative reinforcement techniques. An observable behavioural pattern is repeated until it becomes habitual behaviour. The behaviourist perspective does not focus primarily on any mental activity, such as the process of learning, comprehending, reasoning, remembering or using language (Meinz, 2004). In the classroom, learning is a passive process; learners follow the structured activities with appropriate combinations of stimuli, reward and punishment, especially in the learning of basic skills. Knowledge is believed to transport directly from teachers and learning happens through repetition, imitation and practice tutorials (Pritchard, 2005). Even though people have learnt and benefited from this theory, it has been shown that this technique does not prepare learners to be creative thinkers or to develop problem-solving skills (Lightbown & Spada, 1999; Skinner, 2006). In second language acquisition, the drills of grammar and vocabulary are examples of the application of the behaviourist theory. This approach has been shown to not offer the maximum exposure to the foreign language and its use (Pemberton, Fallahkhair & Masthoff, 2004).

Teaching English in Thailand, as in other Asian countries, has been principally based on the behaviourist approach. As mentioned in the previous chapter, English has become an important tool in developing the nation and is commonly used by many companies for employment and promotion purposes, particularly tourism. Consequently, English is considered as the language for empowerment, learning and social development, and has been a compulsory subject in the elementary school curriculum since 1996 as a means to meet the requirements of the national curriculum. Unfortunately, the focus on English

teaching in Thailand has concentrated on drilling the grammatical aspects of English. This approach results in teachers being knowledge deliverers while students are passive learners who rarely develop their oral/aural skills, higher-order thinking skills or creativity (Donart, 2006; Foley, 2005; Mackenzie, 2002).

However, under the Thai National Education Act of B.E. 2542 (1999) and Amendment (2002), the Thai government has placed greater weight on the learning process of all subject areas including an emphasis on self-development, student-centred learning, critical thinking and problem-solving skills, lifelong learning and hands-on activities (Nonkukhetkhong, Baldauf & Moni, 2006; Office of the National Education Commission, 2003). Thus, the national language policy is for English teaching, especially in Thai universities, to be charged with placing more emphasis on the development of students' language proficiency, autonomous learning, independent work and self-accessed learning (Foley, 2005).

The government of Thailand has plans to better all Thai students' English proficiency for improved global communication, trade negotiation, email communication and higher education, as mentioned in the previous chapter. It is therefore crucial to understand constructivism learning theory which has become a leading theory and is recommended by the Thai national education reform act. This notion emphasises learners' discovering their own learning techniques. Each learner constructs his or her own rules, mental structures and concept of knowledge to make connections and meaning by reflecting on what he or she has studied or experienced (Mergel, 1998). Constructivism impacts on teaching as it allows learners to develop communication skills. They become active, creative and autonomous learners with a chance to practise their second/foreign language in real-life learning environments (Pritchard, 2005).

2.2.2 Constructivist learning theory.

This section compares and analyses aspects of the learning theory, *constructivism*, and the pedagogy, *project based learning* (PBL). Constructivism can be traced back to the developmental work of a philosopher of education, John Dewey, who believed that learners actively construct knowledge when they are thinking or motivated to solve problems. The significant concept is that learners are encouraged to be responsible and to

actively participate in their own learning (Clark, 1991; Field, 2006; Foti, n.d; Wilson & Liepolt, 2002).

In reviewing the literature on PBL, recent research indicates that the constructivist theory of learning is seen as an appropriate theoretical framework for supporting the implementation of project-based learning instruction (Gülbahar & Tinmaz, 2006; Muniandy, 2000; Sidman-Taveau, 2005; Tekinarslan, 2001; Welsh, 2006). With PBL, the emphasis is on challenging questions or topics of interest that drive learners to encounter “the central concepts and principle of a discipline” (Gülbahar & Tinmaz, 2006, p. 310). Learning becomes challenging. Learners face new learning situations that allow them to plan their own learning process so that they can achieve their goals and objectives (Florez, 1998). Blumenfeld, et al. (1991) stated that the driving questions should not be too easy or too difficult in challenging learners who are motivated to acquire ownership of their learning. These driving questions or topics of interest should lead students to an investigation of a real-world topic (Markham, Mergendoller, Larmer, & Ravitz, 2003). Learners can then try to find ways to answer questions, to solve difficulties and to generate outcomes. In addition, they are eager to learn what they do not know and carry out research and investigation to develop high quality work (Markham, et al., 2003; McGrath, 2002-2003).

A central concept of constructivist theory is the notion that learners build and create meaning and knowledge by applying and restructuring their existing knowledge as new ideas arise. Pritchard (2005) stated that this concept was originally established by Jean Piaget, one of the early leading supporters of a constructivist approach who describes two important learning processes: *assimilation* and *accommodation*. According to Piaget, assimilation is the way in which learners try to understand new information by connecting it with existing knowledge and storing it in a knowledge bank. Accommodation occurs when learners are unable to link old knowledge to new information because of contradictions with existing data, and they attempt to alter or adapt the new information to their present knowledge. Building an understanding of the world around them can gradually develop learners’ higher level of thinking (Gray, 1997) and enable them to gain “a deeper and broader understanding” (Pritchard, 2005, p. 25).

One of the main features of PBL is to encourage students to undertake fieldwork and to be in direct contact with useful resources while searching for data or solutions (Curtis, 2002). Students are able to participate in dynamic learning, make connections with prior knowledge and receive new information, and be exposed to real experience and hands-on learning. Hutchinson (2001) mentioned that PBL focuses on learning by doing. Students are not passive learners who only receive knowledge and information in the classroom from their teachers. They receive knowledge and produce outcomes by exploring and making connections between the real world and their own. They need to collect and accumulate information by conducting interviews and surveys, engaging in personal communication with experts and from the Internet. With this realistic approach to learning, students have an opportunity to construct meaning from their learning and develop higher levels of thinking which enhance their quality of content learning in subject areas. In addition, students can connect and summarise concepts by building an understanding of what is outside the classroom's walls and applying their perceived knowledge in problem-solving situations (Gülbahar & Tinmaz, 2006; Thomas, 2000). Curtis (2002) confirmed that experiencing how things work in authentic situations will be retained as knowledge.

Based on constructivist theory, assessing learning should not be a separate activity. The assessment is integrated within individuals' learning processes so that they can evaluate and improve the quality of their learning. Assessment can focus on the interaction of students during learning, problem-solving strategies, group or pair activities, students' projects and observation as well as tests (Atherton, 2005; Kaplan, 2002). This approach which links learning and assessment is different from behaviourist theory.

Similarly, formative assessment plays a critical role in PBL as it can be built into this integrated learning approach. In general, students produce projects over an extended period of time. All the processes of learning, including planning, collection of information and creation of artefacts should be assessed (McGrath, 2003). It is important for teachers to frequently observe learners' skills and knowledge while students generate their projects (Burt & Van Duzer, 1999). In addition, self-assessment and peer assessment can be integrated into formative assessment. The self-assessment allows learners to evaluate their own work and progress while the peer assessment gives the opportunity for group members to evaluate their group work, progress, and the skills and knowledge gained

(Burt & Van Duzer, 1999; Moss, & Van Duzer, 1998; Sidman-Taveau, 2005). To identify their own learning and assess their own ability provides lifelong learning for students (Burt & Van Duzer, 1999).

It is clear that characteristics of the constructivist theory, which are linked to a variety of design features of language instruction, support the implementation of PBL. Constructivist learning changes passive learners into active learners who individually construct their knowledge and learning. In addition, constructivism seems to match the policy and plan detailed in recent changes to the policy document for national curriculum and education in Thailand.

As PBL links to the theory of constructivism, it could be an appropriate teaching approach for Thai classrooms. However, a justification for PBL is needed to verify whether it can help increase Thai university students' English language proficiency. It is critical to further investigate aspects of learning theory that support the contention to apply PBL to the classroom practices, particularly social constructivism.

2.2.3 Social constructivism learning theory.

Constructivism theory impacts on learning as the curriculum is modified to connect to students' current structures of knowledge. Teachers encourage students to discover knowledge for themselves by providing materials needed for learning. Students become important in assessing their own learning progress (Mergel, 1998). However, under the theory of constructivism a learner is viewed as a 'lone scientist' (Jarvis, 2005, p. 39; Pritchard, 2005, p. 111). That is, learning appears to happen in isolation from a social environment (Pritchard, 2005). Knowledge or understanding must be constructed individually by each learner and cannot be handed over from one person to another (McLeod, 2003). Since it has been accepted that learning takes place in a social environment, learners learn by social interactions with more knowledgeable people (Jarvis, 2005). It follows that social constructivism is a further development of, and adds an important aspect to constructivism theory.

The important theme of social constructivism is the social interaction between learners and those who help them to understand ideas or concepts or to perform or think more effectively and creatively (Atherton, 2005; Guerra, 2004). A Russian psychologist,

Vygotsky, greatly influenced this branch of constructivism which gives a high priority to the “Zone of Proximal Development” (ZPD) (Pritchard, 2005).

Vygotsky’s theory explained that the cognitive development of learners depends on ZPD: a certain space or level of understanding “which is just above the level of understanding” (Pritchard, 2005, p. 31) of each learner. Learning best occurs in a challenging environment with great support (Hammond & Gibbons, 2001). Individual learners will move to this ZPD when they get help or guidance from people who have higher related skills so they can perform or work effectively (Atherton, 2005). Morris (2007) stated that to get to this zone to develop their thinking and problem-solving skills, learners need to interact socially with people. Learners can adopt problem-solving skills used by others, then develop and apply them to their own problems. In Vygotsky's theory, involved teachers who are active participants, more capable peers or experts are required to fulfil the role of being an assistant or facilitator (Sidman-Taveau, 2005). The process of supporting learners by using a variety of methods as required in order to promote learning is called *scaffolding* (Jacobs, as cited in Verenikina, 2003).

The term *scaffolding* means “the temporary assistance that teachers provide for their students in order to assist them to complete a task or develop new understanding, so that they will later be able to complete similar tasks alone” (Hammond & Gibbons, 2001, p. 3). The teacher will remove the scaffolding once the students master the tasks. The authors explained that teachers normally play a great role as the more knowledgeable person helping students’ learning and maximizing their existing levels of understanding or present competence. Teachers should know when and how to intervene and use a variety of scaffolding strategies so that students develop their own powerful thinking skills and confidence, allowing them to work independently and apply their understandings in a new learning context (Sharpe, 2001).

There are two levels of scaffolding (Sharpe, 2001). First, *designed-in scaffolding* is devised during the planning phase and built into a unit or lesson plan to assess outcomes (such as knowledge, skills and understanding) and the students’ previous experiences. Teachers create a set of learning experiences to develop students’ new knowledge and skills. Second, *point-of-need scaffolding* or *contingent scaffolding* is support from teachers who decide and provide what learners require to develop their understanding at

the time of need. Hammond & Gibbons (2001) stated that “the sensitivity and skills” of teachers in responding to requests for support by students during the flow of the lesson are considered as “the defining quality of teaching” (p. 5). Some techniques of scaffolding are discussion, supplementary materials, tasks that support individual’s needs, guidelines, examples and questioning (Pritchard, 2005). Sharpe (2001) argued that in contingent scaffolding, teachers ask questions and listen carefully to students’ answers and use various strategies to influence their thinking or to make their thinking clearer. For advanced or adult learners, all types of scaffolding help to broaden and adjust their knowledge to suit the specific content and learning goals (Feez, 2001). The concept of scaffolding is the fundamental part of social constructivist theory of learning.

2.2.3.1 The theory of social constructivism and the pedagogy of project-based learning.

The theory of social constructivism emphasises the importance of social interactions which affect cognitive development and the ZPD together with the role of scaffolding. Many second/foreign language teaching pedagogies contain implications of social constructivism and project-based learning is one approach which is supported by the theoretical basis of social constructivism (Helle, Tynjala, & Olkinuora, 2006; Sidman-Taveau, 2005; Sidman-Taveau, & Milner-Bolotin, 2001).

The role of scaffolding is critical to gain knowledge and skills in project-based learning (Grossman, 2007), and scaffolding can promote language development of English as a Second Language (ESL) learners (Dare & Polias, 2001). Gibbons (2002) stated that to succeed in collaborative and social learning, ESL learners need to be involved in real-life, meaningful and challenging tasks, and that when learners need scaffolding to extend their levels of understanding, the responses from teachers should be appropriate for the language and tasks that cannot be accomplished alone.

As part of project work, teachers and peers can provide valuable scaffolding to support deeper learning, critical thinking and problem-solving skills (Grant, 2002; Newell, 2003). A PBL teacher is a facilitator whose role is to assist discovery, not deliver information to learners; whose role is to encourage learners to learn how to learn and identify the important skills needed to be practical learners now and into the future (Newell, 2003). As PBL is designed to support students on their journey to discover themselves and the

world, teachers generally get input from students. After that, teachers provide scaffolding directed at the needs of each student or group (Sidman-Taveau, 2005). Since the process of constructing the artefact drives learners to work their own way toward the solution, the facilitator will help challenge the learners to do their best to achieve their goals and objectives and help sharpen their thinking by giving feedback to individuals and groups (Helle, Tynjala, & Olkinuora, 2006).

According to Markham et al. (2003), teachers in PBL “facilitate and manage the process of learning” (p. 8). In other words, the teachers create tasks or activities that allow students to think or solve the problems, then assist them with tackling the problems or fighting with information for their answer. Markham et al. suggested that teachers should have “interpersonal and communication skills” (p. 9) and the ability to manage the open-ended learning process. That is, teachers should communicate extensively and have good relationships with learners, take an interest in learners’ lives outside the classroom and show care to them (Newell, 2003).

Another form of scaffolding in PBL is student-student interaction or peer collaboration which reflect the theory of social constructivism (Pritchard, 2005; Sidman-Taveau, 2005). Students in PBL are active learners who are involved in social interactions in the classroom. They are encouraged to help each other by giving suggestions for improving artefacts or solving problems and sharing perspectives of the subject, plans, resources and skills during the learning process (Stoller, 1997). Support in this way can promote critical skills (Pritchard, 2005). In addition, students clearly understand what to learn and how to learn through dialogical, cooperative and collaborative activities of PBL (Muniandy, 2000; Pritchard, 2005).

According to the two types of scaffolding in PBL, it can be concluded that the roles of teachers and students in traditional methods of teaching are different from those in PBL. In PBL, teachers are facilitators who challenge students to achieve their learning goals and support the development of understanding, while students are active learners learning through social interaction. To achieve the Thai national education objectives, it is challenging to investigate the evidence of integrating PBL into Thai university classrooms.

PBL is one of the applications of communicative language teaching. The trend in English language teaching has moved away from the traditional methods to communicative language teaching as a part of the current policy of educational reform in Thailand (Jarvis & Atsilarat, 2004). It is crucial to examine the theoretical background of communicative language teaching and explore the characteristics of the teaching/learning process, student-teacher interactions, areas of language and language skills of this teaching methodology.

2.3. Language teaching methods: psycholinguistic theories, communicative competence

2.3.1 Psycholinguistic theories.

In the 1940s and 1950s, language teaching was based on behaviourist psychology and structural linguistics (e.g. audio-lingual method), which strongly influenced second and foreign language teaching. The audio-lingual method emphasised inductive learning of grammatical rules and language structures that were taught through drillings and practices (Nunan, 1991).

Chomsky's work (Chomsky, Belletti, Rizzi, 2002) in psycholinguistics was strongly influential in changing a reliance on behaviourist approaches to second language teaching. Chomsky did not support stimulus control conditioning as an explanation in the creativity of language (Dixon, 2004) but believed that children are born with a language acquisition device (LAD). According to Chomsky, this 'little black box' helps the child in learning to speak their own native language in a short time without the assistance of adults. Thus Chomsky believed that language can be acquired through the development of the innate structures which allows human beings to distinguish speech sounds, organise linguistics data and creatively combine and construct words, phrases and statements (Brown, 2000).

Through his work on cognitive psychology, Chomsky developed transformational grammar which influenced the cognitive code method (Nunan, 1991; Spada, 2007). With this method, language learning is "inventive" and "stimulus free" and is not based on habit formation and memorisation (Ellis, 1990, p. 38). Learning takes place in a mental process representing how knowledge of rules develops and how learners utilise and integrate new knowledge with existing constructed rules to interpret and express their

ideas, thoughts and feelings (Ellis, 1994). In addition, deductive learning as a basis for practice is emphasised in the cognitive code method (Ellis, 1990). Even though explicit instruction of grammar is taught in classrooms and drills are used in some classes, learners have to understand what they are studying and utilise their cognitive skills to understand the rules. In addition, learners are encouraged to actively engage in activities which provide a chance to use language productively (Ellis, 1990). Language learning process is considered to be an “active, intelligent, rule-seeking, problem-solving process” which allows learners to reason and examine how the target language functions (Nunan, 1991, p. 233). Furthermore, language learning process is the process by which learners learn to test their hypotheses for language structure (hypothesis-testing). In this manner, hypotheses are true and well proven by the time the new language is accepted and understandable. If their language creation is faulty and mistaken, learners need to revise their hypotheses to develop their language whilst in the process of communicating (Chomsky, 2006).

Chomsky’s theory of linguistic competence has been highly controversial in distinguishing between competence and performance. In language learning, Chomsky has separated competence (linguistic/grammatical), which consists of knowledge of grammar structures (Ellis, 1994; Valenzuela, 2002) from performance, which involves the process of applying the rules to the actual utterances (Brown, 1996). With the model underlying linguistic competence of the ideal native speaker, the notion of a homogeneous speech community and perfect language knowledge and performance is a defective indication of competence because of “the process of complications that are involved in speaking or other forms of language production, and which lead to errors and slips” (Mitchell & Myles, 2004, p. 10). Therefore, there were arguments that Chomsky’s theory of competence is limited, structured around the grammar rules and idealised about perfect knowledge available to the ideal speaker-hearer (Brown, 2000; Mitchell & Myles, 2004; Ohno, 2002). With the inspiration of Chomsky’s theory, the cognitive code approach was created viewing “language learning as rule acquisition and hypothesis testing” (Celce-Marcia, 1991, p.223) and attracted many language educators but “no clear-cut methodological guidelines, nor did any particular method incorporate this view of learning” (Richards and Rogers, 2001, p. 66).

2.3.2 Communicative competence.

In the 1970s, there were various theories of language learning which were not merely focused on the acquisition of knowledge of grammar rules but emphasised meaning, function and social context. In particular Hymes and Halliday's work proposed concepts that theoretically and originally underpinned CLT (Brown, 2004; Feez, 2000; Savignon, 2002).

In America, the term 'communicative competence' was invented by sociolinguist, Dell Hymes, who reacted to Chomsky's linguistic competence of the ideal native speaker and hearer. Hymes introduced the theory of communicative competence, which is rather an interpersonal construct and one that can be observed by explicit performance of two or more people interacting through communication (Brown, 2000). Hymes expanded on Chomsky's linguistic competence by considering positive aspects of social and cultural factors of the language. He believed that language learners can only communicate successfully if they have more than a knowledge of grammar. For example, they need knowledge of how to use language appropriately in social situations (Feez, 2000). Hymes' communicative competence involves what rules are used, and how to create accurate utterances and use them correctly (Salmani-Nodoushan, 2007). It is clear that Hymes has retained linguistic competence as a part of communicative competence.

Other American researchers and applied linguists agreed with Hymes in terms of linguistic competence. For example, Canale & Swain (1980) strongly believed that knowledge of grammar (grammar competence), knowledge of how to use language with appropriate social meaning in the communication context (sociolinguistic competence) and verbal and nonverbal indications that are used due to the failure of communication (communication strategies) are important for communicative competence (Ohno, 2002; Zhuang, 2007).

Learning a language is more than a system of language in Widdowson's view. Widdowson (1978, 1989) believed that communicative competence consists of knowledge of grammar rules (linguistic competence) and the ability to use the rules to communicate appropriately and successfully (pragmatic competence). Grammar study must develop from semantic facets to allow learners to practice the language for successful

communication in meaningful contexts. Authentic tasks can develop students' motivation and prepare them for real life situations (Zhuang, 2007).

Hymes', Canale & Swain's and Widdowson's communicative competence has been further extended by Bachman, who built up the structure of language ability used to design and develop language tests and interpret the results correctly (Jordan, 2004; Bachman, 1990). Bachman created Communicative Language Ability (CLA) which includes: (a) *language competence* - the ability to create and interpret discourse in language use, and the ability to relate words, expressions and texts to communicative goals and social settings; (b) *strategic competence* - the ability to relate language competence to one's own knowledge structures and the specific context that communication occurs. With this competence, learners engage in goal setting, assessment and planning to establish ways which aim for effective communication; and (c) *psychophysiological mechanisms* - the process involved in actual language use that distinguishes "the *channel* (auditory and visual) and *mode* (receptive and productive) in which competence is implemented" (Bachman, 1990, p. 108; Bachman & Palmer, 1996; see also Jordan, 2004; Widdowson, 2003).

Besides Hymes' communicative competence notion in America, in England, the teaching of second and foreign languages was rooted in Halliday's functional linguistics theory, which is viewed as "a signalling system, embedded within an encompassing cultural matrix" (Urban, 1981). Halliday viewed language as 'a means of functioning in society' (Kumaravadivelu, 2006, p. 8), and proposed fundamental functions of language which contained three levels of meaning: ideational function (language which involves language users' experience of the real world and his/her own inner world), interpersonal function (language which involves social relations) and textual function (language which makes links to ideational and interpersonal functions to enable language users to structure a recognised text). With the understanding of these three layers of meaning, Halliday believed that language users can comprehend the meaning potential within the language.

In summary, Halliday's concern was how language is created and expressed in a culture's social system in appropriate ways. His view of language focused on the ability to use language in context, in contrast to Chomsky's view which emphasised a complex and abstract system of cognitive processing of rules (Jordan, 2004).

Hymes' communicative competence is comparable to Halliday's "meaning potential", as both theories are based on "speech communities and the integration of language, communication, and culture" (Savignon, 2002, p. 2). This implies that language teaching needs to be carried out in sociological and sociocultural behaviours to empower learners to effectively use language relevant to speech community. Berns (1990) stated that both Hymes and Halliday focused on the role of language in social contexts as the ability of a person to use language can be shaped by social life. It can be concluded that Hymes and Halliday expressed their interest in the relationship between language and meaning, function and social contexts (Fees, 2000)

This perspective on language gives a clearer explanation of communicative competence. That is, language learners cannot learn only language use but they have to learn and comprehend language usage. In addition, language is seen as having both social and functional uses which influence learners to function appropriately and successfully in a particular context (Berns, 1990). This reflection of language was the beginning point of a notional functional syllabus (Finocchiaro & Brumfit, as cited in Tudor, 2001; Wilkins, as cited in Spada, 2007) and the concept of communicative approach in second and foreign language teaching (Widdowson, 1978). Based on the above reflection of language, a method of instruction called communicative language teaching (CLT) (Tudor, 2001) was developed.

Various theories of second language acquisition have been developed and shaped the understanding of CLT, including Krashen's *comprehensible input hypothesis* and Long's *interaction hypothesis* (Sidman-Taveau, 2005; Spada, 2007).

2.3.2.1 Comprehensible input hypothesis.

This theory suggests that the language learner acquires language by receiving comprehensible input that is one step beyond their own current level of linguistic competence, and that the input (message) must be comprehensible enough for the meaning to be understood. That is, when language learners who are at level "i" receive comprehensible input that is level "i+1", the acquisition of language can occur (Krashen, 1982). According to Krashen, a teacher in a classroom monitors written and spoken language of students, and helps modify and provide comprehensible input that is slightly

beyond the students' knowledge level. Therefore, students must be actively engaged and work closely with their teacher and peers to comprehend that input and acquire additional knowledge of the new language (Courcy, 2002). As the goal of language acquisition has been moved from focusing on form to communication or the negotiation of meaning, Krashen's theory presents language as not a result of behavioural practices but of language which is directed to learners' current knowledge. Although Krashen's work has been criticised by other second language acquisition researchers, his theoretical work on comprehensible input motivated much interest among second language teachers, and became a vital idea for teachers to succeed in promoting acquisition in language classrooms (Ellis, 1990; Sidman-Taveau, 2005). His work has influenced and supported CLT as CLT focuses on the increase in comprehensible language input (Spada, 2007).

2.3.2.2 Interaction hypothesis

Like the comprehensible input hypothesis of Krashen, the interaction hypothesis of Long focuses on comprehensible input that promotes acquisition (Ellis, 1990). The interaction hypothesis is based on interaction occurring through group work that can lead to acquisition and greater comprehension for language learners. There is negotiation of meaning when there is a two-way conversation in the target language (Long, 1983; Long, 1996). Long further explained that language learners create meaning negotiation by using interactional modifications (e.g. comprehension checks, topic shifts, clarification requests, etc.) which create comprehensible input (learner production) and later facilitate language acquisition. Therefore, classroom tasks need to be authentic tasks which learners can perform to negotiate meaning in various contexts. The central issue is that meaningful, interactive, conversational tasks are believed to create the opportunity for language learning and provide greater understanding of meaning rather than forming grammatical structures (Jordan, 2004).

In light of these views, the comprehensible input hypothesis and the interaction hypothesis support the development of CLT as these hypotheses hold an idea of involving language learners in more interactive learning tasks to develop their communicative abilities. Learners are able to obtain more comprehensible input through meaningful communication (Chen, 2005; Spada, 2007).

2.4 Communicative language teaching approach (CLT)

As interest in CLT has risen since the 1970s, and it has become a current trend in research and the most prominent approach to second and foreign language teaching (Brown, 2000; Spada, 2007), it is critical to understand the focus of CLT and how it is integrated into language teaching. In CLT, communication or communicative competence became a major goal of language teaching (Kim, 2003; Johnson, 1995; McKay, 2002; Savignon, 2002). In order to promote communicative competence, students should be able to communicate fluently and accurately in the target language (Gagnon, 1999; Mora, 2002; Snow, 1992), and be able to “use the language appropriate to a given social context” (Larsen-Freeman, 1986, p. 131). Learners need to be actively engaged in constructing intent and use the target language as a tool for communication of meaning (Littlewood, 1981). Learners should be involved in class discussions and have practice negotiating meaning among their peers and teachers. Learners should be motivated and encouraged to express their own thinking, feelings and needs. There are many instructional ways to support learners to reach the goals of language learning. The CLT approach enhances second language acquisition and engages students both in meaningful classroom activities and in various social contexts (Boyd & Maloof, 2000; Johnson, 1995).

The CLT approach has been interpreted to focus on language use instead of language usage. As learning involves the integration of different language skills (Gagnon, 1999; Mora, 2002; Snow, 1992), a concern about focusing on meaning rather than on form has risen. Spada (2007) argues that a balance between practising form and meaning should be further investigated, as research has indicated that success with reading and writing has helped in second language learning.

In summary, the shift of this pedagogy shows the difference in language learning between past and present methodologies. The language laboratory was traditionally used to listen to taped language but has now changed to a multimedia centre. Learning was limited to the classroom environment but is now encouraged to occur outside the classroom which is connected to society, the community and the world. Teachers and students use textbooks and the Internet as teaching and learning resources, and educational software is a part of the learning system. Learners have the opportunity to experience information, and to seek and create target language in meaningful contexts (Kern, 2000; Richards, 2006).

As mentioned in Chapter 1, a number of teaching approaches incorporate the applications of CLT and PBL. There are a number of studies which have documented the success of using PBL in the classroom with second language learners (e.g., Beckett & Slater, 2005; Finch, 2003; Johnson, 2003; Markham et al., 2003; Sidman- & Milner-Bolotin, 2001; Sidman-Taveau, 2005; Sritiwong, 2000; Sudrung, 2004; Termprayoon, 2002; Yun, 2000) and the features of PBL complement the features of CLT. Further details related to results of PBL are examined at a later point in the section called *PBL in Language Learning and Benefits*.

As many Thai learners are incapable of using communicative English efficiently after studying English for 12 years (Kaewmorakot, 2005; Mackenzie, 2002), it appears that PBL could be a promising teaching approach to develop Thai learners' constructive learning. In order to better understand how PBL links theory and practice, the following section details the history of PBL, and discusses the definitions and description of PBL.

2.5. History of PBL

PBL is not a new approach in education. Beckett (2006b) stated that PBL can be traced back to the mid-1800s, and was first created by David Snedden who taught science in American agriculture classes. Later, in the early 1900s, PBL was further developed by William Heard Kilpatrick, John Dewey's student, and focused on the need for learners to have a purposeful activity (Beckett, 2006; Muniandy, 2000, Wolk, 1994). In other words, learners in PBL had the opportunity to construct knowledge by generating their projects based on their interests and individual differences. They made connections between their new knowledge and their existing knowledge and were able to apply them to similar settings. They learnt in a meaningful context while creating the end product (Wrigley, 1998).

2.6 Definitions and Description of PBL

As PBL has been implemented in various disciplines in the classroom, there are many definitions of PBL (Welsh, 2006). In disciplines other than second and foreign language, the Buck Institute for Education (BIE), an American research and development organisation, defined PBL as "a systematic teaching method that engages students in

learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks” (Markham, et al., 2003, p. 4). Solomon (2003) explained that PBL is a process of learning that students are responsible for in their own education. Students work collaboratively to solve problems that are “authentic, curriculum-based, and often interdisciplinary” (p. 10). Learners learn how to design their own learning process and decide what and where information can be collected. They analyse and synthesise the information then apply and present their new knowledge at the end. Throughout the process of learning, teachers act as managers and advisors.

Thus, PBL is a teaching method aimed at problem solving in a collaborative environment over an extended period of time. It is a hands-on experience which starts from driving questions or problems that create activities and leads to the meaningful products at the end.

PBL was initiated into second language education during the seventies (Hedge, 1993). In a second language classroom, PBL is a systematic instruction method that develops students’ language skills, cognitive domains and global personality skills through valuable projects (Ribe & Vidal, 1993). Moss and Van Duzer (1998) defined PBL as “an instructional approach that contextualizes learning by presenting learners with problems to solve or products to develop” (p.1). Fried-Booth (2002) developed a definition of PBL as “student-centred and driven by the need to create an end-product” (p. 6). The author further explained that PBL is a means to create an end-product in a real-world environment with confidence and independence. Project work is driven by the intrinsic needs of students who develop their own tasks individually or in small groups. This approach creates links between real-world language and language in textbooks.

PBL was consistently presented by the majority of authors in second language and foreign language practices (Florez, 1998; Hutchinson, 1993; Maley, 2002; McGrath, 2002-2003; Ribe and Vidal, 1993) as a powerful and motivating teaching method to develop learners’ second and/or foreign languages through learning by doing. Language learners often see the target language as something outside their world since they have no chance to employ the language learnt in the classroom or to use it outside the classroom. PBL allows learners to work together with hands-on experience in an authentic and meaningful

context (Fried-Booth, 2002) and drives language learners with a problem to solve or a product to generate. Learners either work alone or in groups with their own responsibility and the challenge to solve authentic problems and decide their own approaches for accomplishing their goals (Hutchinson, 1993).

At the end, students present their newly acquired knowledge and a product which shows their learning. They are assessed throughout the process by peers and teacher. The teacher's role throughout is as a facilitator and advisor. Moreover, PBL develops useful research and study skills, such as the use of reference resources and modern technology, for example, computers, the internet and its powerful search engines, all of which are beneficial for lifelong learning (Markham, et al., 2003; McGrath, 2002-2003).

When learners see the language that can be used in their lives and is applicable to their tasks or needs, they can develop their language skills and communicative competence and gain confidence, co-operation, imagination, independence and self-discipline. Finally, they can communicate in the target language about their life, their culture and their world. Hilton-Jones (1988) mentioned that PBL is an appropriate approach that suits language classes with mixed abilities because it allows learners to work at their own pace and at their own level. This instruction provides learners with an understanding of their real needs for using language (Dhieb-Henia, 1999; Hilton-Jones, 1988). In addition, PBL is a teaching method that enhances language and content learning in English as a foreign language (Guo, 2006).

From the above definitions and explanations of PBL in second language and foreign language studies, the definition of PBL in this study is summarised as *an in-depth learning focusing on real-world problems and challenges that engage students who work as a team through meaningful activities resulting in an end product.*

It is evident that PBL is a possible means for enabling students to develop their language, content and communicative skills. They can use and integrate language and factual knowledge in their real lives while conducting and generating the project. This is opposite to traditional classrooms, where teachers transfer knowledge from textbooks to students. Therefore, it is critical to investigate PBL implemented in a Thai context, and to examine whether Thai students are able to develop their English proficiency, learning skills and

self-confidence through the use of PBL in their learning procedures. To better understand how PBL is distinguished from other similar methods of learning, such as problem-based learning, the similarities and differences between these two educational methods are presented in the following section.

2.6.1 The comparison of project and problem-based learning.

Both problem-based learning and project-based learning have the same abbreviation known as *PBL* (Lee & Tsai, 2004), although in this study the abbreviation PBL is only used to refer to project-based learning. These two instructional methods focus on authentic and hands-on investigations to enhance learning. Students are given open-ended projects or problems with more than one correct model or answer, intended to allow students to develop their decision-making and problem-solving skills while actively seeking a solution (Moursund, 2002). In the meantime, students acquire a conceptual understanding of specific content knowledge. They work collaboratively and discuss their ideas throughout the process of learning (Jones, 1996; Park & Peggy, 2007; Markham, et al., 2003). As these two teaching methods are built on constructivism, students construct their own learning from their experience and reflect on what they have learned through their learning practices. Deep learning is created in the learning process (Sas, 2006). In addition, the two methods of learning emphasise the student at the centre with teacher as a facilitator or coach (Markham, et al., 2003). The teacher encourages the students to connect their previous knowledge to the new knowledge related to the problem. Students learn how to communicate their new knowledge to others, question their peers and share their learning.

Even though both problem-based learning and project-based learning have many things in common, they have distinctive points of learning. In problem-based learning, a teacher starts with the presentation of an ill-structured problem relevant to the field in which students will become proficient. Students start to identify the problem and factors they need more information about, and pose questions for information they do not know. The teacher guides the students to the questions that are pertinent and essential to this stage of their study (Engel, 1997). Some questions are followed up by the whole group and some are allocated to individuals to find the answers. In addition, the teacher discusses the resources that are needed for the research with the students. The students construct plans to find their own answers, create solutions, and later share the information or solutions

with their peers (Boud & Feletti, as cited in Duch, Groh, Allen, 2001). The goal of problem-based learning is problem-solving skills which contain various approaches to counter problems, while an end product is not a key concern (Jones, 1996).

Unlike problem-based learning, the process of project-based learning typically begins with driven questions or problems that help students to select their topic of interest or a topic which they believe is important and relevant to their studies. Students work collaboratively and design plans for their research before commencing the project. At the end, students have to develop a meaningful product, presentation, or performance (Markham, et al., 2003; Moss and Van Duzer, 1998; Stanley, 2000). Even though the principal goal is the final product which can be shared with others and evaluated (Brophy, 2004; Sas, 2006), the most important feature that shows the success of learning is the production process in which students acquire their new content knowledge and communicative, social and management skills (Curtis, 2002; Guo, 2006; Helle, Tynjala, & Olkinuora, 2006; Markham et al., 2003; Solomon 2003).

It is clear that in project based learning, students control their own learning and collaboratively work together to achieve their goals. They have the opportunity to construct their knowledge and demonstrate their creative thinking and skills through their projects. The characteristics of PBL activities are different from other teaching approaches; therefore the following section identifies the principal features of PBL.

2.7 Principal Features of PBL

The characteristics of PBL are consistent among educators who studied and implemented this teaching method (Curtis, 2002; Hedge, 1993; Helle, Tynjala, & Olkinuora, 2006; Solomon 2003; Stoller, 1997). Features of PBL include: (a) complex explorations over a period of time; (b) a student-centred learning activity whereby students plan, complete and present the task; (c) challenging questions, problems or topics of student interest which become the centre of the project and the learning process; (d) the de-emphasis of teacher-directed activities; (e) frequent feedback from peers and facilitators, and an opportunity to share resources, ideas and expertise through the whole process in the classroom; (f) hands-on activities and the use of authentic resources and technologies; (g) a collaborative learning environment rather than a competitive one; (h) the use of a variety

of skills such as social skills and management skills; (i) the use of effort in connecting ideas and acquiring new skills during different stages of projects; (j) the production of meaningful artefacts that can be shared with peers, teachers, and experts in a public presentation; and (k) assessment in both the process of working from the first stage to the last stage and the finished project.

It is clear that PBL has several distinct characteristics which build upon the essence of authentic learning. Therefore, it is important to study how authentic learning facilitates a project based learning environment.

2.7.1 Authentic learning.

Authentic learning allows students to experience relevant and real-world tasks. It makes their learning more meaningful by connecting prior knowledge to their current study. Herrington and Herrington (2006) stated that students in authentic learning environment are “engaged in motivating and challenging activities that require collaboration and support” (p. 2). Students have real-life roles which are similar to the real world outside the class room and these necessitate teamwork, negotiation, and the use of problem-solving skills (Woo, Herrington, Agostinho, Reeves, 2007). The teacher acts as a facilitator to guide students to achieve their learning’s goals by giving support and guidance throughout the learning process.

Authentic activities are one of the main features of PBL as students have an opportunity to connect to real world situations while completing their projects. (Markham et al., 2003) A PBL project allows students to engage in authentic situations and practices, for example, communication with people outside the classroom and using problem-solving, teamwork and critical thinking skills. They have the opportunity to use other than their textbooks, they need to search and investigate their project through the use of other resources (e.g. Internet, local community, advertising materials, and verbal communication in the real world.)

It is clear that authentic tasks embedded in PBL have the potential to match the real-world contexts. Challenging topics should encourage students to communicate meaningfully and purposefully. Students should have a chance to use what they learnt from previous and

present classes to communicate and provide ideas in real ways. Students should have opportunities to read and listen to valuable sources of input and converse and interact with people outside the classroom. After going through a complex process of in-depth learning, students then should have the opportunity to create authentic product that is directed towards their ultimate goal.

2.7.2 Roles of Teachers and Students in PBL.

Traditionally, Thai teachers have been the centre of the classroom and controlled both the content and the method of teaching and learning. Students have become passive recipients with no degree of control, especially in content language production. Learning grammatical rules is being emphasised instead of the use of a communicative approach (Smyth, 1987). However, under Thai education reform of 2002, the teaching methods, roles of teachers and students, and the processes of assessment are to be changed (Fredrickson, 2003a). The Thai education policy considers the teaching of English for communicative purposes to be important; therefore the roles of teacher and student need to be changed to successfully reform the teaching and learning processes (Kaewdang, 2000).

As CLT is an approach where second languages are taught with a focus on using the language for communication purposes, the interaction in the target language between teachers and students and other learners is emphasised and the use of authentic and meaningful language is introduced (Mangubhai, Marland, Dashwood, Son, 2007). To implement CLT in the classroom, the comprehension of the teacher and student roles is taken into consideration. The concept of the teacher in communicative classrooms is not only as an instructor but as a facilitator of learning (Brown, 2000; Larsen-Freeman, 1986; Littlewood, 1981; Nunan, 1989). There are many tasks for teachers to perform, such as organising activities, establishing learning environments for students and promoting the use of the target language for communicative purposes. In addition, during communicative activities a teacher acts as a resource person, introducing new language that students need to complete their activities, and monitoring and evaluating their language competence (Littlewood, 1981). When students need assistance or advice, the teacher can be an advisor and a co-communicator who participates with students in

learning activities without interfering with their learning initiative (Larsen-Freeman, 1986; Littlewood, 1981).

The role of the learner is related to the role of the teacher. While teachers create situations to promote communication, students are language users who actively use the target language, trying to negotiate meaning and learning to use language form appropriately (Nunan, 1989; Larsen-Freeman, 1986). During communicative activities, learners are experts of content while teachers become researchers and learners who observe students' learning and appropriately enhance their knowledge and skills (Breen & Candlin, as cited in Richards & Lockhart, 1994; Nunan, 1989). It is clear that teachers are less formal and less dominant when students have more control over their own learning. As learner autonomy is incorporated into the communicative language classroom, learners become involved in the curriculum process in tasks such as content selection and assessment. Therefore, learners make choices in their learning and their roles are changed to develop language skills and how-to-learn skills (Nunan, 1989).

As previously stated, PBL is one type of learning associated with the CLT approach. To bridge performance between the use of target language in class and the use of it in situations outside class, it is important to consider the roles of teachers and students in PBL. PBL allows students to find out about the world and themselves: who they are and what they want to learn and become. Therefore, teachers play a great role in assisting students to discover their own journey (Newell, 2003).

A teacher in PBL is a facilitator of skill acquisition and an advisor. As a facilitator, the teacher generates activities and students have opportunities to draw and strengthen their skills in inquiry, critical thinking and problem-solving (Newell, 2003; Fried-Booth, 2002). Teachers need to establish an environment conducive to constructive inquiry and create and encourage risk taking and thinking (Blumenfeld, et al., 1991). To ensure that successful environments flourish, teachers can help learners develop goals, monitor the process of learning, answer questions raised by students and suggest options whenever students reach a deadlock (Woodward & Cuban, 2001). In addition, teachers need to maximise students' thinking and learning and help students who struggle to find solutions (Newell, 2003). In the early stages of PBL, teachers need to help students to develop an assessment tool such as a rubric, which is used at different stages of the project lifecycle

to help students clearly understand what is expected of them. Involvement in devising rubrics helps students become motivated and develop a sense of ownership of their own learning (Stanley, 2000).

During learning or creating projects, students may have difficulties and struggle to create high quality artefacts. For this reason, the teacher needs to model, guide and support learners so that they can undertake projects successfully (Markham, et al., 2003). In addition, teachers need to monitor progress, give feedback and evaluate overall learning while not placing focus on performance, such as grades and right or wrong answers. With too much focus on performance, students tend to avoid risk taking and are afraid of making an error in class. They therefore make “less use of cognitive and metacognitive learning strategies” (Blumenfeld, et al., 1991, p. 384). Clark (2006) emphasised that teachers have to be careful not to put their ideas into students’ projects as students need to investigate their own ideas, design their own learning and construct their own artefacts. Postholm (2005) stated that students’ voices should be heard in the classroom, and that they should be treated as responsible learners who need to find out what they want from their learning and develop their “intrapersonal competence or intelligence” (p. 533). Once students have a chance to question, imagine, struggle for answers, guess answers, challenge each other, compare facts and create outcomes, they are motivated and fully engaged in their in-depth study (Katz & Chard, as cited in Clark 2006).

Teachers need to be equipped to handle foci for both short-term and long-term second language projects. Fried-Booth (2002) stated that for short-term projects, language and grammatical structures can be predicted so the teacher can easily monitor language use and examine students’ comprehension. On the other hand, for long-term projects, it is difficult to predict what language points the students will need as students’ knowledge of language and grammatical structures gradually rises during the processes of discovering their learning. Teachers usually generate the language content or specific grammar points after seeing the knowledge gaps of students and assist them in achieving their learning goals. The teacher may also need to assist in establishing the project, timeline and goals (Stanley, 2002).

Not only is a teacher in PBL a facilitator, but also an advisor. Newell (2003) stated that the advisor should establish rapport with students and care for students by helping them to

achieve their journey of learning. Students need “tough love, understanding and comforting” (p. 36) during their work on projects. To make students feel confident and motivated throughout their project, teachers need to support and encourage them psychologically and morally by simply being with them and spending time with them (Fried-Booth, 2002). However, teachers should be aware of the abilities, aptitudes and learning styles of students who have different paces of learning (Markham, et al., 2003).

As well as being a facilitator and an advisor, the teacher in PBL must also be a knowledgeable master. Blumenfeld et al. (1991) said that it is important for teachers to have sufficient knowledge about the project and its content so that they can assist students effectively. In addition, teachers should possess the process skills needed such as thinking and problem-solving skills, and be able to scaffold instruction in order that they can gradually pass authority to the students to be in charge of their own learning. Furthermore, the teacher needs to ensure that resources are available and show students how to access and use them (Stanley, 2000).

It is clear that the role of the teacher in PBL is not only to support students’ learning but also to develop awareness of their own learning so that they can reach their learning goals (Howard, 2002). The teacher’s role is not only in helping them complete their project but one of guiding them to be self-directed learners. The role of the teacher in PBL is different from that of one in a traditional class. The teacher in PBL acts as a cognitive and meta-cognitive coach by “asking, monitoring, probing, managing, group regulating, keeping moving” (Rahman, Daud, Jusoff, Ghani, 2009). In addition, the teacher promotes decision-making and reflections (Howard, 2002). The teacher assists students to construct their understanding of the problem and allows them to analyse and solve the problem. The teacher helps facilitate students to be able to connect their new learning to prior knowledge to enhance their cognitive skills (Leng & Ee, 2009).

The role of the student in PBL is of great importance. As PBL involves student-directed learning (Diffily, 2001), the student needs to be involved in three major roles: (a) as a self-directed learner, (b) as a team member/collaborator and (c) as a knowledge manager/leader (Murchú, 2005). As self-directed learners, students choose the topic that is related to their experiences and interests. They design their learning goal which helps with stimulation and motivation from the beginning to the completion of the project. They

assign tasks within the group based on individual interests, undertake their projects, find resources to use, choose artefacts, evaluate and revise their work and generate artefacts (Clark, 2006). Besides being self-directed learners, students widen their role to become peer-helpers who in turn help other learners to complete tasks. They also depend on each other as their work forms part of the overall project (Murchú, 2005).

Besides being responsible for their own learning, as team members with shared goals students also need to work collaboratively for the success of the project. As team members, they need to have a sense of ownership and empowerment of their own project (Murchú, 2005). Individual students work at their own pace to complete their assigned task and present their progress, obstacles or queries about their learning to their group or to other groups, as each person is responsible for the final product. Since the final outcome is in part their responsibility as part of the whole class or group work, students need to be team members willing to work and put in effort to make it right (Stanley, 2000).

As knowledge managers/leaders, students are required to have a solid foundation in the topic of the study. Unlike traditional classrooms where the teacher directly transfers knowledge to students who memorise and learn by rote, students in PBL need to search for information, collect, analyse and interpret data, design artefacts and present them as the outcome of their in-depth and constructive investigation (Murchú, 2005). Students in PBL work in more open-ended environments, allowing them to discover knowledge, take responsibility for their learning and understand the process of learning. At the completion of their project, the students can demonstrate their results, understanding and knowledge development through their meaningful and high-quality products (Helm, 2004).

It can be concluded that the roles of teachers and students in PBL are equally important and that they need to be flexible for successful participation with each other. The teacher is not a leader but a facilitator, an advisor, and a knowledge master, while the student is not a passive learner but a self-directed learner, a team member/collaborator, and a knowledge manager/leader.

Thai educational reform requires the teacher to be a facilitator, not a teller who instructs by rote learning. The role of the student is to be an active learner who can learn by

themselves, conduct research and develop their individual intelligences with support from the teacher (Kaewdang, 2000). It is clear that PBL is one teaching-learning process choice for Thai students as it emphasises the change regulated by the education reform, i.e. that teachers act as facilitators while students are empowered in their own learning. It is therefore critical to investigate the benefits and challenges of implementing PBL from the perspective of both students and teachers. The result of the study can be a guide in how to successfully implement PBL into second/foreign language classrooms and add to the current research knowledge, and it can assist teachers in dealing with the demands of the curriculum reform, especially in the unique context of Thailand.

As PBL engages students actively in the learning process and involves students in problem-solving skills, hands-on learning and self-directed learning, it is essential to understand the assessment methods which demonstrate the students' language performance, learning skills and self-confidence through PBL activities.

As learners are empowered in PBL and take full responsibility throughout the process of their learning, a better understanding of learner autonomy is gained which is an important characteristic of PBL.

2.7.3 Learner autonomy.

Teaching and learning has moved in recent decades from a teacher-centred approach towards more learner autonomy and independence (Thanasoulas, 2000a). The roles of teachers and learners are important in the learning process. The idea of learners "taking responsibility for their own learning, developing autonomy and skills in learning-how-to-learn" (Nunan, 1989, p. 80) is important for developing learners' awareness as learners. Widdowson believes that learners should have authority in directing what they learn in the classroom while teachers respond to learners' needs and create the natural contexts which allow learning to happen (Widdowson, 2003). The author explains further that in some aspects of language learning, learners should be directed by teachers but always within limits. However, learners' initiative is important in the process of language learning. Thanasoulas (2000b) pointed out that autonomous learners are expected to be in charge of their own learning, including planning, monitoring, evaluating their learning and making decisions on content and objectives. However, the teacher is still an important person who

negotiates with learners, is involved in decision making, and assists learners by providing appropriate resources, materials, and methods based on the learners' needs.

There are many aspects of learner autonomy such as *humanistic language teaching*, *collaborative learning*, *experiential learning*, and *the learning-centred classroom* (Little & Dam, 1998). Similar notions to learner autonomy are identified as *independent learning*, *flexible learning*, and *student-centred learning* (Macaro, 1997). In this study, the term '*learner autonomy*' is used because it implies that learners are individuals (Little & Dam, 1998).

The various definitions of learner autonomy have much in common. Little and Dam (1998) described learner autonomy as "...responsibility for our own learning ... The learner must take at least some of the initiatives that give shape and direction to the learning process, and must share in monitoring progress and evaluating the extent to which learning targets are achieved (§ 2). Macaro (1997) defined autonomy as "an ability which is learnt through knowing how to make decisions. It is an ability to take charge of one's own language learning and an ability to recognise the value of taking responsibility for one's own objectives, content, progress, methods and techniques of learning." (p.168). Therefore, it can be concluded that learner autonomy is the ability to control one's learning process.

There are many advantages to be found in learner autonomy. Autonomy can enhance a process of lifelong learning (Council of Europe, as cited in Macaro, 1997). In addition, Little (2003) pointed out that there are three benefits of making learners autonomous. First, if learners attend to their learning, better learning is the result. Second, if learners have control over their own learning, they are motivated to complete their learning no matter how challenging it is. The final benefit involves second and foreign languages. Learning to communicate is a function of language practice; the more learners use language in a social context, the higher their spontaneous language proficiency develops. As they are autonomous, learners have the opportunity to choose the ways in which they develop their required skills. They can carry out their tasks, trying to complete them by accessing target language sources and resources that are not prepared by the teacher (Macaro, 1997).

Learner autonomy is promoted through project work. In PBL, students are allowed to select the project topic and to be involved in designing and planning their project and the process of learning with support from teachers (Markham et al., 2003). In other words, the authority is given to learners to control their learning from the beginning of the study to the end of the course. Stoller mentions that PBL classroom settings can narrow “the gap between traditional classrooms and more learner and learning-centred settings” (Stoller, 2006, p. 33). When students have responsibility for their own learning, they are motivated and feel more competent and self-determined. Students are likely to gain interest and succeed in learning (Kohonen, 1992).

It can be concluded that students in PBL involved in the various project work stages (selecting and investigating topics, collecting data, interpreting and presenting data, assessing the project) will have enhanced connection with and self-control over their own learning. Therefore, PBL fosters learners to become autonomous and lifelong learners (Diffily, 2001).

As a framework for developing learner autonomy exists in the Thai educational plan (Fredrickson, 2003c), there should be a proposal for its implementation. Integrating PBL in a Thai university setting could provide an important focus on a new and promising means of learning a foreign language. Since PBL requires students to work together to actively engage, experience and understand their learning, it is important to investigate how students undertake cooperative learning and how cooperative learning promotes effective learning in PBL settings. Curtis (2002) ended her article about the power of PBL as follows: “If you can experiment and see how things work, it will be stored in your brain longer. And if it’s funner, you’ll learn faster” (p. 52).

2.7.4 Cooperative learning.

Cooperative learning is defined as “group members working together to accomplish shared goals (Gillies, 2007, p. 246). To increase the awareness of one’s own learning, students should reflect and share their learning experience with their peers. Cooperative learning can be a means to increase learner’s awareness of learning (Kohonen, 1992).

Cooperative learning is one of the successful teaching strategies that promote higher achievement and greater productivity (Lyman & Foyle, 1988). Holt, Chip and Wallace

(1991) stated that learning cooperatively “where all work for one and one works for all” (¶ 6) helps students to solve problems in school and allows them to stay in school and support each other both emotionally and academically. In addition, learners are able to improve social development which is beneficial for workplaces in the future. The authors describe cooperative learning as one of the most powerful strategies that makes school “a more humane place” (¶ 4) as the school environment for learning is safe, steady and supportive.

To create the most advantageous environment for the second language acquisition classroom, students should engage in meaningful communication so they can effectively complete a cooperative task (Deng, 2007). Gillies (2007) and Johnson & Johnson (1994) listed five elements essential for successful cooperative learning. First, there must be *positive interdependence*. Students share a common goal but that goal can only be achieved if all students complete the task that they have been given responsibility for. Students learn that they “sink or swim together” (p. 33). Second, there must be *face-to-face promotive interaction*. Students provide effective assistance to each other by exchanging resources, discussing, reasoning and sharing feedback to achieve the group’s goals. Third, there must be *individual accountability*. Every student has his/her own responsibility with a fair share of the workload to contribute to the group. Fourth, there must be *interpersonal and small-group skills*. Students must be taught social skills to promote group achievement. These skills build trust and effective communication, and enhance decision-making and conflict-management skills. Finally, there must be *group processing*. Students reflect on how well they are working or contributing to their goal and what aspects or steps should be changed or added. In this way, group processing allows students to maintain positive working relationships and have a sense of success and respect when collaboratively working with classmates to achieve their goal.

Cooperative learning has been used successfully to improve student learning outcomes in intermediate macroeconomics classes for undergraduate students (Yamarik, 2007), in a Turkish course for fourth grade students in primary education (Oğuzhan & Bekir, 2007), in science process skills for eighth grade students (Bilgin, 2006), and in a biochemistry class for undergraduate students (Anderson, Mitchell & Osgood, 2005). In addition, the study has indicated that cooperative learning helped develop skills in oral communication in EFL university students (Deng, 2007); promoted students’ reading comprehension

strategy use and attitudes towards reading in primary school (Güngör & Ün Açıkgöz, 2006); enhanced critical thinking, problem-solving tasks and positive attitudes in their learning experience in biochemistry class in undergraduate students (Anderson, Mitchell, Osgood, 2005); and improved undergraduate accounting students' generic skills for their future professional accountancy careers (Ballantine & Larres, 2007).

In conclusion, it is clear that cooperative learning promotes quality learning. Cooperative learning allows learners to consciously reflect and maximise their own learning and the learning of those around them. Students gain benefit from the collective effort, understanding that the combined performance contributes to the group's goals and feelings of success, respect and appreciation for what they achieve. Therefore, cooperative learning has been suggested as an effective and promising practice for ESL learners (Holt, Chip, Wallace, 1992). When language learners are in charge of their learning, they are challenged and see themselves as competent learners who use the target language communicatively. They feel confident and gain competence. Cooperative learning enhances learners' ability to assess their own competence and create an atmosphere of achievement. Therefore, it is more likely that learners in cooperative learning groups can be successful in second language learning (Kohonen, 1992).

According to the features of cooperative learning, PBL is seen as the pedagogical practice that is structured around cooperative learning (Stoller, 2006). In PBL, students' learning activities are normally organised in small groups with the emphasis on achieving the objective under the direction of the group members who have shared goals. Each member of the group is a centre of learning, and responsible not only for learning but also for helping other members learn and to give support. Learners work through the project with support from the teacher and feedback from teachers, peers and field specific experts throughout the project (Markham, et al., 2003; Newell, 2003).

When students learn and work in a cooperative learner setting where they can employ their strengths, fulfil their needs, cooperate with and support each other, they feel confident to take risks in their learning (Sapon-Shevin, Ayres, Duncan, 1994). Risk-taking ability is needed and useful for language learners as it is a gateway for them to take risks using the target language without feeling embarrassed (Arnold & Brown, 1999). As a PBL learning environment is a non-threatening and supportive environment, language

learners in PBL become risk-taking explorers (Moss, Van Duzer, 1998; Blumenfeld, et al., 1991).

2.7.4.1 Cooperative learning & collaborative learning in project-based learning.

Besides relating PBL to cooperative learning, collaborative learning can be associated with one of the characteristics of PBL (Moursund, et al., 1997; Stoller, 2006). Panitz (1996) described collaborative learning as “a sharing of authority and acceptance of responsibility among group members for the groups actions” (¶ 3) and the principle of collaborative learning is based upon group members working cooperatively.

There are similarities between cooperative learning and collaborative learning. Davidson (1994) summarises the following five critical characteristics of cooperative and collaborative learning: “1) a common task or learning activity suitable for group work, 2) small-group learning, 3) cooperative behaviour, 4) interdependence, and 5) individual accountability and responsibility” (p. 25). Even though there are similarities between cooperative learning and collaborative learning, there are significant differences between the two. In cooperative learning, students work together to achieve a specific goal or develop an end product which is usually content specific and closely controlled by the teacher (Panitz, 1996). In collaborative learning, students work together to get the task done. Students act as responsible learners who are given freedom of choice to produce the end product. The students’ voice is greatly important to the design their work (Davidson, 1994).

Cooperative learning provides a more structured approach in small-group instruction, more in-depth advice to learners and more direct instruction of social skills (Matthews, Cooper, Davidson, Hawkes, 1995), while collaborative learning is more student-centred in group skills (Panitz, 1996) with less emphasis on independence and individual accountability (Davidson, 1994). Wilhelm (as cited in Stoller, 2006) described that when the concepts of collaborative learning together with cooperative learning were utilised in PBL, students obtained “critical thinking, investigative skill building, motivation, and communicative competence” (p. 31). Fried-Booth (2002) suggested that skilful or competent students are able to take more responsibility for their own learning and students should be involved more in a collaborative group project to develop their language competence and confidence. McGrath (2004) argued that a keystone for PBL is

collaborative work as it allows learners to engage and participate in their own learning. Shared knowledge, which develops students' learning and understanding of what has been learnt in the project, takes place among students, between students and teachers and students and experts.

There are some educators who interpret cooperative learning as a branch of collaborative learning (Chung, 1991) and cooperative learning as a synonym for collaborative learning (see also McCafferty, Jacobs, Dasilva-Iddings, 2006). For this study, cooperative and collaborative learning are interchangeable. Both are defined as a learning approach that directs students to work together under the guidance of a teacher to achieve a common goal.

In conclusion, PBL is organised around cooperative learning and collaborative learning as this instructional approach allows students to cooperatively and collaboratively investigate what is going on and construct what is being learned. By incorporating collaborative and cooperative learning as components of PBL, language learners have an opportunity to use the target language extensively both inside and outside the classroom (Sidman-Taveau, 2005) and gain a meaningful understanding by negotiating meaning (Blumenfeld et al., 1991).

2.7.5 Multiple Intelligences.

Since PBL focuses on individuals' interests, needs and talents, students are given choices when it comes to designing their learning process, deciding their approach to research, and the production and presentation of their end products (Gattegno, 1997). Students in PBL have the opportunity to fully develop their skills and abilities by drawing on their intelligences in in-depth studies on challenging topics, allowing them to take charge of their learning, pursue their achievement and develop meaningful ideas (Brown & Liepolt, 2004; Hargrave, 2003; Wolk, 1994). Therefore, incorporating multiple intelligences theory into classroom practices strongly supports features of PBL (Hargrave, 2003; Moursund, et al., 1997; Welsh, 2006; Wolk, 1994).

Howard Gardner, a key proponent of multiple intelligences, observed that there are a variety of intelligences or abilities that human beings possess, and he formulated the following list of nine intelligences which can be used to explain different ways of

learning: (a) linguistic, (b) logical/mathematical, (c) musical, (d) spatial/visual, (e) kinaesthetic, (f) interpersonal, (g) intrapersonal, (h) naturalistic, and (i) existential intelligences (Brown & Liepolt, 2004). To help teachers teach more successfully and assist students to higher levels of achievement in the real world, many educational institutions have applied Gardner's theory of multiple intelligences (Brown, 2000).

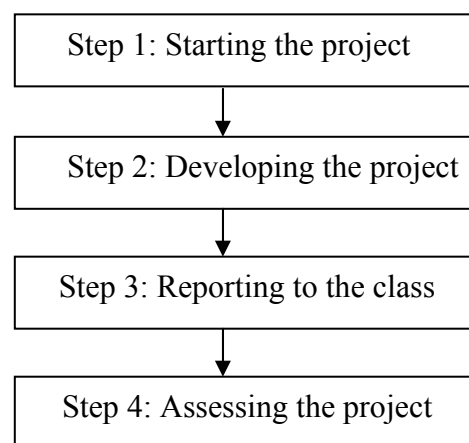
PBL creates a learning environment which allows students to explore their own interests, boost their skills and abilities and expand opportunities to enhance learning potentials. As different students have different intelligence strengths, teachers can apply the multiple intelligences theory in the classroom by providing a variety of learning activities, choices of assignment or assessment. The level of engagement in the activities and the quality of work or assignment can be astounding and superior when choices are made available (Pritchard, 2005). Teachers establish learning activities based on the interest or the curiosity of students and allow students to structure their understanding. In this way, learners are given their choice of learning. To take Gardner's theory into the assessment of learning, the assessment should focus on on-going learning processes rather than on a test of memorisation. In this way, students are given more choice to demonstrate the various ways of understanding their learning (Brown & Liepolt, 2004).

In conclusion, the theory of multiple intelligences supports PBL (Hargrave, 2003; Moursund, et al., 1997; Welsh, 2006; Wolk, 1994). Unlike the traditional formal and structured classroom, where students are unable to employ their intelligences in their learning process, students in PBL have freedom and choices of learning which allow them to utilise their skills and abilities to develop their full potential in their learning (Hargrave, 2003). This theory views each learner as having different strengths; hence, different teaching approaches and the opportunities for students to respond to their own learning styles are needed. As a result, students are likely to succeed in their learning (Pritchard, 2005).

To understand how to integrate PBL into the classroom, the steps of orchestrating PBL are explained in the next section.

2.8 Steps of Project Development

The process of PBL is an ongoing process undertaken by students with support from teachers. PBL's complex, systematic but flexible framework helps students to shape their projects and understand what is expected of them. The project structure helps teachers and students to organise the development of a project's activity based on students' interests and personal contributions to the topics selected for the study. To understand each stage clearly, this research summarises the four general steps of project development from the following educators (Foster and Masters, 1996; Markham, et al., 2003; Moss and Van Duzer, 1998; Ribe and Vidal, 1993; Sheppard & Stoller, 1997; Stanley, 2000; Stoller, 1995). The four main steps of PBL are shown below:



The following is the summary of the four project steps:

1. *Starting the project*: this stage involves selecting the topic that is of interest and relevance to students. The teacher can create guiding questions so that students have an idea of what to do and are encouraged to study or develop. Students then establish the project outline and plan the method of development, the final outcomes and individual's responsibilities. The project should be challenging and motivating such that students can develop and have the flexibility to work at their own level, while team members within the group offer advice and assistance. This is an important feature as it contributes to a successful outcome.

2. *Developing the project*: this stage involves the research which is undertaken by all group members either individually, in pairs, or as a group. This should be decided by the group before commencing the project. Students search for information to answer their driven question, note down the results they achieve, any problems they encounter and ways to solve them. This is an efficient process that can be used to improve the project as it progresses.
3. *Reporting to the class*: this stage involves presenting and receiving feedback from other students on the progress of and improvements to the project. The steps occurring throughout the project are assessed to make sure that students comprehend the problems and apply the skills and concepts necessary to complete the project.
4. *Assessing the project*: the final product can be evaluated by an individual student, students as a group, a teacher or external audience. This stage allows students to apply and present what they have learned.

It is clear that PBL is a systematic methodology that is able to be implemented in classroom settings including second language contexts (Stoller, 1997). The development of PBL in a classroom can be carefully employed under a process that guides practitioners and students in organising projects. The upcoming section focuses on the roles of teachers and students in PBL.

2.9 Assessment of PBL

Assessment of PBL can be different and challenging compared to the assessment of traditional learning. Students in PBL are assessed by various means such as “traditional paper-and-pencil tests to new modes of assessment: case-based assessment, self and peer assessment, performance-based assessment and portfolio assessment” (Berge, Mortelmans, Spooren, Petegem, Gijbels, Vanthournout, 2006, p. 347). However, there are some arguments that standardised tests such as multiple-choice and true-false tests are inappropriate to measure student learning outcomes in PBL (Grant, 2002; Markham, et al., 2003; Slater, Beckett, Aufderhaar, 2006).

In disciplines other than language teaching, various assessment practices can be integrated. For example, homework assignments, laboratory exercises, final project papers

and presentations can be employed to measure content outcomes, while implementation evaluation, informal evaluation and project papers are used to assess scientific process learning outcomes. In addition, assessing the overall outcomes of students can be done through a peer review form, a faculty review panel, a final research presentation and a final paper (Baker, 2006).

In language teaching, students in PBL use real communication, authentic language and learning experiences to achieve the goals of learning. Therefore, performance assessments are crucial in PBL as they allow a variety of assessments to evaluate students' process of learning and tasks (Arlington Education and Employment Program, 1997; Sidman-Taveau & Milner-Bolotin, 2001). According to Hutchinson (1996), the accuracy of grammatical and linguistic structures of target language should not be the only focus of PBL assessment. The principal way for assessing project work is evaluating what students learn, the processes and efforts that lead to the final production and what the learning outcomes are (Blumenfeld, et al., 1991). Therefore, multiple types of formative and summative assessment should be integrated as a part of an effective assessment program (Sidman-Taveau & Milner-Bolotin, 2001; Slater, et al., 2006).

Formative assessment is generally desired for giving feedback throughout the process of creating projects, while summative assessment provides students with the overall degree of their performance at the end of the course (Markham et al., 2003). In addition, summative assessment provides information about the effectiveness of the learning program, learning environment and teacher performance (Cotton, 1995).

Both types of assessment should be carefully designed and constructed to support students' learning, and focus more on learning and performance. Markham et al. (2003) proposed three types of products that need to be produced to demonstrate students' learning: (a) culminating products, (b) multiple products and (c) artefacts.

Culminating Products are products such as research papers, reports, multimedia shows, presentations and exhibitions which are produced and presented at the end of the project in front of an audience. They display depth of learning and a mix of content knowledge and skills.

Multiple Products are products generated during the project and require students to produce proposals, outlines, interview plans, drafts, product critiques and final versions of papers.

Artefacts are products such as notes, journals, e-mails, records of conversations, interviews with structured questions and a short paragraph describing the progress of work. They demonstrate the process of planning and questioning, problem-solving skills, record keeping skills and important life and work skills.

Both *multiple products* and *artefacts* should be collected and evaluated by teachers who then give students constructive feedback. This improves both individual and group work as students know they are carrying their project and producing a meaningful product (Markham et al., 2003; Solomon, 2003). Teachers should provide formative assessment at least once during the project's process. Feedback from teachers is needed before a project is finalised, but it is an ideal practice to use this form of assessment as frequently as possible (Sidman-Taveau & Milner-Bolotin, 2001).

Besides teachers being assessors, peers and learners are the main sources of assessment. Peer assessment allows learners to provide continuous feedback when assessing peers' projects and learning processes (Wilson, 2001). In PBL, students can evaluate their own team members' work or peers' work by offering suggestions for improvement or giving support. Having experience with peer assessment during the learning process helps learners to evaluate their peers' final projects more easily (Arlington Education and Employment Program, 1997). In addition, peer assessment allows students to develop the important skill of giving constructive feedback (O'Farrell, 2005). Students also increase confidence in assessing the quality of their own work (Wilson, 2001). Therefore, peer assessment is not only marking the work of others but also an important part of the learning process, as students are responsible for their comments and actively involved in giving and receiving assessment (Wilson, 2001). Peer assessment also allows teachers to assist and supervise the learning process among students (Buchanan, 2004).

Self-assessment enables students to evaluate their own work by reflecting on the performance, work progress and overall learning process that leads to their achievement (Hattum-Janssen & Pimenta, 2006). As students set their own learning goals and select the method of assessment (Bergh, et al., 2006), they become active, responsible and

motivated to take part in their learning process. O'Farrell (2005) stated that it is vital to teach students how to evaluate what they have achieved rather than what criteria and standard mean. Peer and self-assessment promote lifelong learning, self-awareness and critical reflection skills (O'Farrell, 2005; Buchanan, 2004; Wilson, 2001; Arlington Education and Employment Program, 1997; Ribe & Vidal, 1993). Nevertheless, there are challenges regarding peer and self-assessment, for example, some students feel they are not judged fairly by their peers or lack the necessary experience to critically judge themselves (Hattum-Janssen & Pimenta, 2006).

External audiences such as community members, experts and parents can take part in the assessment process (McGrath, 2003; Solomon, 2003). External assessors can observe various elements including "language content, the amount of work produced, presentation, continuity, involvement, use of self-access materials, etc." and can give their judgment on the overall achievement of the group instead of individual students. They can provide "reassurance, motivation and a different perspective" compared to what students have received from other sources of assessment (Ribe & Vidal, 1993, p. 90). Ribe and Vidal stated that a teacher's observation diary and students' notes can be beneficial tools for external observers to understand the background of how the class works, which can help them to better evaluate the group and the project.

Since there are numerous ways of assessing students, assignments and products, rubrics can guide teachers and students in more objective and reliable assessments (Grant, 2002). A rubric is a set of criteria guided for evaluating students' work (Arlington Education and Employment Program, 1997) and a scoring tool "...that clearly differentiates levels of student performance" (Markham et al., 2003, p. 51). Pearlman (2006) stated that students in PBL should see a rubric on the day that they start their projects so that they understand what teachers expect from them, and use a rubric as a guide for self-assessment and directing their learning. Pearlman illustrated that the New Technology High School, in Napa, California has integrated PBL in the classroom since 1996 and currently gives separate grade results for different categories such as content, critical thinking, written communication, oral communication, technology literacy, and any other learning outcomes which present students' skills and abilities. As teachers assess each area of a project, students can clearly visualise their performance in a specific area of the project (Markham et al., 2003).

Rubrics should be carefully designed as the criteria need to meet the class instructional goals and objectives of the project. Rubrics should contain three features: (a) a set of aspects of product or performance, (b) a scale with numerical scores describing each level of performance and (c) criteria with specific indicators for evaluating a product or performance's quality (Markham et al., 2003). In order to allow easy differentiation between performance levels, descriptions of the different levels of performance and the criteria needed to achieve these levels must be well defined (Arlington Education and Employment Program, 1997; Keller & Bonk, 2003). Markham et al. (2003) suggested that if students have an opportunity to apply rubrics to assess previous student projects before their project starts, they will clearly understand what they need to do to achieve the academic standard and application of knowledge that contributes to a successful project.

Creating rubrics is a time-consuming and challenging task for teachers (Markham et al., 2003). Teachers can either make rubrics by themselves or create rubrics in conjunction with students by discussing the definition of a high quality and poor quality end product (Andrade, 2000). Rubrics help students to be attentive to learning and understand the standards they must meet as they progress through a class. Additionally, rubrics help teachers to collect data on student development and progress (Keller & Bonk, 2003). Using rubrics aligned with vivid assessment criteria provides students with a sense of fairness about grading (Markham et al., 2003). According to a study into using rubrics along with self-assessment of 7th and 8th grade students' writing in San Diego, Andrade (2000) indicated that using both tools enhanced students' learning and thinking and made teachers' instruction more effective.

To convert a rubric into an overall grade, teachers use numbers that represent the level of quality of each criterion, change the figures into the number that shows the middle of the range for a grade, average the scores, and assign a grade accordingly (Andrade, 2000). Alternatively, they can assign points to each aspect of the product and "show the point totals that correspond to the letter grades" (Keller & Bonk, 2003, p. 2). The authors further commented that it is a good idea to provide positive comment when grading so that learners can see the areas that they have achieved in and that they need to improve. The upcoming section describes benefits and challenges associated with PBL when applied in classrooms of language and other disciplines.

2.10 Benefits of PBL in areas other than language learning

As a traditional textbook-driven approach does not engage students in the learning process in ways that PBL does (Markham et al., 2003), research has shown that there are many benefits in implementing PBL in a variety of educational contexts as follows:

- Enhancing academic achievement and content knowledge relevant to the course
- Increasing autonomous learning
- Gaining important life skills
- Developing higher-order thinking skills
- Increasing motivation

2.10.1 Enhancing academic achievement and content knowledge relevant to the course.

As PBL allows students to have first-hand experience of the topic being studied through their project, it is evident that students can reflect on their experience and make a meaningful transition between the in-depth project and the topic of the study. A three-year-study in England revealed that the standardised test results and the understanding of mathematics of students from two schools, one being PBL and the other not, were different (Boaler, 1999). In the first school using traditional teaching methods, students studied maths only from textbooks while in the second school using PBL methods, students worked on open-ended projects. It was found that in the first school, students gained mathematical knowledge which could be used only in conjunction with the textbooks and in the examination. In the second school, the students also gained mathematical knowledge and scored significantly higher in the national examination. In addition, the results showed that students from the textbook school soon forgot what they had learned while the project students retained their knowledge. The results showed that if students learn by doing, solving problems and making knowledge connections, they retain what they have learned, which can be applied in the real world (Curtis, 2002).

Similar gains in academic achievement were reported for the Ecological, Futures, and Global (EFG) curriculum of an American elementary school (Kucharski, Rust, & Ring, 2005). It was found that students of the project-based learning group scored higher than the control group on academic achievement measures and measures of academic satisfaction. Gültekin (2005) studied the effect of project-based learning on learning

outcomes in the fifth grade social studies course in primary education in Turkey. The results showed that the experimental PBL group gained greater academic success than a control group. Similar results were found by Esmail (2006) who investigated the effectiveness of using a PBL model for computer technology instruction. It was found that students of the PBL group scored higher than the traditional group for project design and computer technical skills. From the above studies, it is clear that PBL can enhance students' academic achievement and content knowledge.

2.10.2 Increasing autonomous learning.

PBL offers students an opportunity to direct their own learning by setting their own objectives. They acquire the knowledge of the targeted theme at their own pace and in their own time and they become more responsible in their learning to achieve education value from the outcome (Dhieb-Henia, 1999). In 2003, Frank, Lavya, & Elata (2003) studied a PBL approach in an academic engineering course at the Israel Institute of Technology and found that engineering freshmen who had initially been weaker could adjust their learning based on their individual abilities. It was shown that their learning improved and they finally accomplished outstanding results.

2.10.3 Gaining important life skills.

PBL allows students to be actively involved in their own education through projects. Students have opportunities to undertake field work, speak to experts, carry out a variety of investigations and gather materials to develop the project. When students enter the real world, knowledge construction and life skills are necessary (Markham, et al., 2003). PBL develops not only knowledge of the topic but also boosts "learner's problem-solving skills, research skills, collaboration and resource management skills, negotiation, organisation and interpersonal relations" (Stanley, 2000, p.4). Cheng (2006) investigated first year students' experiences of doing project work in junior college in Singapore and found that students improved in their collaborative, presentation and communicative skills. According to teachers from elementary and secondary schools in the Ross Valley School District in California, it was found that PBL develops respect among students and helps to acknowledge other people's opinions (Ridley University, as cited in Foster & Shirley, 2004).

It is clear that PBL develops important life skills in learners. These skills which are implemented throughout the process are likely to be useful in their real-life future. The students from the Ross Valley School District in California admitted that the skills they used while creating projects would be needed in the workplace (Ridley University, as cited in Foster & Shirley, 2004). Curtis (2002) stated that students gain other skills such as teamwork, problem-solving, and the ability to meet deadlines after participating PBL activities.

2.10.4 Developing higher-order thinking skills.

Higher-order thinking skills are one of the main benefits of undertaking PBL; students develop skills in analysing and interpreting data and other cognitive processes that lead to in-depth understanding (Curtis, 2002; McGrath, 2002-2003). To accomplish learning goals, students need to think, plan, analyse, research, develop technology, learn inquiry skills and complete the process, and this leads to the production of high-quality outcomes. Smith, Lee, Newmann (2001) conducted research on the restructuring of Chicago elementary schools and found that there was convincing evidence that deep thinking is one of the benefits of PBL.

2.10.5 Increasing motivation.

As students choose their own project and set their own goals, they are aware that their work is valuable in answering the questions, solving the problems or being beneficial to the community. They are personally involved in the project and are stimulated to work hard. PBL builds intrinsic motivation and commitment that drives students to be involved in a self-learning process in ways that are not possible in traditional methods of teaching and learning (Katz, 1994; Markham et al., 2003). Therefore, students are motivated as they develop a sense of ownership of the project (Dhieb-Henia, 1999). PBL is applied as the learning method at the Department of Communication, Roskilde University, Denmark. The university believes that students' learning is enhanced with PBL and that approach increases students' motivation and interest which drives them through the final outcome of their project (Schroder, 2002). PBL generates positive motivation which is important in acquiring knowledge. PBL allows learners to research topics that interest them and so is motivating students to increase effort to produce a meaningful outcome. This enables students to develop a sense of achievement and pride (Hutchinson, 2001).

From the number of benefits mentioned above, it is evident that the gains offer a perspective on the effectiveness of PBL in empowering students to take full responsibility for their learning. PBL should be promoted in classrooms as it is a way to allow learners to achieve academic, content and other skills required to undertake the project. In addition, PBL allows students to direct their own learning and builds motivation that drives students in the learning process. This type of learning is related to the current trend of teaching and learning in recent curricula, including that of Thailand. With this study focusing on integrating PBL in language instruction, it is vital to perceive a better understanding of the effects of PBL on students in language classes.

2.11 Benefits of PBL in Language Learning

PBL plays an important role in developing learners' *target language* for real-life purposes. It helps language students become more competent in the use of the target language and promotes learners' autonomy, learner centredness, learner motivation and integrated skill practice (Sheppard & Stoller, 1995).

PBL has been described as an effective way of engaging in 'simultaneous acquisition of language, content, and skills' (Beckett & Slater 2005, p. 108). PBL would therefore help language learners relate to the task, to the language and to the culture because it offers the potential to integrate the target language into the learner's communicative competence, helps the language become more relevant to their needs and enables them to communicate and understand the target language's culture (Hutchinson, 1996). It is clear that PBL can be a connection between using the target language in class and using the target language in authentic contexts outside the classroom. Research has shown that there are many benefits to using PBL in the language classroom. These are:

- Gaining language proficiency, self-efficacy and self-esteem
- Using real-life language and experiencing language in meaningful life situations
- Developing motivation, self-confidence and the cognitive domain in second/foreign language learning

2.11.1 Gaining language proficiency, self-efficacy and self-esteem.

PBL allows students to demonstrate their language knowledge through their learning process as well as through the meaningful outcomes that students generate using real-

world experiences. Sritiwong (2000) investigated the use of a school newspaper project to promote the English writing ability and self-efficacy of Mathayom Suksa 6 (Grade 12) students at Suksasongkhraw School, Chiang Mai Province, Thailand. A writing ability test and a self-efficacy questionnaire were employed to assess students' writing abilities and self-efficacy before and after the experiment. Testing revealed that the students' writing abilities and self-efficacy were higher after being taught through the school newspaper project.

It is evident that PBL can provide meaningful opportunities for students to apply the skills and knowledge they acquire through their direct experience to develop their language skills. An investigation of the development of sixth grade English language students using the project work approach was carried out at Ban Plongliam Primary School, Samut Sakhon Province, Thailand (Termprayoon, 2002). The results showed that the language proficiency before and after completing the project work was statistically significant at a level of 0.01. It was also found that listening, speaking, and writing skills were better after completing the project work than before. The students indicated that learning English through project work seemed to be more useful for their daily lives. With regards to the project evaluation, the students were able to plan and complete the tasks required in the projects. They also learned how to work together in a group.

Similarly, a study of the development of English project work lessons for grade eleven students at Maetang School, Chiang Mai Province, Thailand, showed that the two English Project Work lessons were very successful and practical for the students' levels of knowledge. As for the students' language skills, it was found that students' speaking and writing skills improved and their self-esteem was positive for all factors (Suriya, 2000). Similar gain was reported for an upper secondary school in Thailand. An eighteen-week-development of the project-based process curriculum to enhance English language skills was studied and found that the students' English abilities increased over the length of the project. The result of the groups' post-test of English language proficiency was significantly different at a level of 0.05. According to the assessment reviews of four skills during the process, the progress of the groups at the second review was higher than at the first, and the third review was higher than at the second and significantly higher than the first at a level of 0.5. Furthermore, data collected during the evaluation concluded

that after implementing the curriculum, the students' satisfactory scores were rated at the higher level (Sudrung, 2004).

According to the study of twenty-seven ESL learners in a computer-assisted project-based learning class in the Alisal School District in the city of Salinas in Northern California, it was found that the participants who spoke Spanish in their community had a chance to use English extensively and communicate in meaningful interaction and negotiation. Therefore, they developed their English language skills (Sidman-Taveau, 2005). The research reviewed here suggests that PBL enhances students' language proficiency, self-efficacy and self-esteem.

2.11.2 Using real-life language and experiencing language in meaningful life situations.

PBL activities engage learners in communication tasks allowing students to communicate in the target language and learn its culture in an authentic and meaningful context (Stanley, 2000). According to a study of implementing PBL in an English class for adult Latino learners in northern California by Johnson (2003), it was found that PBL allowed learners to use English in real situations with confidence. In addition, Foss, Carney, McDonald, Rooks (2007) investigated the effectiveness of PBL in a short-term intensive English program for Japanese university EFL students, and found that PBL allows students to experience the use of English in real situations. Similarly, the study of integrating civics content into ESL courses as a way for adult ESL immigrants and refugees to pass the U.S. citizenship test showed that PBL engaged English language learners who are at beginning, intermediate and advanced levels in authentic learning activities, and gave them the opportunity to practice and use English language in the real world (Terrill, 2000).

It is clear that PBL represents meaningful experience for students when compared to typical school activities which are separated from everyday life. Students can improve and strengthen their target language learning for the rest of their lives through PBL (Yun, 2000). In addition, as students are involved in real-life language and exposed to authentic contexts, they remember what they learn for a long period and can make connections and apply their learning to other problems or real-world situations (Curtis, 2001).

2.11.3 Developing motivation, self-confidence and the cognitive domain in second/foreign language learning.

Among the benefits of PBL, an increase in motivation of students has been found in various studies (Finch, 2003; Johnson, 2003; Markham et al., 2003; Stanley, 2000; Welsh, 2006). Motivation is one of crucial affective variables in second language acquisition theory (Arnold & Brown, 1999). Positive motivation is important for the success of language education (Ellis, 1994) and PBL is a valuable means of creating this motivation (Beckett & Slater, 2005; Hargrave, 2003; Hutchinson, 1996).

Features of PBL help enhance the motivation of students. Stanley (2000) stated that when students are given choices to choose the topics of study that interest them and are allowed to control their learning, set their own goals and the processes to achieve those goals, students are motivated to learn the target language. Welsh (2006) and Finch (2003) stated that students get motivated because PBL provides an opportunity for learners to interact with each other and comment on each other's work in the target language, which leads to inspiration and a model of expertise among learners. Research has shown that once students communicate in the target language and create outcomes that are meaningful and of worth to themselves, they can make connections between language activities and the real world (Stanley, 2000). Newell (2003) indicated that as PBL motivates students to learn, "it keeps students in school, keeps them enthused and keeps them happy. Therefore, the door of opportunity is opened to learning worthwhile, meaningful skills" (p.8). Furthermore, PBL not only drives learners to learn and practise the target language but also improves students' confidence, motivation and attitudes to learning English (Finch, 2003). Similar results were reported for a study which showed that PBL served as an important motivation and support in increasing adult English language learners' self-confidence (Johnson, 2003). Stanley (2000) stressed that PBL motivates adult ESL learners to learn and use language as they are not wasting their time and effort.

From the above studies, it is clear that PBL enhances motivation and allows learners to pursue their language learning. This approach provides some autonomy for students, such as having control over their own learning and the process of producing meaningful outcomes, and managing their roles in the classroom. Winke (2005) stated that in general, motivated learners are learners who can work in demanding situations to succeed with tasks that are challenging and become experts of those tasks. In second language

learning, Gardner (2001) believed that once students are motivated, they put their effort into learning and using the language. They think that the task they are trying to complete is fun, challenging and enjoyable, and put their effort into creating successful language learning.

In addition, engagement in PBL boosts not only motivation but also self-confidence (Stoller, 2006). Maleki (2005) stated that it is common for students to become tired and distracted, especially when their task is demanding and complicated. Therefore, it is crucial to sustain motivation and self-confidence. Dörnyei (2001) suggested that self-confidence appears when learners are supported by ongoing feedback and encouragement. In addition, learners should have the opportunity to engage in meaningful tasks. Furthermore, to reduce the anxiety which can affect self-confidence, teachers should encourage the class to be relaxed and supportive. Success in second language acquisition depends on the level of self-confidence, motivation and anxiety (Krashen, 1982).

In PBL settings, teachers and peers need to provide formative and summative feedback which reflects learners' achievements (Stoller, 2006). Feedback and support from teachers and peers helps students to recognise their own progress and problems. Also, students have the opportunity to evaluate their language proficiency during the learning process. Stanley (2000) mentioned that receiving feedback throughout this instruction is useful, especially when presenting the final outcomes in the target language. Students feel less frightened and therefore more confident (Stoller, 2006).

The other benefit of PBL is to engage students in cognitive development that leads to in-depth understanding (Hargrave, 2003; McGrath, 2002-2003; Stoller, 1997). Motivation and cognitive engagement go hand in hand; when learners are motivated and cognitively associated they learn more effectively and maintain what has been learned (Muniandy, 2000). As learners in PBL are involved in tasks that encourage them to think through multifaceted problems or topics, learners can 'know' and 'do' in their learning (Markham et al., 2003, p. 6). In other words, students can develop content knowledge relevant to the course and apply that knowledge in different situations (Helle, et al., 2006). Stoller (1997) indicated that PBL can work effectively in classrooms as this approach can improve "students' language skills, content learning, and cognitive abilities" (p. 5).

It is clear that PBL can be a teaching methodology that allows the passion of learning to come to life and allows learners to see the need for knowledge and skills. As this learning is real and authentic, it follows that learners learn about the topic they feel they need to learn and when they need to learn it (Newell, 2003). However, PBL not only has positive aspects but also negative aspects which are discussed in the following section.

2.12 Challenges in implementing project-based learning

Although studies have shown that PBL allows students to understand and reflect on particular learning areas, taking responsibility for their own learning with increased achievement in their learning processes, performance skills and valuable outcomes, there are difficulties associated with PBL such as time-management, crafting questions, keeping focus and some concerns of teachers.

2.12.1 Time-management.

According to a study of project-based learning by Gülbahar and Tinmaz (2006), students stated that it was difficult for them to manage the deadlines for submission of their work as they were overloaded during the semester and spent extensive time and effort on their own projects. They also claimed that they could not maintain their motivation level throughout the project.

2.12.2 Crafting questions.

According to a study on integrating PBL into science classrooms (Marx, Blumenfeld, Krajcik & Soloway, as cited in Thomas, 2000), students had difficulty creating important scientific questions because their experience in and concept of crafting questions was limited. Additionally, analysing and assessing data and developing reasons to support the data and the conclusions were mentioned as problems.

2.12.3 Keeping focus.

In a study of ESL students and their use of PBL (Beckett, Moulton & Holmes, as cited in Beckett & Slater, 2005), it was revealed that 57% of students felt that the project work took their attention away from their learning. As the students had enrolled in an English language course, they expected English grammar and vocabulary which they believed could improve their language learning. They felt unhappy to produce non-linguistic assignments. In an EFL class in a Japanese university, students used their native language

instead of the target language while creating magazine projects. This hindered their engagement in real communication in English (Eguchi & Eguchi, 2006).

2.12.4 Concerns of teachers.

Teachers sometimes have difficulty selecting topics for the study that match the curriculum plans to the needs of the students (Marx, Blumenfeld, Krajcik, and Soloway, as cited in Curtis, 2002). In addition, the same study found that time limitations can also be a problem with in-depth exploration of projects often requiring more time than expected. Teachers were concerned regarding the role of the teacher in setting task requirements, scaffolding activities, creating rubrics, and assessing students' projects. Similarly, the study of integrating PBL in social studies by Okolo and Ferretti (2001) found that some teachers are not well-practised in managing the goals and needs of student groups engaging in individual learning activities, which can lead to chaotic and negative student behaviour.

There are teacher concerns about PBL being integrated into EFL learning in China where teaching and learning are teacher-centred and students are unable to use English for communicative purposes despite having studied it for many years (Guo, 2006). Guo reported that Chinese university teachers were concerned that students may reject PBL owing to the cultural belief of students that teachers are knowledge deliverers and textbooks are the only knowledge resources. This view is emphasised by the earlier finding of Fang and Warschauer (as cited in Guo, 2006) who claimed that some Chinese universities do not accept the roles of students as active learners in PBL. In addition, Chinese teachers needed professional training in PBL so they could employ the techniques and manage the class effectively. Normally, they are only trained to develop English proficiency and are not trained in language teaching methodology. The last concern is that it would be challenging to manage group work for large classes where there are more than 100 students and that it would not be feasible to provide weekly constructive feedback to such a large group of students.

It was found that PBL generates more work for teachers when compared to the traditional method, which has exact plans for each study period (Curtis, 2002). Teachers need to make sure that they incorporate topics from the regular curriculum into the projects. Teachers have to supervise students who work on different topics at different paces and

with different abilities. Other obstacles were insufficient resources, having a fixed schedule, mismatched technology and fixed curriculum policies (Solomon, 2003).

2.13 Current uses of PBL in Asia

Globalisation has enormously influenced changes in education. A shift away from traditional teaching methods in which teachers and textbooks are the centre of knowledge has been changed to one where active learners constructing knowledge with the guidance of the teacher. PBL is considered an effective and innovative teaching pedagogy in the 20th century (Wong et al., 2006).

Singapore is an example of an Asian country where PBL has been implemented since 2000 and is commonly referred as Project Work (PW). The Singapore Ministry of Education's vision of *Thinking Schools, Learning Nation* (Pearlman, 2004), has resulted in PBL being integrated into the curriculum framework in primary, secondary and junior colleges. It is primarily designed to enhance students' skills including collaboration, communication and independent learning with the aim of developing knowledge and skills that meet the challenges of the 21st century (Ministry of Education, Singapore, 2010a). At the pre-university level, PBL is integrated into all curricular with time spent on project work so that teachers and students work closely together (Ministry of Education, Singapore, 2003).

A Senior Minister of State, the Ministry of Trade and Industry and Ministry of Education stated that PBL has been found to be a successful teaching method as it has fostered students' English proficiency, increased confidence in using English and built strong communication skills (Ministry of Education, Singapore, 2010b).

Current research on the implementation of PBL in Singapore in a variety learning areas has found that PBL enhanced learning in a number of cases. For example, English language teacher-trainees' perception on PBL (Holst, 2003); secondary school students' motivation in the PW context and in their normal mathematics or science lessons (Liu, et al., 2004); students' and teachers' perceptions of computer-supported project work in classroom learning environments (Wong, et al., 2006); secondary school students' level of information literacy through project work (Tan & Theng, 2006); the study of the PBL

implementation in an engineering class (Teck, 2009); and students' perceptions of their computer-mediated project-based learning environment and their attitudes towards project work (Seet & Quek, 2010).

In Hong Kong, schools are now required to not only support content knowledge learning but also the skills needed in real life such as problem solving, collaboration, and communication skills. As student-centred learning plays a crucial role in education reform in Hong Kong, PBL, one of the student-centred approaches, has been suggested as fitting in with the Hong Kong government's policy (Lam, Cheng, Ma, 2009). Since 2000, PBL has been promoted as an alternative teaching method to traditional teaching and many teachers have implemented PBL in their classrooms (Weatherby, 2007). Several research studies on PBL have highlighted its benefits, for example, the investigation of perceptions of teachers and secondary school students (Ko, 2004); the effect of using PBL on teacher education students through digital video production (Hung, Keppell, Jong, 2004); the investigation of PBL on Hong Kong secondary English classrooms (Lee, 2005); the comparison of self-direction reading of university students using PBL in the classroom (Yuxia & Lok, 2006); and the investigation of secondary school teachers and their students' motivation towards PBL (Lam et al., 2009).

For similar reasons to Singapore and Hong Kong, PBL has also been promoted in most Malaysian schools (Chan, 2002; Leng, 2008). Integrating PBL into classrooms has resulted in a number of research studies in areas such as engineering courses (Hashim & Din, 2009; Jusoff, Rahman, Daud, Ghani, 2010; Kok-Soo, 2003; Puteh, Ismail, Mohammad, 2010; Rahman, Daud, Jusoff, Ghani, 2009), in a science course (Leng, 2008), and in an English course to investigate students' attitudes and motivation (Nor, 2007).

As one of the significant aspects of the Thailand education reform emphasises student-centred learning at all levels and in all areas including English language education, as detailed in Chapter one (section 1.1.3), PBL is one of alternative teaching approaches which could achieve the education reform goals in line with the 1999 National Education Act (Chatvichean, 2008; Srison, 2008). To foster communication skills, critical thinking and problem-solving skills, and interpersonal and self-directional skills, the Ministry of Education, Thailand has not only initiated and supported PBL for implementation in many

subjects but has also funded primary and secondary school teachers since 2000 to undertake a series of seminars and activities related to PBL instruction in the class room (Ministry of Education, 2004).

According to Thai Library Integrated System (ThaiLIS), which collects all these, research reports and articles written by graduates, teachers and academic staff from all over Thailand, there are 946 titles related to PBL for the period 2002-2010 (Thai Library Integrated System, 2010). This online library is supported by the Ministry of Education, the Office of the Higher Education Commission, and the Office of Information Technology Administration for Educational Development. Thai researchers have conducted research on PBL in various areas and subjects including teachers' attitudes, teacher's training, the development of problem solving, thinking, management, problem-solving skills of students from a number of subjects (e.g. Agriculture, Art, Computer Sciences, Engineering, History, Home Economics, Maths, Science, Social Science, Thai language, and Physics).

However, only a few studies measured the effects of PBL on students' English achievement. There are 10 research reports investigating English proficiency through the use of PBL on secondary school students and one research report examined primary school students' English proficiency (Thai Library Integrated System, 2010). It is important to mention that according to the above research reports, the Thai schools had had success with PBL both in English proficiency and the development of skills (Moonsarn, 2006; Ngogbungkla, 2007; Pansawat, 2008; Patthamalai, 2008; Prakhongsi, 2007; Rattanasri, 2008; Termprayoon, 2002; Sritiwong, 2000; Sudrung, 2004; Suriya, 2000; Orsuwan, 2008).

Although to date there are only a limited number of successful studies for Thailand and other Asian PBL language classes, there are some good results for western education contexts (see section 2.10). In addition, there is no current relative research on the pedagogical integration of PBL in language classes in a Thai university. The depth of previous Thai research does not address ways to solve the problems of English proficiency and learning skills and low confidence, as detailed in Chapter 1 (sections 1.1.3, 1.1.4, 1.3).

Therefore, this intervention of using PBL in an English language course is needed to address the problems and to provide further research evidence. There is a need to investigate whether PBL can enhance Thai university' proficiency and learning skills and confidence in an English course.

2.14 Conclusion

To summarise the benefits and challenges of PBL, current research shows that project-based learning supports self-directed learning. Students have an important role in selecting the content areas and the nature of projects that they are interested in and wish to study. This instruction can challenge learners to engage in independent work within the framework of a group project and can develop lifelong learning strategies. Doing project work allows integration of the four basic language skills (listening, speaking, reading and writing), collaborative teamwork, problem-solving and other social skills which are important in a fast changing world. However, with some of the challenges found in PBL, teachers need to carefully design and develop programs and give special attention to issues such as time-management, difficulty in crafting questions and lack of focus. In addition, in the case of teachers' challenges, further research is needed into how teachers can manage PBL more effectively in the classroom in different cultural teaching and learning contexts.

Even though there is extensive literature, including research evidence, on the benefits and success of PBL, research on how PBL could be effectively implemented for foreign language learners in the Thai education system is limited. In addition, little empirical research has been done to present any challenges of PBL to second and foreign language learning. Therefore, an inquiry into the integration of PBL in a Thai university classroom, which is the main focus of the research question for this study, would significantly enhance research knowledge. The results of this study may improve teaching and learning in Thailand and other countries that use English as a second or foreign language. This is especially important in Asia where, as mentioned in chapter 1, English is regarded as an important factor in developing countries and a gateway for a better life and better employment opportunities. Hence, the research questions for this study are:

1. Can Thai university students' English language proficiency be enhanced by using a PBL approach?
2. Does the use of a PBL approach assist Thai university students to improve learning skills and self-confidence?

Before presenting and discussing the outcomes of implementing PBL in a Thai educational context, it is necessary to describe the research methodology employed in this research. This methodology will be presented in the next chapter.

Chapter 3 - The Research Methodology

This chapter presents the research design for this study and outlines the methodology utilised within the context of the *English for Tourism* university course. The researcher describes the setting, selection of participants, data sources, data analysis procedures and ethical issues. A detailed timeline of the study is presented at the end of the chapter.

3.1 Context of *English for Tourism* and Selection of Research Participants

This study was conducted in a regional Thai university in an *English for Tourism* course that has been offered at the university since 2007. This course has a duration of 17 weeks and is compulsory for third year English major students who choose an 'English for Careers' stream of study.

At the time of data collection, there were 60 students enrolled in this course and the participants for this study were chosen from those students. In order to select the participants, the researcher drew a sample by utilising the guidelines for random assignment designed by Curriculum Corporation, Australia (Curriculum Corporation, 2008). With this random assignment, the researcher used random numbers generated by an Excel program to produce "pseudo-random" numbers which "have the same properties as true random numbers" (p. 2). According to Ary, Jacobs, Razavieh and Sorensen (2006), each possible sample has an equal chance of being selected and helps produce representative samples for the study. In addition, this sampling technique eliminates researcher bias and biased sampling procedures. This sampling did not offer any opportunity for the researcher to apply personal bias.

A total of 30 students were selected for this study, with the remaining students joining a traditional teaching class to be taught by another teacher. Following the first session, where the course was outlined in detail and the use of PBL in the classroom was discussed, four students withdrew (the reasons are discussed in section 4.1.3). The remaining 26 students were third year students majoring in English. They had enrolled in the *English for Tourism* course in the first semester of academic year 2008 (June - September) and their ages ranged from 19 to 20 years old. All students had studied

English for at least 8 years in their primary and secondary schools (Division of Academic Affairs, 2007). In addition, in their first two years of study at this university they studied all English subjects stated in the curriculum of Western Languages Department, Naresuan University.

For the investigation of their development of English language proficiency using PBL, the students were divided into three groups (high, medium and low) based on the raw scores of their overall results of three pre-tests (TOEFL[®] PBT, writing and speaking) used to screen students into the groups.

3.2 Research Methodology and Design

A mixed methods approach was designed to help interpret and explain the results gained or changed in various stages of implementing PBL through the use of different research instruments. Based on the purposes of the research, this study employed a variety of quantitative and qualitative instruments to investigate the way in which PBL can enhance Thai university students' English language proficiency, learning skills and self-confidence.

3.2.1 A mixed methods study.

Mixed methods research is an approach for “collecting, analyzing, and interpreting quantitative and qualitative data in a single study” (Onwuegbuzie & Leech, 2006, p. 474). The data from different types of instruments are merged, integrated, connected, or embedded to provide a more comprehensive understanding of the research questions (Creswell, 2008). The principal philosophical notion of mixed methods research is a pragmatic approach which focuses the best way to answer research questions. Here, a complex multi-faceted approach is used to collect and analyse the data rather than a single approach (quantitative or qualitative) to understand the research problem (Creswell, 2009). This approach has been popular for the past 30 years according to the rise in number of books and journals related to mixed methods study (see Creswell, 2009). This approach is problematic in terms of time, resources and expertise required to integrate quantitative and qualitative research in one study (Ary, Jacobs, Razavieh, Sorensen, 2009; Creswell, 2009).

3.2.2 Rationale for a mixed method approach.

There are two major reasons employing a mixed methods approach in this study. First, the integration of qualitative and quantitative data enabled the researcher to answer the questions with different evidence.

The first research question, for example, investigated how PBL enhanced Thai university students' English language proficiency. In order to generate a context for understanding the students' gains or changes, the quantitative data (the comparison of pre-test and post-test scores from a standardised test) were analysed to assess the students' English achievement. These data, available only in numerical form, allow the research to see simple numerical figures for start and end points. To provide further information about students' English language proficiency in other contexts other than the standardised tests, qualitative data (reflection or opinions of the students on the use of English in the PBL context and in-depth explanations from the researcher's point of view) were needed. Qualitative data added depth and details of how or which characteristics of PBL helped to further improve the students' four skills of listening, speaking, reading and writing.

The second research question deals specifically with the students' learning skills and self-confidence. The aim was to explore areas where skills and self-confidence developed during the application of PBL. To be able to examine these effectively, the study needed multiple data sources, for example, students' diaries, open-ended questionnaires, the teacher's field notes and discussions. The reason for using different data sources in this study was to understand from various viewpoints and "find support for the observations and conclusions in more than one data source" (Ary et al., 2006, p. 505) as educational findings are complicated and should be investigated thoroughly from a variety of perspectives (Wiersma & Jurs, 2005).

Thus a mixed methods approach was essential in examining the students' English proficiency (as in research question 1), and learning skills and self-confidence (as in research question 2) in more depth. The sufficiency of the data according to different data sources or data collection methods allowed the researcher in this study to identify and elicit aspects of investigation for the same situation and the same time with multiple sources of evidence.

Using a mixture of both qualitative and quantitative data sources helped strengthen the credibility of findings (Gerrish & Lacey, 2010) and ensured the trustworthiness of both qualitative and quantitative findings. Data triangulation was used to assess whether the data were sufficient and as a means for seeking confirmation, convergence and connection of results from the different methods (Johnson & Christensen, 2004). Besides enhancing credibility, the mixed data provided deeper insight into the topic studied (Lodico, et al., 2006) and increased “the likelihood that a wider audience will find the conclusions convincing and use the findings” (Wiersma & Jurs, 2005, p. 276). In this study, the researcher gathered the information from both the qualitative and quantitative research sources, then compared the results from data analyses and made interpretations to determine whether the findings from both sources were compatible. That is to say, for research question one, the scores derived from the three tests (TOEFL, speaking and writing tests) were compared with and agreement sought with the findings from the student observations, project diaries, and discussions as a means of revealing the students’ English proficiency level. In relation to research question two, the cross-checking of data from different sources is used to ensure consistency of information derived from the qualitative data (e.g. the observation, project diaries, discussions, and open-ended questionnaires) in relation to the students’ learning skills and self-confidence.

3.2.3 Reliability and validity.

The concept of reliability and validity in qualitative and quantitative research are crucial. Reliability in quantitative data refers to the consistency of scores from an instrument. As quantitative data collection involves gathering numeric data, it is critical to ensure that instruments are reliable. Lodico, Spaulding, and Voegtle (2010) asserted that when repeating tests or questionnaires under the same condition or using different raters, the instruments should produce the same results. There are many ways to determine the reliability of quantitative instruments: retest method, alternate forms method, split-half method, internal consistency method (for more details, see Burns, 2000).

In this study, the researcher measured the internal consistency (reliability) among items using the alpha coefficient of reliability as suggested by Cohen, Manion, Morrison (2007). The internal consistency was measured in speaking test, writing test and observation

schedule (see Tables 4.18, 4.23, 4.28). The TOEFL test, a standardised test, has undertaken various reliability analyses that suggest the test produces consistent scores (for more details, see Educational Testing Service, 2010b).

Validity is the significant feature when constructing or selecting quantitative instruments. In this study, the researcher ensured the content validity of the speaking test, writing test and observation schedule. The researcher asked experts whether the questions really measured what they claimed to measure or whether the questions were representative and related to the objectives of the instruments. For example, the interview questions of the speaking test were assessed by the researcher's supervisor in Australia and an official from the local Tourism Authority of Thailand (TAT). Both of them were experts, the former specialises in English Curriculum and Teachers of English to Speakers of Other Languages (TESOL) courses and is familiar with qualitative research. The latter has expert knowledge on tourism in Thailand and particularly the region where this study was conducted. They checked whether the questions were understandable and the test measured the students' performance in their English speaking skills by expressing basic ideas on local tourism (for more examples of other research instruments' validity, see sections 3.2.6.3 -3.2.6.4).

The TOEFL test has undergone a variety of content validity, criterion-related validity, and construct validity. The results conducted by a number of researchers showed that the TOEFL test's questions are valid having a high correlation with other tests that measure the same area of English language proficiency (for more details, see Educational Testing Service, 2010b).

Reliability, or dependability of qualitative data is essential criterion of quality. Creswell (2009) states that to address dependability, the researcher needs to demonstrate the process used in the research in detail so that a future researcher can develop a thorough understanding of the analytical method, be able to follow the procedures and expect the same conclusion.

To establish dependability, the researcher in this study described the implementation and timeline of the study (see sections 3.4, 3.5) and the method of data analysis (see section 3.3) and presented some examples of qualitative instruments (see Appendix 4-8). Creswell (2008) suggested that triangulation helps enhance dependability of the research.

In this study, the researcher utilised investigator triangulation to examine the same situation. That is, besides having the researcher as an observer, another experienced teacher was employed to observe the students' performance in English language proficiency, learning skills and self-confidence in the same classroom phenomenon. There were two stages of procedures. Firstly, both the researcher and the observer were trained in the use of observation form prior to the commencement of the study. Secondly, they independently commented on the students' performance with the researcher and the observer comparing the results to determine the level of English language proficiency, learning skills and self-confidence. In addition, the researcher sorted data from not only herself but also from the students to receive facts, data, and the student's perspectives.

A validity procedure relates to the credibility which concerns "the accuracy or truthfulness of the findings" (Ary et al., 2006, p. 504). To validate the credibility of the findings, the researcher triangulated different data sources by investigating whether one instrument confirmed data collected from other different instruments (e.g. the comparison of the findings from students; project diaries and the researcher's observation). The researcher also used the full and rich account to deliver the findings (see the examples from sections 4.3.1 - 4.3.4) as this detailed description presenting a particular setting allowed readers to understand and experience a natural phenomenon of the study which added to the validity of the findings (Creswell, 2009).

3.2.4 Overview of the mixed methods design.

In this mixed methods approach study, the researcher employed an equal-status concurrent triangulation strategy (Creswell, 2008). Using this strategy, the researcher usually collects qualitative and quantitative simultaneously and places equal weight or status on qualitative and quantitative information. However, in practice, one may be emphasised slightly more than the other (Creswell, 2009). Easterbrook, Singer, Storey, and Damian (2008) argued that results derived using this strategy are used to "confirm, cross-validate or corroborate findings (p. 304). The authors further suggest that additional data collection together with "a follow up study" might be essential (p. 304). In this study, the researcher collected both types of data within the same time period.

The rationale for using this strategy is that data collection can be done in manageable time frames as the researcher can gather both types of data at one time in the same research

setting (Creswell, 2009). This model is designed to allow the integration of data from qualitative and quantitative instruments which can answer the research questions raised in this study. This study presents “quantitative statistical results followed by qualitative quotes that support or disconfirm the quantitative results” (Creswell, 2009, p. 213). The researcher has integrated or compared several types of data during interpretation, discussion and conclusion phases as suggested by Creswell (2008). The researcher has used several types of data to see whether there are points of convergence, consistencies, differences, similarities to be drawn during discussion and conclusion. After integrating and analysing several sets of data, the findings of the study should be “well-validated and substantiated” (Creswell, 2003, p. 217). Figure 1 presents the research design of this study.

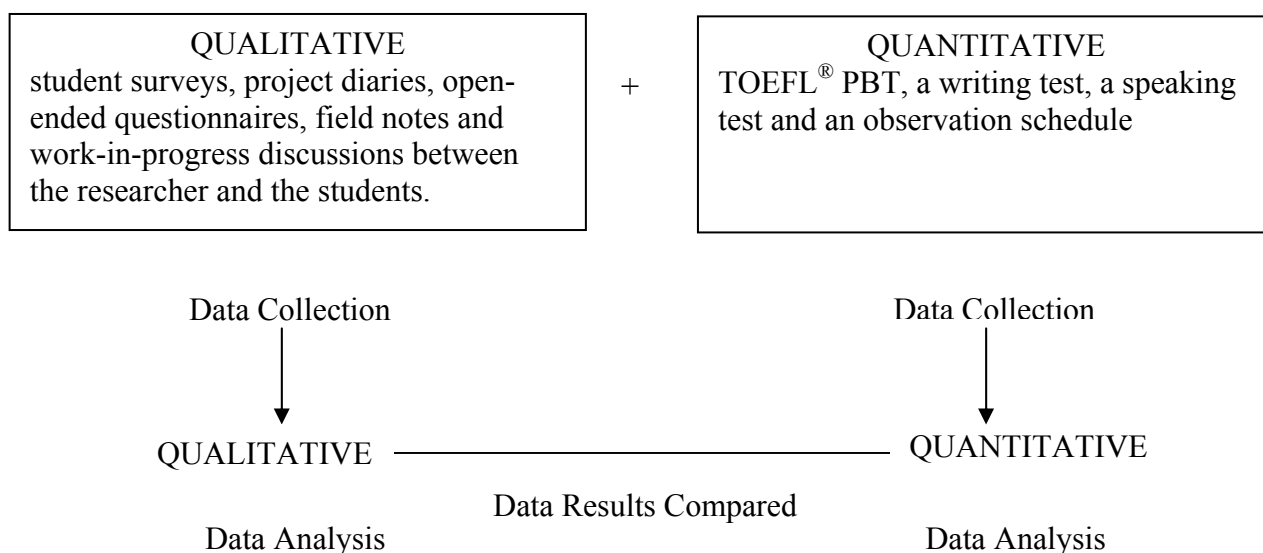


Figure 1 Equal-status concurrent triangulation strategy of the overall research design
SOURCE: Adapted from Creswell (2008).

- Note. 1. A plus sign “+” means a simultaneous or concurrent collection of data.
2. An arrow sign “→” means a sequential collection of data.

Figure 1 demonstrates an equal weighting of qualitative and quantitative instruments and data. There was no priority of one form of data over the other. The data from each method were collected at different phases of the study. After collecting both forms of data, an analysis was undertaken. To investigate any changes in students’ level of English proficiency, quantitative data was analysed and compared with the interpretation of the qualitative data. To explore any changes in the students’ learning skills and self-

confidence, the researcher compared the themes and emerging ideas from each of the data sources and inferred whether the findings were convergent, contradictory, or complementary. Finally, using, analysing and corroborating several sources of data provided triangulation of data within the study.

3.2.5 Role of Researcher and Instructor and Researcher Bias.

Researcher bias can provide false findings resulting from unfavourable influences. The researcher was likely to unintentionally allow verbal or nonverbal cues to influence the participants' performances in order to confirm her hypothesis. In addition, bias can be found during data interpretation; therefore, the researcher needed to be aware of the causes of researcher bias as it is difficult to correctly assess or find a solution for eliminating the bias (Burns, 2000; Norris, 1997).

As the researcher was personally involved in this research design, bias could have been an outcome from "selective observations, hearing only what one wants to hear, or allowing personal attitudes, preferences, and feelings to affect interpretation of data" (Ary et al., 2006, p. 507). Since there were five different qualitative data (student surveys, project diaries, open-ended questionnaires, field notes and work-in-progress discussions between the researcher and the students), the researcher attempted to reduce the bias by employing the independent observations of an experienced English native speaking teacher who was involved in the entire analysis process as recommended by Taylor-Powell (2003). The process of the independent observations was conducted into three stages. First, the researcher analysed, interpreted her findings, and compared her findings with those of the observer or the students (e.g. diaries, discussions, and open-ended questionnaire). Second, the English native speaking teacher read the researcher's and the observer's notes or/and the students' reflections and discussed the findings with the researcher. In some cases, the researcher was asked to explain some interpretations. Third, the English native speaking teacher after looking at all the data generally agreed with the same major conclusions as the researcher.

3.2.6 Research Instruments.

To achieve the aims of the study, a variety of research instruments were used to suit the research questions. The quantitative research instruments included TOEFL, a writing test (Appendix 1), a speaking test (Appendix 2) and an observation schedule (Appendix 3) while the qualitative instruments consisted of a survey (Appendix 4), students' diaries (Appendix 5), open-ended questionnaires (Appendix 6), the teacher's field notes (Appendix 7) and work-in-progress discussions (Appendix 8). The different instruments used in this mixed methods study are detailed in the following sections.

3.2.6.1 TOEFL[®] PBT.

The TOEFL[®] PBT is a paper-based standardised test that measures the ability to use and understand English in a classroom setting at college or university level. The test has been internationally accepted as a standard of English testing with “more than 7,500 colleges, universities and agencies in the U.S., U.K., Canada, Australia, Germany, and the Netherlands as well as a further 130 other countries relying on TOEFL test scores to help make admissions decisions” (Educational Testing Service, 2010a, ¶ 2). The test is for non-native English speakers who wish to attend an English-speaking college. The researcher chose this test because it can distinguish English abilities among test takers (Educational Testing Service, 2010a).

The TOEFL[®] PBT was administered in this study with permission from the Educational Testing Service (ETS). The test included *Listening Comprehension* (50 questions), *Structure and Written Expression* (40 questions) and *Reading Comprehension* (50 questions).

The TOEFL paper-based test is a valid measure of English language proficiency as each section evaluates English language listening comprehension skills, structure and written expression and reading comprehensions skills (Brown, 1988). It was found that test takers' scores were extremely consistent from one test version to another (the TOEFL computer-based test became available in 1998 and the TOEFL internet-based test became available in 2006). The reliability coefficients for the TOEFL paper-based test from 2001 to 2004 were as follows: reliability of listening = 0.89, structure/written expression = 0.91

and reading = 0.90. The reliability of the whole test was 0.96 (Educational Testing Service, 2005).

It can be concluded that the TOEFL was a valid and reliable standard measure to indicate how effectively the students could communicate in English in an academic setting. The researcher used the TOEFL test as a standardised English language proficiency test before and after implementing PBL to investigate whether PBL had enhanced the students' English proficiency. The same copies of the TOEFL test were used before and after implementing PBL. Each time, the participants were given two hours to complete the TOEFL[®] PBT.

Since the same version of TOEFL and other tests (e.g. speaking test and writing test) were employed in pre- and posttests, the students may experience a testing effect. That is, the experience from taking the pretest may influence the outcome of the posttest. The researcher assumed that the students, who studied the same subjects at the same classes during the project period, experienced the same testing effect, were exposed to similar occasions, and changed naturally in similar areas. With the assumption that all students had the same experiences, any testing effect was thought not to have any bias on the repeated test (Porte, 2010).

3.2.6.2 Speaking test.

A semi-structured interview was utilised to assess the speaking skills of each of the participants. The interview contained a carefully prepared and structured set of open-ended questions which were asked in chronological order to all interviewees (Sewell, 2006). Patton (1990) states that because the interviewees answer the same questions, this type of interview facilitates interviewers to compare across performances, systematically organise and analyse interviewees' responses. Evaluators have an opportunity to reassess the instrumentation used in the evaluation.

In this study, even though the questions were predetermined, the interviewer had the option to vary the questions based on the students' responses. Follow-up questions were utilised to draw out their speaking skills along with probe and pause strategies. Ary et al. (2006), Burns (2000) and Lodico et al. (2006) suggested that using open-ended questions

and probe and pause strategies is important to compare the obtained data and to standardise the interviewing procedure (Ary et al., 2006).

To assess the validity of the interviews of this study, the interview questions were assessed by the researcher's supervisor in Australia and an official from the local Tourism Authority of Thailand (TAT). Ary et al. (2006) and Best and Kahn (1998) advised that content validity should be evaluated by experts or colleagues experienced in the particular area to determine whether interview questions will measure what they are intended to measure. The researcher interviewed a further five students from a conventional teaching class undertaking the same subject, *English for Tourism* to examine the validity and reliability and identify any ambiguities or problems with questions before conducting the interviews (Ary et al., 2006). Twenty-six participants were individually interviewed during the second and third weeks of the study. Each interview took between 3 and 6 minutes and was audio recorded. At the end of the study, final interviews were undertaken. The students were asked the same questions for both pre- and post-tests.

The purpose of the interviews was to assess the students' speaking skills pre- and post-employment of PBL. The interview questions aimed to elicit students' speaking proficiency on:

- ideas and content (clear, focused and well-suited to purpose);
- organisation (structuring information in logical sequence, making connections and transitions among ideas, sentences and paragraphs);
- language (selecting words appropriate for purpose); and
- delivery (choosing verbal and nonverbal techniques to enhance the message).

An analytic rating scale was used to assess speaking skills. This study utilised the *Speaking Official Scoring Guide* (Appendix 4.21) created by the Oregon Department of Education, USA. This scale provided six rating scale levels for a learner's performance, ranging from no proficiency to superior. There were two reasons to choose these rating scales. Firstly, this type of rating scale contained the band descriptors that capture various aspects of students' oral communication performance. Fulcher (2003) suggested that a single score given to each speech in second language speaking may not be a fair way to evaluate the complexity of conversation. Secondly, since the purpose of this test was to

assess the students' speaking ability, real-world topics (sightseeing in each student's hometown) were used for discussion in the speaking tests. There was a need to select a rating scale that provided multiple levels classified in terms of how each student performed a task in real-life activities.

Two raters were used to establish the reliability of raters. These raters were the researcher and an experienced native-English speaking teacher who assessed the oral skill of the participants. As the reliability of the test or measuring procedure allows the researcher to "make claims about the generalisability of their research" (Howell, et al., 2005, p.1), it is critical to consider the rater consistency (Bachman & Palmer, 2000). To ensure inter-rater reliability, before employing the test the two raters closely rated the speaking skills of the five students selected from a conventional teaching class undertaking the same subject, *English for Tourism*. The test scores were examined to see the consistency level of the two raters' scores. If inter-rater reliability is high, this indicates that the abilities to be rated are well defined and that utilisation of the rating system is consistent (Ary et al., 2006 & Howell et al., 2005). The inter-rater reliability was provided (see Table 4.23).

3.2.6.3 Writing test.

A writing test was employed to assess the students' writing skills. To construct the test, the researcher designed an integrative question which tested multiple language abilities of the students at the same time. The components being tested included content, organisation, vocabulary, language use, and mechanics. The purpose of the test together with its reliability and validity were considered (Ary et al., 2006). The quality of the writing test's usefulness is represented by its authenticity. The writing test task should be authentic and allow test takers to demonstrate their writing ability beyond the test (Weigle, 2002). In addition, Weigle (2002) suggested that a test creator should be concerned with *practicality*, as in whether the numbers of tasks is appropriate for the time allocated and whether the scoring is feasible as it is time-consuming and labour intensive. In this study, only one writing task test was given to the students because of their tight study schedule.

To ensure that the test was authentic, the question simulated the type of writing that relates to tourism, allowing the students to demonstrate their ability to write a competent paragraph. The writing task question was "If a foreign visitor only has one day to visit

Phitsanulok, where do you take them?” To assess the validity of the question, the researcher’s supervisor in Australia evaluated the question to see whether the test measured the skills of students in writing and the level of language was appropriate for EFL students.

To establish the reliability of raters, five students from a conventional teaching class undertaking the same subject, *English for Tourism* undertook the test (see these students’ information in section 3.1). The two raters, the researcher and a native-English speaking teacher, closely rated the writings of the five students selected. Each rater scored the test and the scores were then compared to determine the consistency of the raters. This trial testing determined whether the raters would use and interpret the marking scheme in the same way and if they would find the criteria appropriate to identify the students’ abilities (Shaw & Weir, 2007). The *Rater Agreement Index* (RAI) was calculated to see the agreement among raters. The test scores derived from the trial showed that the agreement between the raters was high (RAI = .92). Twenty-six participants undertook the test during the second and third weeks of the study. At the end of the study, the same writing tasks were again given to the students.

An analytic rating scale was used to assess writing skills (Appendix 4.22). Analytic scales are one of the most widely used scales in ESL, and were created by Jacobs, Zinkgraf, Wormuth, Hartfiel and Hughey (1981). The scale rates on five aspects of writing, (a) content, (b) organisation, (c) vocabulary, (d) language use, and (e) mechanics, and scores learners’ performances ranging from poor to excellent.

There were two reasons for using this rating scale. First, the researcher could diagnose different aspects of the students’ writing abilities including ideas and content, organisation, word choice, sentence construction, fluency and convention. This type of rating scale was useful as it contained the band descriptors that captured various aspects of students’ oral communication performance. Secondly, an analytical rating scale is appropriate for ESL learners who tend to score differently for each aspect of their writing abilities (Weigle, 2003).

3.2.6.4 Observation schedule.

An observation schedule was employed by the researcher and the native-English speaking teacher on three occasions during the study (weeks 4, 8 and 11). The observation was designed to examine how well students used English by observing their presentations. The observation items included: (a) use of appropriate English, (b) clear pronunciation, (c) appropriate gestures, (d) precise language, (e) correct grammar, (f) modulation of voice, and (g) use of language related to tourism.

Nine students, three students from each of the high, medium and low groups in terms of English language proficiency, were randomly selected to be observed for their language use. A five-point Likert scale, ranging from 'never' (scale 1) to 'always' (scale 5), was used to evaluate the frequency of students' behaviour with language use.

To ensure a reliable and valid observation schedule, the researcher constructed each item to ensure that content was relevant to the purposes of the study. The supervisor, the researcher and a Thai teacher, an expert in language testing, examined the observation items carefully to check that the data collected was relevant to the task and captured what was intended to be measured (Burns, 2000). In addition, to examine the consistency across the two observers, the observation schedule was trialled during the presentations of the five students from a conventional teaching class undertaking the same subject, *English for Tourism*.

3.2.6.5 Survey.

The survey was completed by the 26 students in the second week of the study. It was presented in both Thai and English and aimed to elicit students' prior experience in studying English, any study experience outside Thailand, their expectation from this study, their general knowledge about the course, their confidence level in using English, factors that might help them to use and understand English, and the types of class activities and teaching methods they preferred.

A valid survey refers to the survey instrument that measures what it intends to measure (Fink, 2003). Therefore, the research looked at the objectives of the study and constructed eight survey's questions to serve the purposes (Ary et al., 2006). To reduce the variables which can influence the validity of a questionnaire, the students were allowed to answer

in Thai so that they felt comfortable and relaxed in expressing their ideas. The survey was designed to protect the students' anonymity so that truthful responses could be obtained.

A reliable survey needs to be free from measurement error which causes the differences of answers between the obtained scores and the true scores (Fink, 2003). Lodico, Spaulding, Voegtle (2010) suggested that if the survey itself is unclear, wordy, imprecise, or difficult to understand, it causes measurement error. Therefore, in this study the survey was tested on five students from the conventional teaching class undertaking the same subject, *English for Tourism*, to examine whether the items were clear, appropriate, and problem-free. After pilot testing the questions and receiving feedback from the five students, three out of eight questions were rewritten due to unclear and wordy questions.

The data obtained from the survey assisted the researcher to understand the students' feelings, behaviours and attitudes to English language classes and usage. The data were used to create appropriate PBL classroom activities for this study and to compare students' level of confidence in using English before and after implementing PBL.

3.2.6.6 Project diary.

All students completed project diaries as a formative assessment which was integrated as a part of the project and study requirements. The diaries guided students' performance in PBL and ensured that their goals for the project were completed in a timely manner. In addition, a reflective diary helped the researcher to observe whether the students understood the content knowledge and helped the students to increase their learning skills and self-confidence. Tang (2002) found that a reflective diary is a suitable and useful assessment tool for teachers to pinpoint students' opinions, needs and abilities. Students have opportunities to purposefully express what they have learned and keep pace with learning activities. Ribe and Vidal (1993) stated that the information from a diary allows students and teachers to realise what is happening throughout the project and provides in-depth information on each student's development.

This study adapted some aspects of a project diary called "the Project Framework", which was originally created by Beckett and Slater (2005). The Project Framework captures not only students' language skills but also the content and skills used during project creation each week. In this study, the project diary was used not only to assess the improvement of

the students' English language proficiency, their learning skills and self-confidence but also to be a channel of communication between students and the teacher. In addition, the project diary allowed the students to make connections between their project and their learning (Nunan, 1992). The students were allowed to write in Thai so that valuable insights into aspects of their English language development and perspectives on PBL could be gained. The researcher gave an explanation of what they needed to include in their diaries and provided the opportunity for students to write anything else they wished to discuss with the researcher.

3.2.6.7 Open-ended questionnaires.

All students undertook open-ended questionnaires at the end of the study. The questionnaires aimed not only to elicit their reflections on implementing PBL but also their opinions on their four skills in English related to the integration of PBL.

Each question was presented in English with an appropriate Thai translation so that there was no misunderstanding in meaning. Ambiguous questions can lead to uncertain responses (Mujis, 2004). To ensure a reliable and valid questionnaire, two experts in the field of language testing gave suggestions and helped to supervise and eliminate the insignificant questions or terms that were not relevant to the instrument's purpose as suggested by Best & Kahn (1998). The researcher designed the questions based on the purposes of the questionnaire with well-defined, clear, simple and comprehensible language (Nunan, 1992).

3.2.6.8 Field notes (Observation).

The researcher used observation as a means of obtaining data on how Thai students demonstrate improvement in their English language, learning skills and self-confidence. Two observers (the researcher and the experienced native-English speaking teacher) captured behaviour and perspectives of students as a group when they did presentations and of the nine students, three from each of the high, medium and low groups, randomly selected. To establish the reliability of data, the researcher and the observer's results, ideas or insights were compared for consistency. In some cases, the researcher and the observer highlighted different but meaningful points of views.

In observation, the researcher acted as a *participant observer* and the experienced native-English speaking teacher acted as an *observer participant*. In the position of *participant observer*, the researcher was fully engaged in implementing the PBL program and enthusiastically participated in activities in the classroom. She was able to gain their trust as the students expressed their opinion and problems and asked questions which were not typical in a Thai learning environment. In the meantime, she observed students' behaviours and interactions, and the context. The *observer participant's* role was known to the class but the way he actively interacted with the students was limited (Hesse-Biber & Leavy, 2011). During classroom activities or after presentations, the students normally expressed their opinions on their English language abilities and their work-in-progress to the observer. Their main purpose was to just chat or to ask for opinions if they were unsure of grammar use. The observer did not fully participate in activities and did not become involved with the students to obtain specific information. However, being an *observer participant* allowed the observer to provide a snapshot of the students' performance in English, learning skills and self-confidence at that time.

The researcher employed field notes to record information such as dates, times, classroom settings, students' behaviours, and students' language use both within their groups and during presentations. In addition, the researcher recorded her own feelings and thoughts about what was being observed. The recording of data was done as soon as possible after observation. Lodico et al. (2006) & Hoepfl (1997) suggest that the field notes should be descriptive data highlighting evidence that sheds light on the research questions. In addition, they should contain both descriptive field notes (a description of setting and participants, specific activities or events) and reflective field notes (the observers' personal feelings, ideas, beliefs, impressions and problems) to control the bias of observers. Also, *demographic information* about the time, place and date of the setting are included (Creswell, 2003).

As an observer was present in the classroom, it was likely that the participants might behave, interact or respond differently from the way they do normally. This situation is called *observer effect* (Ary et al., 2006). To reduce observer effect and to help the participants accept and feel relaxed about the presence of observers, the observer increased the frequency of his presence (as suggested by Muijs, 2004). Initially, the observer planned to come three times to observe the students' performance in English,

learning skills and self-confidence but later changed to six visits out of twelve class sessions.

To identify and eliminate observer bias, the research used an in class observer (Ary et al., 2006). Thoroughly prepared and comprehensible guidelines for the observation sessions were prepared to avoid the problem of personal bias (Muijs, 2004), in order to achieve reliability, the observer's and the researcher's recorded field notes were compared (Best and Kahn, 1998).

3.2.6.9 Work-in-progress discussions.

Work-in-progress discussion sessions were undertaken on four separate occasions during the study. Each group of students presented their work-in-progress report with the researcher outside their normal class times. A set of guiding questions for the work-in-progress meetings were given at the commencement of the study so that the students were comfortable and ready to express their ideas on their projects, and relaxed when called on to speak English. The discussions were not aimed to only elicit student performance in speaking skills but also to probe their feelings on the PBL process, including providing insights into their project progress, problems and challenges. These discussions were flexible and follow-up questions were used to encourage students to elaborate more in their responses. An audio recording was used to collect interview data as it was less distracting than taking notes (Ary et al., 2006). To construct content validity, the questions were assessed by the supervisor and an expert in the area of language testing (Nunan, 1992) as to whether they were fit for the purpose of the discussion. The questions was administered and piloted with the five students from a conventional teaching class undertaking the same subject, *English for Tourism*.

3.3 Data Analysis and Statistic Devices

Data were gathered by quantitative and qualitative methods before, during, and after administering PBL. The quantitative data were analysed using statistics after the study had been completed whereas the qualitative data were gradually combined, collected and analysed throughout the study.

3.3.1 Quantitative data.

TOEFL® PBT, speaking tests, writing tests

The data from these tests were processed statistically by the use of The Statistical Package for Social Science (SPSS) to show the pre-test and post-test scores of the 26 students.

SPSS computes a *t*-test from means and standard deviations. The *t*-test is a statistical procedure that allows the researcher to determine whether the differences in means between pre-test and post-test scores are significant or not (Burns, 2000). The assumption is made that the population data from which the samples are drawn are normally distributed and the samples are randomly selected (Fink, 2006). The *t*-test must meet the assumption in order for the test to be accurate. In this study, all data sets were normally distributed and the samples were randomly selected. The *t*-test was employed to assess whether the mean scores of pre-test and post-test were statistically different from each other. Descriptive statistics were used to describe the data. For example, the mean (\bar{x}) is an average score of the data. Standard deviation (S.D.) indicates “on average how much the individual scores spread around the mean” (Phakiti, 2010, p. 44). *Z* scores (*Z*) are standardised scores indicating “how far a given raw score is from the mean in standard deviation units” (Brown, 1988).

Wilcoxon Matched Pairs Signed Rank Test is a non-parametric statistical tool that examines changes that occur in pre-test and post-test measures. A difference score (*d*) is used to calculate for each pair of scores. In the process of interpreting data, a *Z* score was calculated to indicate the level of significance of the test (Burns & Grove, 2005). In this study, the low, medium, and high groups were compared to measure their overall achievement and to determine changes that occurred in pre-test and post-test measures.

Observation schedule

All items of observation schedule were rated on five-point Likert scales. The data from three observations were analysed using SPSS to compare the students’ performance in language use. The first observation was compared with the second observation, the second observation was compared with the third observation and the first observation was then compared with the third observation. Cronbach’s alpha was used to evaluate the inter-rater reliability of the raters.

3.3.2 Qualitative data.

The analysis of qualitative data does not depend on the statistical procedures. Therefore, to analyse data from the surveys, project diaries, open-ended questionnaires, field notes and work-in-progress discussions, the researcher applied steps of qualitative data analysis guided by Ary et al. (2006), Gay & Airasian (2003), Lodico et al. (2006), Taylor-Powell (2003) as follows.

Preparation and Organisation Process

After receiving data, the researcher familiarised herself with them by reading and/or listening to them a number of times. The data was then organised based on issues of tentativeness (e.g. level of confidence, factors of using English, activity, knowledge and skills, language, content, concerns, problems and questions). The same data subjects were collected and filed together. Lodico et al. (2006) stated that data prepared and organised in this way can be simply retrieved and rearranged at later stages.

Coding Process

This stage involved an inductive process through which the researcher investigated each section of information and made connections and constructed meaning from the data. This process is called a coding process. Miles and Huberman (1994) stated that codes are labels for what the researcher assigns as the meaning to a particular part of information obtained during studying.

The researcher labelled the codes by looking at words and sentences which seemed essential and were mentioned regularly. There could be any number of initial codes but this number gradually reduced as the relationships and the focus became clear and coherent (Lodico et al., 2006). The main reason to code the information was to identify the differences and similarities in the data (Ary et al., 2006). After the data was broken down by coding, similar codes were grouped into categories (also called themes), which are “a classification of ideas and concepts” (Gay & Airasian, 2003, p. 232). As suggested by Creswell (2008), the researcher used categories to present the findings together with the use of subcategories to answer the research questions and to help readers gain an understanding of the students’ performance, attitudes and comments during implementing PBL.

The following examples showed categories that were identified to sort responses to the questions. The abbreviations were assigned in parentheses.

Question 1: *Can Thai university students' English language proficiency be enhanced by using a PBL approach?*

Categories: listening skills (Ls), speaking skills (Ss), reading skills (Rs), writing skills (Ws), feedback (F), scaffolding (S1)

Subcategories: improvement, decline, positive feedback, negative feedback, engagement, summarisation, main idea, grammar, sentence structures, spelling and use of punctuation, writing process, scaffolding listening, scaffolding speaking, scaffolding reading, scaffolding writing

Question 2: *Does the use of a PBL approach assist Thai university students to improve learning skills and self-confidence?*

Categories: teamwork skills (Ts), higher-order thinking skills (Hots), presentation skills (Ps), self-confidence (Sc), benefits to teacher (Bt), benefits to students (Bs), challenges to students (Cs), challenges to teacher (Ct), scaffolding (S2)

Subcategories: friend problems, time problems, PBL problems, self-problems, resource problems, miscellaneous problems, scaffolding teamwork, scaffolding higher-order thinking skills, scaffolding presentation skills, scaffolding self-confidence.

Interpreting Process

The researcher interpreted the data through an inductive process. She reflected and explained what was in the data, what it all meant and why it was important. The data from interpretation was used to support either what the researcher had known, to relate to the theoretical framework, or to connect with previous studies' discoveries. The interpretation of data was not derived from the researcher's feeling or imagination as the interpretation must be backed up by the data (Ary et al., 2006, Gay & Airasian, 2003).

The method of reporting the results of the data analysis was in narrative style and included participants' quotes. The quotes in Thai were translated into English for better understanding. The language of the participants gave the rich description and reality of their responses to learning.

In conclusion, the researcher undertook data analysis in an attempt to understand the data, examine the data, categorise, compare and connect the relationship of data and interpret

the data. The researcher developed reasoning and coherent logical descriptions of major interpretations and findings. It should be noted that to validate the accuracy of the findings, the English native speaking teacher thoroughly examined the researcher's original transcripts, data analysis documents, field notes from the observer and comments from the students (see section 3.2.5).

3.4 The Implementation of the Study

The study was conducted over one semester in the *English for Tourism* course during which the researcher used PBL as the basis for students' learning.

In the first two classes, the participants were given a lecture on PBL including definitions, steps of project development, roles of the teacher, the observer and the students and assessment of PBL. The teacher and the students discussed some basic projects ideas (e.g. a travel brochure, an online report and a digital presentation) and the quality of end products and at the mean time variety of rubrics used for assessing end products were shown by the teacher.

The students formed their groups and shared team experiences and individual strengths to develop collaboration and understandings with each other. The teacher showed tourism attractions of Thailand through CD to engage and involve the students in their learning. She then provided a list of attractions in Phitsanulok to allow the students to understand more about tourism industry of their area. She explained that tourism industry is one of the major revenue sources in Thailand and how tourism developed the country. The students in this class could find ways to improve the tourism industry in Phitsanulok, one of the major region cities and attract both Thai and non-Thai tourists into the city. She set the stage by providing the real-world problems/ questions to motivate the students to engage hands-on learning. A set of driving questions was given to the students who brainstormed ideas for answers. The teacher acted as a facilitator guiding and responding questions or thoughts which helped students to think forward and have ownership in their learning.

At week 3, a handout of student investigation brief was given to the students so that they could create their project management framework. They had to decide their groups'

names and design their end products which were a travel brochure. Their learning happened more outside class as they needed to discuss and gather their background information needed for their project. Having their learning goals in minds, they had to decide what, when, where, how they would collect the data. They shared responsibility for the various parts of the project among their team members. At the end of week 3, the students negotiated with their teacher on what criteria they used for evaluating their learning process and their project. In addition, they were asked to write their first project diary to reflect experience they made during creating project, activities, knowledge and skills, problems, questions or concern and to check whether their learning objectives were achieved. They were assessed on their English skills by implementing 3 tests (TOEFL, writing and speaking tests).

At week 4, each group conducted the research on the possible way to develop tourism industry and decided to develop either one sightseeing or one tourism service. To report on their research progress, they made a presentation on their results of the investigation. The feedback from peers, the teacher and the observer were provided at the end of the class. The feedback included the comments on choice of each group's end product, power point presentation and language use and usage. The teacher scaffolding on specific language needs for practice was provided as an ongoing task for all four skills (listening, speaking, reading and writing) and other skills (thinking skills, problem-solving skills, PowerPoint skills and presentation skills). Outside class discussion among students was needed to review and improve their project, language use and skills. To keep track on the students' learning process, work-in-progress discussion was set for the following week. The teacher provided a handout of specific questions which would lead to a well-prepared participation with confidence in using English.

At weeks 5-7, discussions with the teacher were held at the teacher's office. The progress and problems of each group were reported and solved. During this period of time, the students made interviews with tourists and staff of *Tourism Authority of Thailand*. Handouts or teacher scaffolding related to language or skills were provided to suit their needs.

At week 8, each group made a presentation on their progress and the results of data collection. Feedback and suggestions from their peers, teacher and observer were provided. They were asked to write their project diary.

At week 9, the students collected more data, made data analysis and interpretation. They worked on preliminary outline of their travel brochures. During this stage, the teacher served as an advisor guiding every group's work. As she did, she asked herself the following coaching questions:

- Do the students achieve their goals of learning?
- Are they responsible their own learning?
- Does each student contribute their work equally and have any problems related to teamwork?
- Are the resources used for their project reliable and suitable for their language level?
- Do they have any obstacles due to a bureaucratic system or the limitation of money and time?

During coaching or teacher scaffolding, the teacher was aware not to give direct solutions to the students but to stimulate the students to find their own answers. To motivate them to produce their high-quality work and keep working, the teacher referred back to their goals (what they wanted to achieve), their curiosity (how they would answer the driving questions) and their natural ability (they had different abilities and they could be successful on creating their project). The students were asked to write a project diary to double check whether their language and learning skills were enhanced and any difficulties during their learning process.

At weeks 10-11, the students had work-in-progress discussions with their teacher and the observer including comments on their brochures' drafts which revision was needed. The discussions brought particular topics that showed in-dept content knowledge, language and learning skills development and the level of confidence. During the discussions, the teacher tried to guide them to expand their skills, have ownership in their own learning, reflect their work and think critically. The teacher was able to observe the students' ideas on their individual project diaries. By the end of week 11, they made a presentation on their project development. The observer and the teacher observed their performance and

provided feedback. The students reflected on work experience during the project in their diaries.

At week 12, after having three presentations in front of the class, the students had some ideas on how to make a presentation in line with the criteria set in the beginning of the study. They revised their brochures based on the feedback. They were reminded to refer their quality of their work to the criteria. The teacher support was provided for all groups as required and requested.

At week 13, it was a students' final reflection of goals, experience and success during project work.

At weeks 14-15, the students presented their projects in front of experts in tourism industry and foreign language learning together with student audience while the teacher and the observer observed how the students were engaged in their projects. At the end of week 15, they were asked to write their diary to share their learning and experience of this study.

At weeks 16-17, besides evaluating their English skills, learning skills and self-confidence, the students evaluated and reviewed their learning process and the criteria by answering an open-ended questionnaire. They showed their opinions on what they liked, disliked, wish to redo during the learning process. By the end of week 17, everybody was assessed on their English skills with the three tests (TOEFL, writing and speaking tests).

3.4.1 The researcher's role.

The researcher is a Thai academic and has been a lecturer in English for 8 years. She is employed at the university where this study was conducted and was able to implement the PBL program. She had observed the difficulties students were having with low English language proficiency and the lack of life skills (e.g. teamwork, problem-solving, and negotiation skills) and self-confidence. Since *English for Tourism* is the practical use of English language and other skills, the researcher could see an opportunity for improvement in a way these skills could be obtained by implementing the PBL.

3.5 Procedures and Timeline of the Study

Table 3.1 details the sequencing of the PBL tasks through each week, the materials used and the research instruments applied at each stage.

Table 3.1 Timeline of the study

Week	Procedure	Materials used in class	Research Instrument
<p>1-2 (4, 6, 11, 13 June) <i>(inside & outside class activities)</i></p>	<ul style="list-style-type: none"> • Class orientation • Surveyed background information of students • Lectured about PBL • Formed groups • Focused on possible topics • Brainstormed the possible aspects that promote tourism of students' favorite locations and aspects that interest them. 	<ol style="list-style-type: none"> 1. A consent form (Appendix 9) 2. A letter for participants (Appendix 10) 3. A handout of course outline (Appendix 11) 4. A DVD about Thai tourism 5. A list of attractions in Phitsanulok (Appendix 12) 6. A handout of relevant vocabulary (Appendix 13) 7. A handout of a set of driving questions (Appendix 14) 8. A handout of PBL (Appendix 15) 9. A handout of our investigation (Appendix 16) 	<p>Field notes</p> <p>Survey</p>

Week	Procedure	Research Instrument
2-3 (9 - 20 June) <i>(inside & outside class activities)</i>	<ul style="list-style-type: none"> • Each student was assessed on their English skills (listening, speaking, reading and writing). • Each group discussed how they could attract more tourists and make Phitsanulok tourist friendly for both Thai and non-Thai tourists. 	TOEFL® PBT In house Writing & Speaking Tests Work-in-progress discussions

Week	Procedure	Materials used in class	Research Instrument
<p>3 (18, 20 June) <i>(inside & outside class activities)</i></p>	<ul style="list-style-type: none"> • Each group summarised a description of popular tourist attraction. • Each group brainstormed to identify the sort of language and skills for their topic. • Each group listed all the language elements and skills that are part of each objective. • A copy of each group's objectives was photocopied and given to each student within the group. • Each group considered questions; what/when/where/how they would conduct an investigation/information. • Each group decided on each member's role: an interviewer, a photographer, a researcher, an artist, a presenter, a writer, an editor, etc. which was based on their interests and abilities (Students could pair up with others to balance the workload). • The deadline for the final outcome and the sequencing of project tasks was discussed in the group. • The students were asked to write a project diary as homework. • The students prepared a 10-minute- draft proposal presentation for the following class. • Outside class support by teacher was arranged. 	<p>10. A handout of student investigation brief (Appendix 17)</p>	<p>A Project diary</p>

Week	Procedure	Materials used in class	Research Instrument
4 (25, 27 June)	<ul style="list-style-type: none"> • Each group made a presentation. • The teacher took notes and made comments and gave feedback on overall class performance • Each group brainstormed and selected sources of information that gave relevant content & identified how to collect, record and organise data. • The teacher and an observer observed their language usage during the discussion process. • Each group was provided with a handout of specific language needs for practice and any clarification (outside class activity). • A handout of specific questions was provided prior to having a discussion with the teacher. 	<p>11. A feedback form: work-in-progress (Appendix 18)</p> <p>12. A handout of teamwork skills for group projects (Appendix 19)</p> <p>13. handout of specific language needs (Appendix 20)</p> <p>14. A handout of specific questions (Appendix 21)</p>	<p>Observation schedule</p> <p>Field notes</p>

Week	Procedures	Materials used in class	Research Instrument
5-7 (2, 4, 9, 11, 16, 18, July) <i>(inside & outside class activity & Teacher's office)</i>	<ul style="list-style-type: none"> • The teacher and students discussed the progress of each group in class. • The teacher modeled how to prepare an oral PowerPoint presentation. • Each group collected their data. • Each group received assistance from the teacher on how to analyse the data. • The students were asked to write a project diary as homework. • <i>(14-18 July)</i>: Each group had a discussion with their teacher regarding their group progress and problems. 	15. A handout of how to create an oral PowerPoint presentation. (Appendix 22)	A project diary Work-in-progress discussions

Week	Procedures	Material used in class	Research Instrument
8 (23, 25 July)	<ul style="list-style-type: none"> • Each group made a presentation and summarised the result of their data collection. • Each group received feedback & suggestions. • The teacher and an observer observe their language usage and presentation. • The students were asked to write a project diary as homework. 	16. A feedback form	Observation schedule Field notes A project diary

Week	Procedures	Research Instrument
9 (30 July, 1 August) <i>(outside class activity)</i>	<ul style="list-style-type: none"> • Each group collected more data. • The students were asked to write a project diary as homework. 	A project diary

Week	Procedures	Research Instrument
10-11 (6, 8, 13, 15 August) <i>(inside & outside class activity & Teacher's office)</i>	<ul style="list-style-type: none"> • Each group had a conference with their teacher about the group progress and problems. • Each group made a presentation. • The students were asked to write a project diary as homework. 	A project diary Field notes Work-in-progress discussions Observation schedule

Week	Procedures	Material & Research Instrument
12 (20, 22 August) <i>(outside class activity)</i>	<ul style="list-style-type: none"> • Each group prepared their final presentation and were allocated time for their rehearsal. 	-

Week	Procedures	Research Instrument
13 (25 - 29 August) <i>(Teacher's office)</i>	<ul style="list-style-type: none"> • Each group discussed with their teacher about their progress and problems. 	Work-in-progress discussions

Week	Procedures	Research Instrument
14-15 (3, 5, 10, 12 Sept)	<ul style="list-style-type: none"> • Each group presented their end products. • The students were asked to write a project diary as homework. 	A project diary Field notes

Week	Procedures	Research Instrument
16 (17, 19 Sept)	<ul style="list-style-type: none"> • Each student evaluated their English skills and their opinion of the project. 	Open-ended questionnaire

Week	Procedures	Research Instrument
16-17 (15 - 26 Sept)	<ul style="list-style-type: none"> • Each student was assessed on their English skills (listening, speaking, reading and writing). 	TOEFL® PBT In house Writing & Speaking Tests

Table 3.1 indicates that the process of data collection and analysis were inseparable from data analysed progressively throughout the study. The materials used in class were based on each stage of PBL and the students' needs and could therefore vary between groups and individuals. The number of research instruments used in this study was as follows: (a) one survey and open-ended questionnaire, (b) two TOEFL together with speaking and writing tests, (c) three observers in class observations, (d) four work-in-progress discussions, (e) five teacher's in-class field notes, and (f) six project diary entries.

3.6 Ethics

Ethics approval was obtained from both the Australian Catholic University and the university in Thailand before collecting research data. All data were treated in a way that protected the confidentiality and anonymity of participants in the study. The audio recordings were transcribed with each of the students given a pseudonym. The participants' student number was used only when undertaking systematic sampling to draw the sample from the population. After that, all data were de-identified. Coding was used during the gathering and processing of qualitative data.

The researcher and the observer respected and maintained the confidentiality of the participants. All information which was obtained and relevant to the participants remains the property of the researcher and was not used for any purpose other than this study.

The purposes, the procedures, benefits of the study and the responsibility of both the researcher and the participants were explained to the participants. The participants had the right to withdraw from this study at any time without penalty or reason given.

The researcher was responsible for a well-planned and thorough research design such that the findings did not present misleading information. Moreover, the researcher showed loyalty to the profession by providing an honest research report detailing the findings.

3.7 Conclusion

This study used a mixed methods design to acquire both qualitative and quantitative data. Four quantitative and five qualitative instruments were utilised to provide precise and meaningful measurement of findings and to add depth and insight into the participants' performance, interactions and behaviour. The quantitative data were analysed by SPSS while the qualitative data were analysed primarily by content analysis. The results from qualitative and quantitative data were triangulated to examine whether the findings were similar. The next chapter will present the findings from the data analysis of the research.

Chapter 4 - Results

This chapter presents a detailed account of the development, implementation and results of the study. This study was designed by employing mixed methods research with both quantitative and qualitative instruments employed to investigate Thai students' language development through the intervention of Project Based Learning (PBL). Quantitative data were analysed applying SPSS statistics, and qualitative data were analysed using steps of qualitative data analysis guided by Ary et al. (2006), Gay & Airasian (2003) and Lodico et al. (2006). The data were organised in categories, coded, summarised and interpreted. A variety of observation notes, project diary, discussions and responses to the open-ended questionnaires are shown and reported. This analysis presents findings involving English language proficiency, students' learning skills, and self-confidence in using the language. The description of the processes that occurred during the study provides an in-depth accounting of the analysis methodologies used in this study. In relation to simplicity, the findings are presented according to each instrument. However, chapter 5 will look at particular aspects and show how each instrument contributed to data analysis on English proficiency, skills and self-confidence.

4.1 Background Information

As this study focused on Thai university students and their English language proficiency, it is necessary to explain the traditional classroom setting and initial students' responses to the survey and to the program. This explanation demonstrates Thai students' learning experience, learning styles and learning behaviour.

4.1.1 Traditional classroom setting.

The classroom in this study was typical of the new style university classroom in Thailand. The room contained audio-visual equipment, projectors, computers, Internet, air-conditioning, fans and whiteboards. The classroom arrangement was in traditional style consisting of rows of lecture chairs facing the teacher. Students are not allowed to wear shoes inside the classroom and these are taken off before entering, whereas the teachers do wear shoes inside the classroom. There is a strict uniform requirement for university students, especially in government universities, enforced by the teachers. Teachers are

highly respected and are expected to be role models; therefore, female teachers wear blouses with mid-length or long skirts, or pant suits and male teachers wear formal pants and collared short or long sleeve shirts with or without ties. Some teachers dress in traditional style clothing (the use of silk skirts/ indigenous Thai pattern cotton trousers and colorful blouses/shirts).

Classroom culture is very formal, with great respect shown to teachers and older persons. This means that students rarely ask questions in the class and challenge their teacher. When asked to speak English, the students will keep their eyes down and become quiet; sometimes they fail to give any responses. They are hesitant to speak English and tend to laugh to cover their embarrassment whenever they make an error. They are usually afraid to use English, and lack confidence when asked to speak English in class.

4.1.2 Initial students' responses to the survey.

The class consisted of 21 female and 5 male third year students studying an English major and enrolled in *English for Tourism* as one of their compulsory courses. As confirmed by the survey, they had studied English language for at least ten years and none had studied outside of Thailand. All students majoring in English had to choose to study Chinese, Japanese or Korean as their third language and minor subject, as stated in the course curriculum. When asked what they expected from this course, all indicated that they wanted to develop their English skills (listening, speaking, reading, and writing skills) for real-life situations. They wanted to be able to communicate with tourists naturally, fluently and confidently and hoped that this course, together with PBL, would be beneficial for them in their future and in their work experience. In addition, they wanted to learn the history and vocabulary related to tourism. Interestingly, only two of them expected to develop their competence in using proper English grammar.

Most of the students knew that *English for Tourism* was an introduction to the English skills needed for different aspects of tourism, and that the course offered the chance to obtain information about specific sightseeing areas, culture, history and festivals of Thailand. Nearly 80% of the students believed that PBL could develop lifelong learning skills (e.g., problem-solving, critical thinking, and teamwork skills) which could help them to be successful employees. They wanted to pursue careers in the tourism industry after graduation. They believed that *English for Tourism* was beneficial to their future as

they could develop an in-depth knowledge of the areas of tourism and prepare themselves for their careers in tourism.

When asked the question “*How confident are you to use English with English native speakers?*” it was interesting to see that nearly 12% of the students answered that they had very low confidence, while 77% reported that they had low confidence in using English. The rest said that they were moderately confident to use English. The main reason given for this lack of confidence was being afraid that foreigners would not understand them if they ever had the chance of a conversation in English. Interestingly, the students with very low confidence and low confidence claimed that their use of English was limited due to feeling incompetent and embarrassed to make mistakes while using English.

The results of the questionnaire showed that the top three tools that the students considered helped them to use and understand English were English soundtrack movies, live Internet chat, and English songs. The three most favoured class activities and teaching methods were learning in a real-life situation, student-centred learning and having the chance to speak English with their teachers and classmates.

It is interesting that 24 out of 26 students wanted to learn in a real environment with hands-on activities together with teacher guidance. Fifteen out of 26 students wanted to choose their own routes of learning as they thought that it would not give them as much pressure or stress. In other words, they thought that it would help them to enjoy their learning, have some fun along the way and give some personal pleasure. Fourteen out of 26 students believed that motivation, excitement and enthusiasm could be increased by communication among friends and teachers. In addition, 12 out of 26 students showed their interest in experiencing learning activities outside the classroom.

The next section focuses on the responses of the students to the program. Pseudonyms are used to protect confidentiality of all participants.

4.1.3 Initial students’ responses to the program.

On the first day of class, when the 30 students who were randomly selected were advised that their course outline was different from what they were expecting, they were a little concerned and wanted an explanation as to the differences between their class which

would be employing PBL and the second available class which would use the teacher's own material and a conventional teaching technique.

The purposes, the procedures, a lesson plan were presented. Benefits of the study and the responsibility of the researcher and the participants were fully explained, after which the students were allowed to ask questions; the Q/A session lasted for approximately 30 minutes. At the completion of the question and answer period, all students were given a consent form written in Thai which was to be completed and handed back at the next class. The consent forms set-out the process of the study clearly and advised that they had the right to withdraw from the class at any time without any penalty and join the other class.

Two days later, 28 students turned up with their consent forms, and two female students had withdrawn from the class and enrolled in the class employing traditional methods of teaching. Champee, one of the withdrawing students, was willing to give her reasons why she withdrew. She told the teacher that she did not feel comfortable with this type of learning (PBL) and that she was determined to obtain good grades so she could get an honours degree. She said "I did not want to take a risk of dropping out while studying; I think it's better for me to study with what I'm used to." She also reacted negatively to project work and preferred working alone and having more test-taking rather than group work.

The following week, the rest of the class was given an in-depth lecture on PBL and asked to form groups of four or five students with the aim of investigating and promoting the aspects of tourism of students' favourite locations and their interest in this area. Meanwhile, each student was assessed on their English skills by taking TOEFL® PBT, Writing and Speaking Tests. The students started their third week by presenting the results of their investigation. By this time, a further two female students had withdrawn, admitting in an apologetic e-mail that they felt they could not make enough time available for the project work both in and outside class. They thought that they would have to spend a lot more time with PBL than they would if they just had to attend lectures in a classroom and sit for exams. Also, they had enrolled in more courses than the other students and felt that the time restraint would be a problem. These students had transferred from a Public Relations major to an English major in 2007 and had a number of English courses to catch

up. In addition, they were 'new' students to this class and had no support base within it. They said nobody in the class wanted to have them as group members as they were strangers and 'our English is not as good as them', 'we don't want to pull their scores down' (J. Jaidee, Personal Communication, July 20, 2008).

These students admitted that while trying to form their group, they felt guilty and anxious. However, they did concede that teamwork and learning from experience would be important for their future life because they had to think, do and reflect on the results of their work-life balance and, if they had enough time and did not feel stressed with the number of subjects, they would definitely have continued in this group. Even though the students were encouraged to stay in the course and offered assistance by the teacher to find a group and improve their English language ability, they politely refused insisting that leaving this course was the best they could do.

It should be noted that the 26 participants in this study attended the class regularly. If they missed any class time due to extra university activity they always presented a formal letter from their head teacher. Most were obedient, hardworking and polite. However, if called on to speak English in front of the class or to answer a question from the teacher, they were very shy and withdrawn and embarrassed to speak English. They were allowed to ask questions and express their opinions in Thai in case they had difficulties. Nevertheless, they rarely spoke or asked questions, even when urged by the teacher (a normal situation in student-teacher interactions even in English language classrooms). They were normally softly spoken and preferred to sit in the background. In contrast, when they came together in a group, they were more confident to speak English with their team members. It seemed that they liked working in groups without the teacher being involved. Overall, the participants wanted to improve their English and strengthen their confidence in the use of English even though they felt challenged in a mixed ability class and were using PBL as a new method of learning.

4.2 Research Question 1: Can Thai university students' English language proficiency be enhanced by using a PBL approach?

To assess the students' English proficiency and language use before and after employing PBL, four quantitative and four qualitative research instruments were used.

4.2.1 Quantitative Data.

The four instruments used in this research were (a) TOEFL[®] PBT (TOEFL paper based test), (b) a writing test, (c) a speaking test and (d) the use of an observation schedule. The first three tests (TOEFL[®] PBT, the writing test, and the speaking test) were utilised to assess the participants' English language proficiency. The observation schedule was employed to examine the use of the English language of the students. The quantitative data was processed statistically and the descriptive results are provided below. SPSS statistical software was used in the analysis of the data.

4.2.1.1 TOEFL[®] PBT, a writing test, a speaking test.

To evaluate students' proficiency in listening, speaking, reading and writing English at the beginning of the study, the students undertook three pre-tests: (a) TOEFL[®] PBT, (b) a writing test, and (c) a speaking test. The last two tests were developed by the researcher.

TOEFL[®] PBT included Listening Comprehension (50 questions: 40 minutes), Structure and Written Expression (40 questions: 25 minutes) and Reading Comprehension (50 questions: 55 minutes). The participants were given a total of two hours to complete the TOEFL[®] PBT. Following a break, another 30 minutes was spent on the writing test.

In addition, students were asked to nominate their availability for a 10-minute speaking test sometime during the second or third week without causing interruption to any classroom activity. All 26 participants undertook the four skills tests again during the sixteenth and seventeenth weeks, using the same tests with the same amount of time allocated.

Criteria for grouping

After collecting the overall results of the three pre-tests (TOEFL[®] PBT, writing and speaking), the students were divided into three groups based on the raw scores. To divide the class into three groups meant that the raw scores of 75 and above resulted in 8 high achievers, 74 to 66 resulted in 10 medium achievers and below 66 resulted in 8 low achievers.

Table 4.1 The three levels of students based on raw scores of TOEFL® PBT, writing and speaking tests

Raw Score	Frequency	Learners' level
100	1	high
85	1	high
84	1	high
81	1	high
78	2	high
75	2	high
74	1	medium
73	1	medium
72	1	medium
69	2	medium
68	3	medium
67	1	medium
66	1	medium
64	1	low
58	2	low
53	1	low
51	1	low
50	1	low
48	1	low
44	1	low

Process for evaluating each group of students

Following the TOEFL® PBT pre-test and post-test, each group (high, medium, and low achievers) was further reviewed by using each group's scores for Listening, Structure & Written Expression, Reading, Speaking, and Writing. A non-parametric statistical tool (Wilcoxon Matched Pairs Sign Rank Test) was employed to measure the achievement of each group. The following tables show the pre-test and post-test results that participants as a whole achieved in each area of English language.

Table 4.2 The comparison between the means of pre- and post- TOEFL® PBT tests before and after using PBL

Tests	Scores	Pre		Post		t
		\bar{X}	S.D.	\bar{X}	S.D.	
TOEFL	140	48.04	9.13	58.54	10.25	6.26**

N= 26

Note * = $P < 0.05$, ** = $P < 0.01$

Table 4.2 shows that the mean scores of the pre-test was 48.04 while the post-test mean scores was 58.54. A test suggests a statistical significance at a 0.01 level ($t = 6.26$). That is, the t -test indicates that the post-test scores were significantly higher than pre-test scores.

Table 4.3 The comparison of the low achievers' test scores of TOEFL tests before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	29	43	14	-2.380* (.017)
2	36	49	13	
3	37	61	24	
4	39	55	16	
5	43	50	7	
6	47	43	-4	
7	44	50	6	
8	38	59	21	

Table 4.3 shows a Z score of -2.380 that indicates the low achievers' post-test scores were higher than their pre-test scores at a significance level of 0.05.

Table 4.4 The comparison of the medium achievers' test scores of TOEFL tests before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	45	52	7	-2.805** (.005)
2	43	57	14	
3	51	67	16	
4	57	65	8	
5	46	52	6	
6	43	55	12	
7	48	54	6	
8	51	64	13	
9	47	58	11	
10	49	54	5	

Table 4.4 shows a Z score of -2.805 that indicates the medium achievers' post-test scores were higher than their pre-test scores at a significance level of 0.01.

Table 4.5 The comparison of the high achievers' test scores of TOEFL tests before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	56	47	-9	-1.960 (.051)
2	48	83	35	
3	59	66	7	
4	47	58	11	
5	60	65	5	
6	56	70	14	
7	58	60	2	
8	72	84	12	

Table 4.5 shows a Z score of -1.960 that indicates there were no significant differences between pre-test and post-test scores of high achievers.

Tables 4.3-4.5 show the overall results of three groups of students on TOEFL test. The low and medium achievers' results were significant at 0.05 and 0.01 respectively while the results of high achievers showed no significant differences. This indicates that PBL had a positive effect on the overall development of low and medium achievers' TOEFL tests, which included listening comprehension, structure and written expression and

reading comprehension skills. On the other hand, PBL had no positive influence on the overall development of the high achievers' TOEFL tests.

Table 4.6 The comparison between the means of pre- and post- listening comprehension tests before and after using PBL

Tests	Scores	Pre		Post		t
		\bar{X}	S.D.	\bar{X}	S.D.	
Listening	50	15.62	4.90	19.23	5.38	4.61**

N=26

Table 4.6 shows the mean scores of the pre-test was 15.62 while the post-test mean scores was 19.23. A test suggests a statistical significance at a 0.01 level ($t = 4.61$). That is, the t -test indicates that the post-test scores were significantly higher than pre-test scores.

Table 4.7 The comparison of the low achievers' test scores on pre- and post-listening comprehension before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	10	12	2	-2.552* (.011)
2	11	20	9	
3	10	16	6	
4	15	23	8	
5	9	11	2	
6	13	15	2	
7	11	13	2	
8	15	22	7	

Table 4.7 shows a Z score of -2.552 that indicates the low achievers' post-test scores were higher than their pre-test scores at a significance level of 0.05.

Table 4.8 The comparison of the medium achievers' test scores on pre- and post-listening comprehension before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	13	14	1	-2.680** (.007)
2	16	19	3	
3	19	22	3	
4	19	20	1	
5	15	17	2	
6	21	28	7	
7	14	16	2	
8	12	21	9	
9	21	21	0	
10	17	20	3	

Table 4.8 shows a Z score of -2.680 that indicates the medium achievers' post-test scores were higher than their pre-test scores at a significance level of 0.01.

Table 4.9 The comparison of the high achievers' test scores on pre- and post-listening comprehension before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	18	12	-6	-1.367 (.172)
2	14	27	13	
3	18	18	0	
4	12	17	5	
5	25	25	0	
6	10	20	10	
7	19	22	3	
8	29	34	5	

Table 4.9 shows a Z score of -1.367 that indicates there was no significant difference between pre-test and post-test scores of high achievers.

The results in tables 4.7-4.9 indicate that PBL influenced the development of low and medium achievers' listening comprehension, while there appeared to be no significant effect on the high achievers' listening comprehension.

Table 4.10 The comparison between the means of pre- and post- structure & written expression before and after using PBL

Tests	Scores	Pre		Post		t
		\bar{X}	S.D.	\bar{X}	S.D.	
Structure & Written expression	40	14.04	3.33	17.12	3.39	3.89**

N=26

Table 4.10 shows the mean scores of the pre-test was 14.04 while the post-test mean scores was 17.12. A test suggests a statistical significance at a 0.01 level ($t = 3.89$). That is, the t -test indicates that the post-test scores were significantly higher than pre-test scores.

Table 4.11 The comparison of the low achievers' test scores on pre- and post-structure and written expression before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	6	15	9	-1.122 (.262)
2	15	10	-5	
3	10	19	9	
4	11	15	4	
5	16	15	-1	
6	14	8	-6	
7	13	16	3	
8	12	22	10	

Table 4.11 shows a Z score of -1.122 that indicates there was no any significant difference between pre-test and post-test scores of low achievers.

Table 4.12 The comparison of the medium achievers' test scores on pre- and post-structure and written expression before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	9	15	6	-2.810** (.005)
2	16	18	2	
3	12	19	7	
4	16	20	4	
5	14	17	3	
6	11	16	5	
7	17	19	2	
8	18	20	2	
9	9	18	9	
10	15	16	1	

Table 4.12 shows a Z score of -2.810 that indicates the medium achievers' post-test scores were higher than their pre-test scores at a significance level of at least 0.01.

Table 4.13 The comparison of the high achievers' test scores on pre- and post-structure and written expression before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	15	18	3	-2.184* (.029)
2	15	20	5	
3	18	20	2	
4	17	20	3	
5	13	17	4	
6	20	23	3	
7	15	13	-2	
8	18	19	1	

Table 4.13 shows a Z score of -2.184 that indicates the high achievers' post-test scores were higher than their pre-test scores at a significance level of 0.05.

The results in tables 4.11- 4.13 indicate that PBL influenced the development of medium and high achievers' structure and written expression skills, but did not appear to have an effect on the development of low achievers' structure and written expression skills.

Table 4.14 The comparison between the means of pre- and post- reading comprehension before and after using PBL

Tests	Scores	Pre		Post		t
		\bar{X}	S.D.	\bar{X}	S.D.	
Reading	50	18.38	4.65	22.19	5.15	4.27**

N=26

Table 4.14 shows the mean scores of the pre-test was 18.38 while the post-test mean scores was 22.19. A test suggests a statistical significance at a 0.01 level ($t = 4.27$). That is, the t -test indicates that the post-test scores were significantly higher than pre-test scores.

Table 4.15 The comparison of the low achievers' test scores on pre- and post-reading comprehension before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	13	16	3	-2.371* (.018)
2	10	19	9	
3	17	26	9	
4	13	17	4	
5	18	24	6	
6	20	20	0	
7	20	21	1	
8	11	22	11	

Table 4.15 shows a Z score of -2.371 that indicates the low achievers' post-test scores were higher than their pre-test scores at a significance level of 0.05.

Table 4.16 The comparison of the medium achievers' test scores on pre- and post-reading comprehension before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	23	23	0	-2.536* (.011)
2	11	20	9	
3	20	26	6	
4	22	25	3	
5	17	18	1	
6	11	11	0	
7	17	19	2	
8	21	23	2	
9	17	19	2	
10	17	18	1	

Table 4.16 shows a Z score of -2.536 that indicates the medium achievers' post-test scores were higher than their pre-test scores at a significance level of 0.05.

Table 4.17 The comparison of the high achievers' test scores on pre- and post-reading comprehension before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	23	17	-6	-1.620 (.105)
2	19	36	17	
3	23	28	5	
4	18	21	3	
5	22	23	1	
6	26	27	1	
7	24	25	1	
8	25	31	6	

Table 4.17 shows a Z score of -1.620 that indicates there were no significant differences between pre-test and post-test scores for high achievers.

Tables 4.15-4.17 indicate that PBL had a positive influence on the development of reading comprehension skills of low and medium achievers, while it appears not to have had any effect on the development of high achievers' reading comprehension skills.

Table 4.18 The test reliability and rater agreement index of the writing test

Test	Test Reliability	Rater agreement index (RAI)
Writing	$\alpha = .92$	0.96

Table 4.18 indicates the writing test is 92% reliable and the test results indicate a high degree of inter-rater agreement (96% level of agreement).

Table 4.19 The comparison between the means of pre- and post-writing tests before and after using PBL

Test	Scores	Pre		Post		t
		\bar{X}	S.D.	\bar{X}	S.D.	
Writing	36	10.58	4.13	19.50	4.23	9.24**

N= 26

Table 4.19 shows the mean scores of the pre-test was 10.58 while the post-test mean scores was 19.50. A test suggests a statistical significance at a 0.01 level ($t = 9.24$). That is, the t -test indicates that the post-test scores were significantly higher than pre-test scores.

Table 4.20 The comparison of the low achievers' writing test scores before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	7	18	11	-2.521* (.012)
2	7	12	5	
3	6	24	18	
4	8	18	10	
5	6	18	12	
6	7	15	8	
7	6	19	13	
8	14	20	6	

Table 4.20 shows a Z score of -2.521 that indicates the low achievers' post-test scores were higher than their pre-test scores at a significance level of 0.05.

Table 4.21 The comparison of the medium achievers' writing test scores before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	9	11	2	-2.809** (.005)
2	12	20	8	
3	6	24	18	
4	7	16	9	
5	13	25	12	
6	12	23	11	
7	13	15	2	
8	7	17	10	
9	14	23	9	
10	19	30	11	

Table 4.21 shows a Z score of -2.809 that indicates the medium achievers' post-test scores were higher than their pre-test scores at a significance level of 0.01.

Table 4.22 The comparison of the high achievers' writing test scores before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	8	18	10	-1.970* (.049)
2	15	21	6	
3	11	18	7	
4	16	14	-2	
5	6	18	12	
6	16	14	2	
7	15	17	2	
8	16	27	11	

Table 4.22 shows a Z score of -1.970 that indicates the high achievers' post-test scores were higher than their pre-test scores at a significance level of 0.05.

Tables 4.20-4.22 show that PBL had a positive influence on the development of low, medium and high achievers' writing skills.

Table 4.23 The test reliability and rater agreement index of the speaking test

Test	Test Reliability	Rater agreement index (RAI)
Speaking	$\alpha = .86$	0.93

Table 4.23 shows that the speaking test is 86% reliable and inter-rater agreement was high (RAI = .93).

Table 4.24 The comparison between the means of pre- and post- speaking tests before and after using PBL

Test	Scores	Pre		Post		t
		\bar{X}	S.D.	\bar{X}	S.D.	
Speaking	24	9.62	3.63	15.00	3.60	9.13**

N= 26

Table 4.24 shows the mean scores of the pre-test was 9.62 while the post-test mean scores was 15.00. A test suggests a statistical significance at a 0.01 level ($t = 9.13$). That is, the t -test indicates that the post-test scores were significantly higher than pre-test scores.

Table 4.25 The comparison of the low achievers' speaking test scores before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	8	16	8	-2.533* (.011)
2	5	11	6	
3	7	8	1	
4	4	8	4	
5	4	12	8	
6	4	12	8	
7	8	20	12	
8	12	19	7	

Table 4.25 shows a Z score of -1.970 that indicates the low achievers' post-test scores were higher than their pre-test scores at a significance level of 0.05.

Table 4.26 The comparison of the medium achievers' speaking test scores before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	12	13	1	-2.809** (.005)
2	12	19	7	
3	11	15	4	
4	4	12	8	
5	9	16	9	
6	14	20	6	
7	8	13	5	
8	14	18	4	
9	12	20	8	
10	6	15	9	

Table 4.26 shows a Z score of -2.809 that indicates the medium achiever's post-test scores were higher than their pre-test scores at a significance level of 0.01.

Table 4.27 The comparison of the high achievers' speaking test scores before and after PBL

Student No.	Test Scores		d	Z
	Pre	Post		
1	11	20	9	-2.217* (.027)
2	12	16	4	
3	8	12	4	
4	15	20	5	
5	15	14	-1	
6	12	17	5	
7	12	16	4	
8	12	12	0	

Table 4.27 shows a Z score of -2.217 that indicates the high achiever's post-test scores were higher than their pre-test scores at a significance level of 0.05.

Tables 4.25-4.27 indicate that PBL had a positive influence on the development of low, medium and high achievers' speaking skills.

Overall, the test results above indicate that there were highly significant differences between the pre-test and post-test ability of participants at a significance level of 0.01 (tables 4.2, 4.6, 4.10, 4.14, 4.19 and 4.24). This means that PBL had a positive influence on the development of the learners' English language skills, in particular on speaking skills. With detailed results on each group's proficiency level, test results suggest that for low achievers PBL positively influenced the development of participants' listening, reading, writing and speaking skills, but had no effect on their structure and written expression results. Interestingly, PBL had a statistically significant effect on the development of medium achievers' English language skills, with improvement shown in structure and written expression, listening, reading, writing and speaking. In addition, there were positive impacts for high achievers, who showed improvement in structure and written expression, writing and speaking but for whom PBL had a non-significant effect on the development of listening and reading skills.

4.2.1.2 Use of an Observation Schedule.

Besides TOEFL® PBT, a writing test and a speaking test were employed to examine whether PBL enhances Thai university students' English language proficiency. The researcher and an observer assessed nine participants, three students from each of high, medium and low groups, randomly selected. The classroom observation schedule form was utilised during their three presentations in weeks 4, 8 and 11. They were rated in terms of their language use on a five-point Likert scale, ranging from 'never' (scale = 1) to 'always' (scale = 5). Before observing and rating, the teacher and observer were trained thoroughly in all aspects of carrying out the process of observation. To familiarise observers with the students' frequencies of language use, five participants were randomly selected and assessed in trial observations.

The following tables show the test reliability and rater agreement index of the observation, the comparison of the three observations of the nine students relating to language use and the comparison of the three observations of each group of students with regard to language use.

Table 4.28 The test reliability and rater agreement index of the observation schedule

Research Instrument	Reliability Coefficients	Rater agreement index (RAI)
Observation schedule	$\alpha = .80$	0.92

Table 4.28 shows that the speaking test was 80% reliable, with a high rate of agreement between the two raters (RAI=.92).

Table 4.29 The comparison between first observation and second observation of nine students

Items	First Observation Scores		Second Observation Scores		t	Sig
	\bar{X}	S.D.	\bar{X}	S.D.		
uses English appropriately	2.11	.55	2.78	.36	5.66**	.000
has clear pronunciation	2.78	.51	3.89	.33	15.12**	.000
uses appropriate gestures	2.56	.46	2.94	.46	3.50**	.008
uses precise language and has wide variety	2.61	.70	3.06	.39	2.29	.052
uses correct grammar or appropriate language in conversation	2.61	.70	3.33	.50	2.87*	.021
modulates voice appropriately	2.94	.51	3.67	.50	3.25*	.012
demonstrates use of English language in tourism	2.39	.70	2.83	.79	2.87*	.021
Total Language Use	2.57	.55	3.21	.31	6.60**	.000

N=9

Table 4.29 shows that the mean score of the first observation was 2.57 while the mean score of the second observation was 3.21. This suggests a statistical significance at a 0.01 level ($t = 6.60$). That is, the t -test indicates that the second observation scores were significantly higher than the first observation scores.

Table 4.30 The comparison between second observation and third observation of nine students

Items	Second Observation Scores		Third Observation Scores		t	sig
	\bar{X}	S.D.	\bar{X}	S.D.		
uses English appropriately	2.78	.36	3.33	.50	3.59**	.007
has clear pronunciation	3.89	.33	3.72	.62	0.89	.397
uses appropriate gestures	2.94	.46	3.33	.50	2.80*	.023
uses precise language and has wide variety	3.06	.39	3.67	1.00	1.65	.138
uses correct grammar or appropriate language in conversation	3.33	.50	3.67	.50	1.41	.195
modulates voice appropriately	3.67	.50	3.78	.36	0.80	.447
demonstrates use of English language in tourism	2.83	.79	3.78	1.20	2.39*	.044
Total Language Use	3.21	.31	3.61	.57	2.29	.051

N=9

Table 4.30 shows that the mean score of the second observation was 3.21 while the mean score of the third observation was 3.61. This suggests that there was no significant difference between the second and the third observations as the t-test shows that the p value was greater than .05.

Table 4.31 The comparison between first observation and third observation of 9 students

Items	First Observation Scores		Third Observation Scores		t	sig
	\bar{X}	S.D.	\bar{X}	S.D.		
uses English appropriately	2.11	.55	3.33	.50	7.23**	.000
has clear pronunciation	2.78	.51	3.72	.62	4.46**	.002
uses appropriate gestures	2.56	.46	3.33	.50	4.60**	.002
uses precise language and has wide variety	2.61	.70	3.67	1.00	2.46*	.039
uses correct grammar or appropriate language in conversation	2.61	.70	3.67	.50	4.36**	.002
modulates voice appropriately	2.94	.51	3.78	.36	4.47**	.002
demonstrates use of English language in tourism	2.39	.70	3.78	1.20	3.95**	.004
Total Language Use	2.57	.55	3.61	.57	5.34**	.000

N=9

Table 4.31 shows that the mean score of the first observation was 2.57 while the mean score of the third observation was 3.61. This suggests a statistical significance at a 0.01 level ($t = 5.34$). That is, the t -test indicates that the third observation scores were significantly higher than the first observation scores.

Table 4.32 The means and standard deviations of the three observations of 9 students

Items	Scores		
	\bar{X}	S.D.	Meaning
uses English appropriately	2.74	.40	Sometimes
has clear pronunciation	3.46	.41	Sometimes
uses appropriate gestures	2.94	.41	Sometimes
uses precise language and has wide variety	3.11	.43	Sometimes
uses correct grammar or appropriate language in conversation	3.20	.39	Sometimes
modulates voice appropriately	3.46	.49	Sometimes
demonstrates use of English language in tourism	3.00	.74	Sometimes
Total Language Use	3.13	.40	Sometimes

N=9

Table 4.32 shows overall the students sometimes performed the seven skills in their presentations.

Tables 4.29 - 4.32 indicate that there were significant differences between the scores in the first and second observations and the first and third observation. This means that PBL positively influenced the frequency of students' language use. Between the first and second observations and the first and third observations, the students had a higher frequency of language use. In contrast, there was no effect on the frequency of language use of students between the second and the third observations.

Prior to describing the qualitative evidence for developing listening and speaking skills, the description of the classroom feedback is illustrated. It reflects how students did experience difficulties in sharing their opinions and giving feedback on their friends' work and progress due to the cultural impact on their learning.

4.2.2 Qualitative Data.

Corroborating evidence was obtained to show the development of the students' four skills (listening, speaking, reading and writing skills). The four qualitative instruments used to gather the data were project diaries, open-ended questionnaires, field notes, and work-in-progress discussions.

4.2.2.1 Group formation.

Before starting their projects, the students had to decide what type of activities they wanted to create to attract Thai and non-Thai tourists into the city. They were asked to form groups based on their interest. As a result, five groups were formed:

1. Boat tour
2. Tham Pha Ta Pol non-hunting area
3. Tourist tram
4. White water Khek rafting
5. Kwae Noi dam.

Most groups consisted of five members while the White water Khek rafting group had six members. The group names were based on the location or activities they had chosen.

In the following sections, the development of the four skills is described.

4.2.2.2 Listening and speaking skills.

There were three developmental stages of students' listening and speaking skills:

- a) Initial stage of students' listening and speaking abilities,
- b) Second stage of students' listening and speaking abilities, and
- c) Final stage of students' listening and speaking abilities.

4.2.2.2.1 Initial stage of students' listening and speaking abilities.

After the initial investigation of the activities that they wanted to create to attract tourists to the city, the students had to report their results to the class. The aim of the presentation was to give students the opportunity to present their ideas and at the same time to engage in their learning. In addition, the researcher could evaluate their English language skills. During their first presentation (week 4), a number of the students demonstrated low level performance in listening and speaking skills. According to the teacher's observation, she listed the following comments for the students (Field note, June 27):

Table 4.33 Teacher’s comments on the students’ listening and speaking skills

Group	Comments on the students’ performance	Special attention was paid to students’ abilities to
Boat Group	<p>Use language that will be understood by the people you are presenting to. If your target group are foreigners, keep the Thai language to a minimum. When you have to use Thai language to give Thai place names speak slowly and clearly and explain; ie. <i>watphrasiratanamahathatworamahavihan</i> is pronounced as <i>wat-phra-si-ratana-mahathat-wora-maha-vihan</i> and explain that it is known locally as <i>Wat Yai</i>.</p> <p>Do not use <i>Thailish</i>, for example, <i>footbon</i> (football) <i>centran</i> (central) <i>appbin</i> (apple) etc.</p> <p>Do not use Thai language unless it is a proper noun.</p> <p>You need to improve your pronunciation. Make sure your language is clear.</p> <p>Do not read from PowerPoint slides or from your notes all the time.</p>	<p>Use spoken language effectively</p> <p>Use English</p> <p>Use English</p> <p>Speak clearly</p> <p>Describe and explain ideas to others & speak in a flowing way</p>
Tham Pha Ta Pol Non-Hunting Area Group	<p>Initially the section on product started out well but became confused and virtually stopped about half way through.</p> <p>You need to improve your pronunciation e.g. <i>investigated, completed, natural, stalagmite, etc.</i></p> <p>No “yeah” at the end of your talk all the time.</p>	<p>Show evidence of organisation</p> <p>Speak clearly</p> <p>Use spoken language effectively and accurately in informal and formal situations.</p>
Tourist Tram Group	<p>You should pause in your presentation after each slide to allow time for the audience to receive your message.</p> <p>You need to improve your pronunciation e.g. <i>historical places, souvenirs, killing</i></p>	<p>Engage the listener</p> <p>Speak clearly</p>

	<p><i>field, city pillar shire, etc.</i></p> <p>How to read the following numbers: 405, 450, 4005?</p> <p>You've had problems with your friends' questions such as "<i>Do you think visiting Chan Palace will make Phitsanulok more attractive for tourists?</i>" "<i>Should there be more souvenir shops, parking areas and toilets available at the sightseeing?</i>" I'm not sure whether you didn't understand the questions or you didn't have the answers.</p>	<p>Speak clearly</p> <p>Listen, understand and respond critically to others</p>
Kwae Noi Dam	<p>You need to improve your pronunciation. I am confused by your particular pronunciation or grammatical errors e.g. "<i>We will visit this place, investigate the information and make the products to present the tourists and they interested people.</i>" "<i>Because it's the new dam that had been built so it isn't well-known for the tourists, moreover the tourists don't know more about its history too.</i>"</p> <p>You could not complete the sentences when speaking - it's like you can't find any words to use. You also need to develop your knowledge and vocabulary about the area.</p> <p>You think in your native language (Thai), and then translate to English. This makes your meanings messed up or messages confused e.g. "<i>We want to develop our management skills by daring to say direct words and brave decide solve the problems.</i>"</p> <p>"<i>We are able to respect idea friends, control personality, speak fluently and make natural action. We want to improve graphic skills and decorate the graph well.</i>"</p>	<p>Speak clearly & display use of language elements</p> <p>Show evidence of organisation & deliver a thoughtful presentation</p> <p>Use spoken language effectively & describe and explain your ideas to others</p>

<p>White Water Khek Rafting</p>	<p>The verbal presentation was not clear as you did not complete the sentences e.g. <i>“You can go by car from Bangkok and drive to highway number 1 from Phahonyothin Road. All distance of travel about 370 kilometres.” “The tourists get training for best practice before.”</i></p> <p>You read too many notes instead of making your presentation.</p> <p>You’ve had problems with your friends’ questions such as <i>“Are there any local handicrafts?” “Besides rafting adventure along Khek River, What else can we do at Khek River?”</i> I’m not sure whether you didn’t understand the questions or you didn’t have the answers.</p>	<p>Show evidence of organisation & display use of language elements</p> <p>Describe and explain your ideas to others & speak without reading from notes</p> <p>Listen, understand and respond critically to others</p>
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The above table demonstrates that students had problems with their listening and speaking skills, for example, problems with using English. One of boat group’s comments was they used Thai language a few times in their presentation. When they stumbled over the words or did not have enough vocabulary to express themselves in English, they immediately switched to Thai language. This reveals that the students lacked either vocabulary, speaking skills or overall communication problems. In addition, they showed that their listening skills were not strong. When the student audience asked questions, the student presenters could not understand the questions. By the end of the questions, they had missed much of what the audience had asked (for example, see Tourist tram group and White water Khek rafting group’s comments).

As this was the project’s first presentation, students were reminded that comments on their presentation were not to be taken negatively but were offered as advice to assist in their listening and speaking skills and their project development. Positive feedback was also given by the teacher appropriately.

Feedback about their difficulties with listening and speaking was not only received from teachers but also from students themselves. They were instructed to make seven separate entries in their diaries throughout the project to discuss their projects development, knowledge and skills, feelings, problems and questions (see Table 3.1: Timeline of the study). Each of the students talked about their language skills. The researcher chose three

opinions from each student level as examples of students' reflections on their difficulties in listening and speaking skills. Extracts from their first project's diaries on June 20, 2008 are shown (translation from Thai to English):

Low level:

Sa's diary: When I speak English, I always waste time with compiling sentences in my head. Person who is speaking with me has to have a very long moment to get my answer. I hardly respond when teachers ask for a volunteer in classroom. I have problems to understand some vocabulary that my teacher used.

Wa's diary: I want to answer questions but I don't understand what teachers say and I want to speak English very well but I'm afraid that it will be wrong when speaking because I have not many vocabulary and concern about grammar. How should I do? Please help me!

Ba's diary: My problem is understand teacher when she explains about the project's objectives. It maybe a little problem for you but for me it's a big problem with listening.

Medium level:

Ni's diary: The only thing I regard as a problem is I'm worried about my speaking and listening skills. I have problems understanding foreign teachers. I don't understand what they say or ask.

Pui's diary: My problem is communicate with others because sometimes I can't make the thing I wish to say. I think it's clear but nobody understand what I say. But I learned that because of quick thinking and speaking, I make a mistake.

Tee's diary: I don't understand questions from friends and from you. I want to ask but I'm afraid so I asked my friends instead. It is the first time to study like this. I think I will have lots of problem but I don't give up. I would like to improve my English skills this semester.

High Level:

Kae's diary: When I spoke English, I used wrong words and wrong grammar. In our last conversation, I think I answered beside the point.

Yo's diary: When I speak English in my presentation, I can't quite speak it correctly. People always ask me what I've said. I want to speak English well and fluently.

Rung's diary: My concern is speaking skills. I have trouble expressing my ideas. I'm afraid that foreigners don't understand me.

It is clear to see that students recognised their own difficulties with their listening and speaking skills. For example, with low and medium level achievers, they did not understand what their teachers and friends were talking about because of their limitation of vocabulary and use of language. They were not confident taking part in classroom activities. For high achievers, their concern was to respond to other people's opinions with the correct use of grammar and vocabulary. Interestingly, all of them well understood their difficulties in listening and speaking and wanted to focus on improving these skills. They were quite critical of their own capabilities and were encouraged to reflect on their needs so their teacher could support and provide proper guidance.

4.2.2.2.2 Second stage of students' listening and speaking abilities.

Following the second work-in-progress presentation in the class (week 8), there was a clear indication of some development in the students' abilities. The observer wrote:

Overall the presentations have improved. Everyone looked a lot more relaxed and confident with their presentation. They explained and spoke more clearly. They paid attention to friends and teachers' questions and carefully answered them. If they didn't understand the questions, they tried to rephrase and create the best answer to any question. They definitely looked less shy and nervous when speaking.

However, in the majority of cases the presentations were too rushed (quick). They needed to slow down so the audience doesn't miss important information. Also they need to pause between slides if there is any subject change.

Some needed a little more practice with their presentation - pay attention to pronunciation and word usage. Most of them needed to review how to use "ever and never" and pronounce "the end sounds" (such as completed, investigated, etc.) In addition, they needed to review the script by simplifying it in some areas and a change of language if needed. Finally, they needed to tell the audience if making a subject change from one slide to the next such as "this next slide will show XXX" "I would now like to talk about XXX" "A change of topic now to XXX" (Field note, July 25, 2008).

As with the initial presentation of their draft proposal, students again received feedback from their peers and teacher. Overall they were more confident in making their presentations and were interested in looking for ways to improve their English skills. There was a long discussion in class and during this time the teacher encouraged them to discover ways to improve their listening and speaking skills. The next section details strategies that students used to improve.

Strategies developed by students.

As part of the PBL process, students have to identify their learning issues and design solutions to suit. In this study, the students discovered that they had difficulties with their speaking and listening skills. Therefore, they came up with strategies based on feedback from their peers, their teacher, and their own solutions. There were six main strategies as follows:

- a) Speaking English in the work-in-progress discussions,
- b) Listening and responding when making a presentation,
- c) Talking with friends in English,
- d) Watching news and listening to music in English,
- e) Using English speaking chat rooms, and
- f) Interviewing non-Thai tourists.

Speaking English in the work-in-progress discussions.

Each group attended four discussions with the teacher prior to their final work-in-progress presentation. During these meetings they spoke English and always had questions on language usage. They were eager to develop their speaking skills, listening skills, and their confidence. They wanted to understand and use the language effectively. It was a surprise to learn that three out of five groups developed a selection of short dialogues and key phrases to enhance their speaking skills for use within their groups and during teacher / student meetings.

Listening and responding when making a presentation.

Three out of five groups practised their presentation within their own group. Each member agreed to present their information in front of their team and to prepare at least one question to ask their peers who were responsible for different sections of the presentation.

Meanwhile, the other two groups agreed to co-operate and listen to each other's rehearsal and give feedback to each presenter. Their diaries showed that both time and effort were invested to develop their listening and speaking skills. They spoke English to their team members and also to the other team's members, offering feedback at the rehearsal. They also provided descriptive feedback by giving examples of what their friends should have done to make a more effective presentation, for example, "It will be more interesting and exciting to show PowerPoint slides or video of the demonstration of adventurous rafting, such as people paddling downstream and upstream and people avoiding rock obstacles while explaining about white-water rafting," and "Your presentation would be smoother if you didn't stop and try to think what's next. You should have a small note."

Talking with friends in English.

Their diaries showed that every group member chatted with their classmates and roommates in English whenever they could. They decided to use English for more than just presentations; they socialised and talked with their team members in English. The speaking topics included entertainment, food, fashion, hobbies, shopping, and sports.

Listening to music in English.

More than 38% of the students downloaded and listened to free music from the Internet and 50% of the students watched a U.S. music television channel available in their dormitory. In addition, nearly two thirds of the students listened to and sang along with English songs.

Using English speaking chat rooms.

Eighty-five percent of the students chatted in English through free video chatting programs and websites including Live Messenger, Skype, MSN Messenger, Yahoo, PalTalk and Camfrog. They wrote “I spoke English with my friends who live overseas from the Skype software program,” “I spoke with foreigners in English from the Camfrog free video chatroom as I wanted them to check my homework,” and “I talked with my pen-pals who are studying in Singapore through PalTalk and MSN.”

Interviewing non-Thai tourists.

Twenty students indicated that they improved their listening and speaking skills by interviewing non-Thai tourists. An interview not only provided new information but also created an opportunity for students to practice and improve listening and speaking skills. On 25 July, Bee, one of Boat Group’s team members, wrote in her diary in Thai

เมื่อวันเสาร์หนูกับเพื่อนไปที่ที่นักท่องเที่ยวไป มีไปวัดใหญ่กับที่ท็อปแลนด์ เราไปสัมภาษณ์ฝรั่ง หนูได้ข้อมูลแล้วก็ ได้ฝึกฟังกับพูดด้วย ตอนแรกหนูกลัวฝรั่ง คือ...เขาไม่พูดภาษาไทย แต่หนูต้องพูดภาษาอังกฤษ บางครั้งหนู อยากจะพูดให้มันชัดเจน เขาจะได้เข้าใจ แต่ก็ทำไม่ได้ แต่หนูพยายามนะ คือทำให้ดีที่สุด พอพูดกับฝรั่งคนแรก เสร็จ หนูนะโล่งอกเลย เขามาจากประเทศอเมริกา ร่วมมือดีมากและถามให้คำแนะนำหนูว่าต้องใช้ประโยคอะไร จากนั้นหนูก็ได้คุยกับฝรั่ง 2-3 คน หนูเข้าใจที่เขาพูดและก็ตอบคำถามได้ (ทำเสียงตื่นเต้น) มีฝรั่งอยู่คน เป็นคน ฝรั่งเศส เขาสอนแกรมม่าให้หนูด้วย และบอกหนูว่าใช้คำอะไรดี นักท่องเที่ยวถึงจะเข้าใจได้

เรามีข้อมูลไม่พอที่จะมาใส่ในตารางในช่องชาวต่างชาติ เมื่อวานนี้เราก็เลยตัดสินใจว่าต้องไปสัมภาษณ์เพิ่ม เราไป ที่บ้านเยาวชนที่เป็นของคนคริสต์กัน อยู่แถวหน้ามอนี้แหละคะ มีฝรั่งไปประจำ ไปทำกิจกรรม ไปสอนเกี่ยวกับ ศาสนาคริสต์ หนูก็ไปสัมภาษณ์หลายคำถามเลย หนูก็ว่าหนูมั่นใจเวลาพูดและตอบคำถาม หนูสบตาเขา รู้สึกดี เรามั่นใจ การสัมภาษณ์ก็ดี ได้ข้อมูลที่ต้องการ หนูเลยรู้ว่าหนูพัฒนาการฟังและพูด หนูกล้าที่จะพูดมากขึ้น รู้สึกดี ที่เราทำได้ บางครั้งก็มีติดขัด ไม่เข้าใจบ้าง แต่หนูก็เดาถูกเดียว ดูท่าทาง จากที่พูดกันบ้าง

(English translation)

Last Saturday my friends and I went to some tourist sites downtown such as Wat Yai and Topland Plaza. We interviewed non-Thai tourists. I

obtained some data and I practised listening and speaking skills. In the beginning I felt afraid of facing strangers who don't speak Thai but I knew I had to speak English with them. Sometimes I wanted to speak and make them understand me clearer but I couldn't do it. I think I tried my best. After I talked to the first foreigner, I felt more relaxed. He was from USA. He cooperated very well and gave some suggestions about a few English sentences. After chatting to a few tourists, I understood what they said and could answer some questions. Oh! One tourist from France taught me some grammar and suitable words that are easy for non-Thai tourists to understand.

Yesterday, as we didn't have enough information to prepare our table on information from foreigners, we decided to interview more people. We went to Youth House Club which is Christian Club located in front of university. Foreigners always visit there for activities to publicise Christianity. I asked many questions and felt more confident to speak and answer questions. I looked at their eyes this time with confidence. It was a successful interview. From these interviews I know I had improved my listening and speaking skills. I dared to communicate with them. This is a wonderful feeling. Although I didn't understand sometimes, I tried to guess from their body language and the rest of the conversation.

The above extract shows that the student had a chance to practise English skills and improved her listening and speaking skills through the interviews. In the beginning, she was not confident that she could communicate and understand the language. Nevertheless, after trying to speak with a few non-Thai tourists, she started to become familiar with the language and became less hesitant and more confident. She started to believe that she could use the language to speak with others.

The following is another example of a student's improvement in listening and speaking skills through practice with hands-on learning:

Last weekend, I had some problems while trying to approach some foreigners. I wasn't brave enough to talk to them even though I really wanted to speak English. I

let others in the group speak instead. However, my friends told me to try and they said they would help me. So I decided to try and speak with the tourist. It was amazing; I spoke to six non-Thai tourists in one day. When I didn't understand them, I used non-verbal communication and it wasn't bad after all. I have a little more confidence now and I know I should not be afraid to face it. Next weekend, I will go to Wat Yai again to do more interviews. I think I will enjoy it and it should be fun (Wa, Diary, July 27)

The above comment emphasises that speaking and listening skills can be gradually developed if learners practise and spend more time speaking and listening. In addition, it took some time for the students to feel comfortable to speak with foreigners and to gain sufficient English language skills. This learner demonstrated confidence as she showed that she was willing to take risks by going out to interview more and work harder on listening and speaking comprehension skills. Additionally, her attitude was changed as she learned that not understanding was acceptable as long as she was successful in communicating in English with the tourists.

Strategies developed by teacher.

Teachers in PBL have to facilitate and monitor the students' learning progress and their project development, therefore the teacher has to spend a considerable amount of time with the students by way of consultation and support.

In this study, in terms of developing listening and speaking skills, considerable time was set aside by the teacher for guidance and listening to the students. The teacher wanted to encourage her students to practise listening and speaking skills during the learning process. Therefore, the only strategy was to speak English at all times in and outside the classroom during all instructional periods, discussions outside of normal class, and all rehearsal sessions. The following is how the teacher used English in different situations.

Using English in the classroom.

In the classroom, more than half of the students admitted that they had opinions but were worried and shy to use English. They also felt that they could not express exactly what they meant in English. The teacher understood their feelings and endeavoured to reduce their shyness and nervousness and encouraged them to speak English. They were allowed

to remain seated within their groups whenever they were asked to speak English. This assisted and they appeared and felt more confident to speak in English in class.

Since there were insufficient English conversation opportunities for the students outside of the classroom, the teacher encouraged her students to actively participate in classroom activities which normally focused on using the language in real-life situations. They were given every chance to speak English with their teacher and the native-English speaking observer during class activities. This actively engaged students in language learning. They showed that they listened attentively when their teacher talked and were willing to exchange ideas and information. Often during class sessions, students turned to the observer and asked him to pronounce particular words or asked how to use particular vocabulary in different situations. The teacher always made sure that she listened to her students' questions and ideas and asked open-ended questions to encourage them to interact and respond to her. Their views were heard and valued.

In summary, the teacher spoke English at all times during the class and students had the opportunity to use English with their teacher and the observer. They became less stressed and showed an eagerness to speak and use the language.

Using English in discussions.

For further opportunities to use English outside of the classroom, work-in-progress discussion sessions were organised so that each group could speak English with their teacher and the native-English speaking observer. These sessions focused on the groups' progress and the challenges they encountered during their project. The discussions were established four times during July-August 2008 (see Table 3.1 - Timeline). Specific questions were given ahead of time so that students were able to prepare a brief answer expressing their views and feelings. If students could study questions earlier and understand them, they could determine their answers. It is clear that students had constant language input not only from within class but also from discussions with the teacher and the observer. Every team member assisted with answering questions and could add their comments at any time. English language was the preferred language in these discussions.

Even though there were a few scripted dialogues, there was extensive use of English conversation as follow-up questions were used to request more information on a topic

they had already prepared. In the first and second discussions, the set of questions were similar, e.g., what they had learned so far, what they were investigating, what kind of data they had gathered, how they had obtained it, any problems that had occurred and any comments that were raised on this type of learning. For the last discussion, different questions were asked as it was almost the end of the project. Students were asked if they had completed their interviews with tourists, what their findings were, at what stage their presentations and products were, when they would finish their project and if there were any problems that had occurred. The following table shows the conversation's duration of first, second and third work-in-progress discussions.

Table 4.34 Conversation's duration of work-in-progress discussions

Group	Conversation's duration (minutes)		
	1 st meeting	2 nd meeting	3 rd meeting
Boat tour	105	70	82
Tham Pha Ta Pol Non- Hunting Area	48	50	82
Tourist Tram	70	65	36
White Water Khek Rafting	84	66	79
Kwae Noi Dam	50	100	90

Table 4.34 shows that students were able to have a considerable discussion in English. Since the questions were relevant and meaningful to their projects, most of the students spoke for two to three minutes in English, explaining and engaging analytically in the topics for which they were responsible. English language was used for a variety of purposes in the discussions, such as (a) reflecting on their learning, (b) questioning for clarifying purposes, (c) explaining the process, and (d) expressing their feelings. The following excerpts are some examples of how students used English for different reasons:

Reflection

Teacher: How have your experiences during this semester affected your view of learning?

Kae: I had a chance to work in group and acquired knowledge through peers and outside class learning on my own. It was a fantastic experience. I'm confident that I'm capable to take responsibility for my own learning. It's not as difficult as I first thought (White water Khek rafting group, discussion, August 8, 2008).

Questioning for clarifying purposes

Teacher: Anything you want to ask, talk about or tell me or the others?

Rat: We didn't present the history of holy site in detail. Do we have to send the details to you?

Teacher: I think you can present some brief information but for the full detail, you can write it in your report. You can send me your report after the final presentation.

Sa: After final, we must give you a report?

Teacher: Yes (Kwae Noi Dam group, discussion, August 25, 2008).

Explaining the process

Teacher: Please describe how you got the history of Tham-Pha-Ta-Pol non-hunting area.

Wa: First we went to TAT and got a general information about this place.

Su: The brochure from TAT didn't have much detail so we decided to ring Tham-Pha-Ta-Pol non-hunting area tourist office.

Wa: Then we made an appointment for an interview.

Su: After interviewing, a staff gave us the information on tours, maps and history (Tham-Pha-Ta-Pol non-hunting area group, discussion, August 8, 2008).

Expressing their feelings

Teacher: Where did you go for an interview?

Ni: At first I go to Wat Yai.

Teacher: Just only one place?

Ni: No, at Wat Yai and Topland shopping mall. I found that tourists don't cooperate with me. They looked at me like a beggar. I don't like it. I hate it very much (Boat tour group, discussion, July 18, 2008).

It was unavoidable for Thai to be used in the discussions between the teacher and students. For students, Thai was needed to explain some specific vocabulary, to discuss answers among themselves when follow-up questions were asked or when they did not understand the questions. For the teacher, Thai was used for three reasons: (a) providing specific sentences and vocabulary, (b) clarifying questions and (c) giving explanations when resolving students' confusion. However, English was still used almost exclusively in the discussions. It was found that the conversations in Thai in each transcript only lasted from 10 seconds to 2 minutes.

In conclusion, the researcher and the observer encouraged students to talk in greater depth and helped them to reach the aim of the conversation. They had to listen carefully and to respond appropriately when asked to explain in detail.

Using English in rehearsal.

In PBL, students control their learning and are actively engaged in their project. They are required to present their progress through the use of English language learning. In this study, the students practised listening, speaking and comprehension a great deal before presenting their final project. They listened to other groups' oral reports and the teacher's suggestions. A good example took place on August 27 during the rehearsal phase. Each group rehearsed their presentation of their final product as a last chance to receive feedback from their peers, who appeared attentive. When presenters explained their projects, they used appropriate gestures and facial expressions.

While listening, the student audience took notes and these became a tool for asking questions and giving feedback at the end. They nodded their heads and responded occasionally with "I see", "Good point" or "Exciting". After each presentation, the audience gave feedback to the presenting group with a variety of suggestions such as organisation of the content, presentation improvement and presentation slides.

The audience concentrated on the content, asking for explanations because they knew that at the final project presentations a committee and their teacher would be asking them some related questions. Therefore, they tried to help their friends make their points as clearly as possible when asked for any clarification.

Each group paid attention and answered their audience's questions. The presenters showed their in-depth knowledge of the investigation and were able to demonstrate their extensive knowledge on specific questions, for example:

“If you could change the position of a ticket booth of tourist tram service, where would be the best location?”

“If we're backpackers and we couldn't afford the accommodation at the Kwae Noi Dam, where would you suggest that we to stay?”

“You said the best way to get to Tham Pha Ta Pol Non-Hunting Area is by a personal car and the other choice is fairly difficult as we have to go by bus and continue the trip by motorcycle Is there any easier and possible way for tourists to be there?”

“If rainy season arrives, is it safe to use a boat trip?”

“What are the differences of rapids classification at White Water Khek Rafting?”

Based on the questions they asked and the answers they gave, the teacher was able to examine whether the students engaged in the presentations and used their listening and speaking skills in the classroom. Students as presenters were working hard to try to achieve their various aims, such as improving their English skills, making their project interesting and concentrating on the content. In the meantime, student audiences were trying to understand what they were hearing and evaluating content to formulate feedback and questions.

4.2.2.2.3 The final stage of students' listening and speaking abilities.

In week 13, August 27, each group presented their final work-in-progress presentation to the class and received feedback from their peers and teacher. On this day, each group had 25 minutes to present their project. The presentation had to include (a) why they chose the topic, (b) why they chose the end product, (c) what they did to collect the data, (d) where they collected it, (e) results of the investigation, (f) what they discovered during the data

collection, (g) problems in data collection, (h) their experiences, and (i) their conclusion, together with a question and answer session. During this presentation, they showed confidence in speaking and listening skills. On August 27, the observer wrote in his field notes:

Overall the presentations have been excellent. Everyone looked a lot less nervous and anxious. Even though they made a few grammatical and pronunciation mistakes, these didn't affect the quality of their presentation which was easy to follow. They have learned how to relate speaking roles to each other and for the presentations to flow from one to the other. This reflected group rehearsal. They integrated their findings into a meaningful way and presented the results logically.

They spoke clearly and confidently. They spoke at reasonable speed and appeared to understand the content being presented. Their PowerPoint presentations were great, appropriate graphic was used and it kept my interest. Interestingly, they added humour in their presentations while talking about their problems in data collection. Every group talked about their unpleasant experience with non-Thai tourists e.g., the tourists' reactions and how students coped with this situation with good humour; they showed that they didn't take themselves too seriously.

They were able to answer questions by referring to information from a variety of sources such as websites, news articles and brochures. However, each group seemed to have the same problem, which was they were reluctant to answer questions about content on their friends' parts.

The above notes show that the classroom atmosphere seemed to have changed significantly. The classroom had developed into a relaxed atmosphere. The students demonstrated well-rehearsed presentations and stayed on topic. Even though there were a few mistakes in their pronunciation and grammar usage, their presentations were clear, understandable and easy to follow. They carefully explained their answers when they were asked.

Nevertheless, if questions were related to the content of a specific individual's part of the presentation, the others would remain silent. This situation is not unusual in a Thai classroom, where speaking out of turn is offensive. Students did not want to promote themselves in front of their friends. It was explained that being a group presentation it was acceptable for anyone to answer the questions, as this was a part of group work.

In terms of student audience, the researcher sensed that students were enthusiastic and comfortable, showing a sense of belonging and respect. They carefully listened to their friends' presentations, actively participated and willingly contributed to the feedback session. Each wrote their own short notes and gave their feedback to their peers at the end of the presentation, aiming to offer a last-minute change for the final presentation which would happen within the next four weeks. Compared to the first presentation, where the majority of the students were quiet and reluctant to speak and give feedback to friends, they had now built confidence in their listening and speaking skills.

To look at an individual's progress in listening and speaking skills, nine students consisting of three from each level of English expressed their ideas in Thai (where it is easier for them to explain) and in English in an open-ended questionnaire in week 16 on September 19, 2008:

Low level

Sa: การออกเสียงหนูดีขึ้น ได้เพื่อนกับครูช่วยแนะนำค่ะ แต่ก่อนหนูเคยพูดว่า such as เป็น shut as river เป็น liver light เป็น like script เป็น skip อีกอย่างหนูได้ฝึกพูดมากขึ้น พูดกับตัวเอง ฟังภาษาอังกฤษจากเพื่อน และครูก็ช่วยแนะนำด้วย หนูก็ว่าหนูพัฒนาการฟังและการพูดค่ะ
(English translation) My pronunciation is better. I got very useful feedback from friends and teacher. I used to pronounce "such as" as "shut as", "river" as "liver", "light" as "like" and "script" as "skip". I have improved listening and speaking skills through practising by myself, listening from friends and teacher's feedback.

Wa: หนูตอบคำถามมั่นใจขึ้น ถ้าหนูไม่เข้าใจ หนูก็สามารถถามให้กระจ่างได้ หนูรู้ว่าต้องถามยังไง ใช้ประโยคแบบง่ายๆให้เข้าใจมากขึ้น
(English translation) I can answer questions with confidence and if I don't understand what people say, I can ask them for

clarification. I know how to ask simple questions for better understanding.

Ba: การฟังหูต้องปรับปรุงอีก แต่หูก็เป็นผู้ฟังที่ดีนะคะ ครูเคยบอกหนูว่า Practice makes perfect หนูก็พยายามทำ หนูจะฟังเพลงอังกฤษ ดูหนังดูข่าว พยายามอยู่ค่ะ ร้องตามเขา พูดตามหนังบ้าง หนูว่ามันก็ช่วยนะคะ เอาไปใช้ได้ในเวลาเรียนการสนทนา หนูไม่อายค่ะที่จะพูด และก็พยายามตั้งใจฟัง เวลาเขาพูด หนูว่าการฟังหูดีขึ้น

(English translation) Even though my listening ability needs to be improved, I know how to become a better listener. As the teacher said “Practice makes perfect”, I will follow this. I will continue listening to English songs, watching English movies and news. I try to copy singers or movie stars’ sentences. It helps me a lot in conversation class. As I’m not shy to speak English and I pay a lot of attention when people speak, I think my listening skills have improved.

Medium level

Ni: My speaking and listening skills are much developed. I feel confident to use English skills in and outside class. I can ask relevant questions and tell the main idea of presentation or lectures.

Pui: I am not reluctant when asked to be a volunteer in English classroom. I’m not afraid of speaking or answering in English even though my English grammar is not perfect. I can listen and select content that I’m looking for so I can use them in my own presentation or my report.

Tee: I can respond to instructions or questions when asked in English and I begin to ask for more information or ask relevant questions.

High Level

Kae: For daily English conversation, I can easily talk about it and achieve purposes e.g. asking for information, giving direction,

explaining history of famous places, etc. For academic speaking, if I have time and prepare ahead, I think I can take part in formal discussions about the subject I am studying.

Yo: I speak clearer and understand well the structure of presentations (introduction, body and ending). I am able to answer and speak promptly in conversations with foreign friends, tourists and teachers. Also, I am able to make notes on what my teachers or my friends say.

Rung: For me, I feel confident and energetic to have a conversation in English. When I am alone, I practise conversation from one topic to another such as food (price, taste, ingredients) and famous location (fee, transportation, tourists). It is a good technique to improve my speaking skills as it helps me a lot to carefully think and prepare related vocabulary and content. For listening skills, I can make comment on how information is presented. I practised many times in this course.

Overall, these reflections show that the students felt that they progressively increased their communication skills, especially listening and speaking skills such as thinking about what they were hearing, understanding it, giving feedback and responding to questions.

4.2.2.2.4 Conclusion.

From the above qualitative data, it is clearly shown that, overall, students enhanced their ability in listening and speaking skills as a result of integrating PBL into *English for Tourism*. They had a chance to speak and listen to English frequently during their investigations, data collection and presentations of their progress to the class. Authentic activities, one of key features of PBL, drove the students to complete their tasks in a challenging environment that led to strong performance outcomes. They were fully engaged in developing language skills and obtained deeper knowledge of tourism, in which they showed an interest. They had a chance to work collaboratively and to interact with people outside the classroom by using the target language as a medium to achieve their goals.

4.2.2.3 Reading Skills.

In the process of completing their projects, students had the opportunity to experience a wide and varying range of information through reading. They needed to gain a deeper knowledge of the subject they were studying. In this study, the students read extensively. They not only read but also understood and remembered in order to create brochures as their end products. At the end of the study, it was found that the students further developed their English reading skills in three areas:

- a) The ability to summarise the information,
- b) The ability to understand the main idea, and
- c) The ability to read to improve their writing.

4.2.2.3.1 The ability to summarise the information.

PBL engages students in real life situations and offers opportunity for students to be exposed to authentic texts. In this study, the students undertook extensive reading throughout the projects and summarised a lot of information for their background knowledge. At the end of the study, 17 of the 26 students mentioned in their open-ended questionnaire that they gradually improved the ability to summarise what they had read. Ten of the 17 students stated that summarising was still difficult for them, especially when they read information of which they had no prior knowledge or had to encapsulate authors' ideas and meaning in their own words using their limited vocabulary. However, these ten students felt that by the end of the study their ability to summarise effectively and quickly had improved when compared to the beginning of the study.

The Initial stage.

At the beginning of the project, each group was required to read a description of a popular sightseeing location and summarise it into no more than seven sentences. Every group struggled to break down the larger ideas and convey a succinct idea. Even though there were mixed ability groups, they took at least 50 minutes to summarise an A4 sheet of information. Extracts from diaries show the students' challenges in summarising.

ใช้เวลามากจึงเวลาหา main idea และก็ supporting ideas กลุ่มเราอ่านตั้งห้าครั้ง ถึงจะเขียนสรุปโดยใช้ภาษาตัวเอง ยากมาก

(English translation) It took us a long time to find the main idea and supporting ideas. We had to read the information five times. After that, we

had to use our own words to write a summary. This is very difficult (Tuk, Tourist tram group, diary, June 18, 2008).

กลุ่มเรางมมากตอนหาคีย์เวิร์ดและก็คำศัพท์ เราก็เลยแบ่งกันหาในดิคชันนารี บางคนก็หาใจความสำคัญ คีย์เวิร์ด หาไต่เตี้ยสำคัญ เราทำเสร็จทันเวลา แต่ก็ยังสรุปไม่ได้

(English translation) We were confused when finding the author's key words and again with the vocabulary. Our team decided to share the responsibility. Some looked up words in dictionary and some looked for the main ideas, key words, and important ideas. We finished our summary in time but it wasn't a good summary (Pui, White water Khek rafting group, diary, June 18, 2008).

The above reflections show that summarising was a difficult task for the students. They could not easily identify the main ideas or support information due to lack of practice. Additionally, their insufficient vocabulary knowledge contributed to it being a very time consuming task for them.

Scaffolding by teacher.

To assist the students in their summarising skills, teacher modelling was provided twice in class. The students were advised to practise the skill while reading and gathering information for their projects. They were informed that they could not complete their projects without having good summarising skills as they were required to read extensive authentic information and summarise the key details, which would show their comprehension of the text.

In addition, the teacher encouraged the students to practise the skill of summarising as it could be useful for gathering background information for their projects. Also, it would further build vocabulary to assist in communication with non-Thai tourists. They were required to summarise what they had read in class into a paragraph after receiving instruction on recognising key words or phrases to identify who, what, when, where, why and how, and progressively selecting the key ideas to be included. Sometimes they were asked to refine or reduce their written pieces until only relevant information remained. The students received immediate feedback from their teacher, and were generally eager to

see their result and if they were correct. Scaffolding support for weaker groups was provided after class.

Final stage.

The students had opportunities to experience authentic materials and practised summarising a number of times during the creation of their projects. In the meantime, they collected new vocabulary related to tourism and gradually developed their skills, even though a few sentences containing unclear and confused points could be seen. The following table compares each group's summaries between weeks 3 and 8.

Table 4.35 The comparison of summary in week 3 and week 8

Group	Week 3	Week 8
Boat tour	There are many important rivers in Thailand and the Nan River is one of the most important tributaries in Chao Pra Ya River. The Nan river runs about 628 kilometres from Nan Province to Nakornsawan Province. There are many temples along the river. Boat racing becomes a popular sport among Thai and foreign tourists.	Chan Palace is the birthplace of King Naresuan the Great. He was born in 1555. When he was young, he was taken to Burma as a prisoner of the Burmese but returned early in his life. After he became the King, he declared war on the Burmese and forced them out of Thailand. Because of this, he became one of the best known kings of Thailand.
Tham Pha Ta Pol non-hunting area	There are five national parks in Phitsanulok and each has its own interesting waterfalls. There are many unique plants and animals in these areas. Tourists can do many activities such as camping, bush walking, bird watching, etc. The fee is not expensive.	Tham Rod or Rod cave is best known to tourists who visit Tham Pha Ta Pol non-hunting area. Within this cave you can see many seashells and fossilised fish, which now form part of the rocks. The cave also has impressive stalagmites and stalactites. In addition, you can walk along the river which flows through the cave. As a result of the fossils and the physical appearance, this cave is popular among the tourists.
Tourist tram	Folklore museum is a famous place to visit when you visit Phitsanulok Province. A tour guide is provided and if you want to tour around by yourself, you can do it. There are many labels for visitors to read and enjoy the details. Visitors can take photos in the museum and buy locally made souvenirs from the museum. The fee is reasonable for non-Thai tourists.	There are many reasons to visit Wat Ratchaburana in Phitsanulok. First, it is over 400 years old. Second, you can view King Rama VI's boat which he used to visit Phitsanulok from Bangkok. Third, the old pagoda and the eves of ordination hall are decorated with ancient three headed nagas. If you have time, you can also enjoy a Thai massage and herbal sauna. With these attractions, Wat Ratchaburana is one of the major temples to visit when you come to Phitsanulok.

<p>White water Khek rafting</p>	<p>Everywhere in Thailand has temples and in Phitsanulok Province, Wat Phra Si Rattana Mahathat is the most important temple located alongside the Nan River. It houses the most beautiful Buddha image in Thailand. It has a small museum too. It opens every day.</p>	<p>Rafting along the Khek river is one of Thailand's most popular rafting locations. First, it has easy access as it is located on the main highway leading to Phitsanulok. Next, there are various levels of difficulties which you can choose to suit your ability. Third, there are many instructors to help with your rafting. Choosing this area for rafting is a good idea because of easy access, variety of challenges and experienced trainers.</p>
<p>Kwae Noi dam</p>	<p>Phitsanulok Province has beautiful waterfalls. Water cascades over erosive rocks and this creates beautiful scenery. The stones of each waterfall have unique shapes and manners. Many species of flowers and trees can be discovered. Each waterfall is situated on the same highway and it is not far from each other.</p>	<p>Kwae Noi dam is a popular tourist location, especially during the summer. You can picnic during the day or stay overnight on a floating house. In addition, you can swim, fish, and ride a bicycle around many parts of the dam. Finally, you can do a boat tour around the main area of the dam. With all these activities you can easily spend a number of days visiting the dam.</p>

The above table shows the students' development of reading skills and ability to summarise. They showed that they well understood what they had read as their summary topics in week 8 were clear and understandable. They stated the principal idea and supporting details in their own words. For example, in the Tourist tram and White water Khék rafting groups, the students showed their understanding of the author's main point and how the text was structured. They started with the main idea of the text (e.g., *There are many reasons to visit Wat Ratchaburana in Phitsanulok, Rafting along the Khék river is one of Thailand's most popular rafting locations.*) and provided logical examples to support the main idea by using signal words such as *first*, *second (next)*, and *third*.

It is clear that PBL provided students with the opportunity to experience both authentic reading materials and authentic purposes for reading and summarising. The students, being involved with their own learning process, could choose what to read based on their interests and were motivated to read for their own benefit. They not only gained valuable comprehension experience but also improved their summarising strategies.

4.2.2.3.2 The ability to understand the main idea.

In students' project diaries, 22 out of 26 students showed confidence in identifying the main ideas when reading travel brochures, websites and magazine articles related to local tourism businesses. They normally talked about where they obtained the information from, and showed that they could identify the main ideas in an article or news. In the following quote, Dee described what she had read and demonstrated her ability to select the main idea from a reading passage.

I read in English the biography of King Naresuan the Great from a brochure which I got from Tourism Authority of Thailand. He became one of the greatest Kings of Thailand because he saved the country from Burma by fighting on elephant using long sabre with the Burmese Crown Prince and killed him. He saved the country many times and made the Kingdom to be secure and powerful (Tourist tram group, diary, August 1, 2008).

Students' confidence was shown in their work as they investigated, read, gathered information, extracted ideas from the texts and determined the main points. They were

asked about key events or details from history or a specific situation to check whether they were able to recognise, select and discuss a particular piece of information and whether they were able to show understanding from reading the passage. The following transcript was the conversation between students from White Water Khek Rafting group and their teacher in a classroom.

Teacher: What are these printed materials?

Sa: They're articles and brochures about Khek Rafting in Phitsanulok.

Palm: We got it from the Internet.

Teacher: I see. Let me see it please (Teacher is skimming an article.) So, what is the main idea of this first paragraph?

Kae: Um...The Khek River comes from the Phetchabun Mountains in the Phetchabun Province and continues to the border of Phitsanulok Province where it merges with the Nan River.

Teacher: That's great. What is the main idea of the second paragraph?

Ba: Rafting is one of the most popular activities at Khek River.

Teacher: Excellent! (Conversation, July 16, 2008).

The above conversation shows that students had to read and identify authentic materials written in English in an effective manner. They had to understand the context and connect their prior knowledge to the reading subject to develop their reading comprehension. To do this, they needed to identify main ideas and understand certain vocabulary terms. In Week 16, the students were given an open-ended questionnaire and asked whether they had increased their reading comprehension. Twenty-four out of 26 students mentioned their better understanding of what they had read and the key concept. In addition, they believed that the more they read, the more they gained specific vocabulary of tourism. Therefore they could understand the main ideas and more complex content related to tourism.

It is clear that PBL provided students access to a variety of authentic texts. They chose reading materials depending on their interest and had to read and comprehend the information so that they could complete their brochures. As PBL is based on learning through real-life situations, students experienced authentic tasks and information. They had purpose in reading and connected what they read to real-life issues. As a result, PBL

enhanced the students' reading comprehension and reading skills, including identifying main ideas.

4.2.2.3.3 The ability to read to improve their writing.

Project diaries and discussions with the teacher indicate that the students engaged in extensive reading. In an open-ended questionnaire at the end of the study, 19 out of 26 students claimed that their writing ability was gradually developed through their reading comprehension. As their projects were related to real-life topics, they had to be able to comprehend how language was really used outside the classroom. They had to read a number of information sources to increase (a) grammar structure, (b) relevant vocabulary, (c) discourse markers, (d) use of punctuation, (e) language usage, and (f) written voice and style. As their reading improved, students began to understand the form and how written language should be organised and used to achieve specific writing goals. In this study, they had to practise writing summaries and paragraphs. This was done a number of times to make it meaningful and understandable. When asked what they had read in English for their information, students advised that nearly 95% of their reading materials were authentic texts (e.g., newspapers, articles, magazines, brochures and tourism websites). The two major reasons for reading authentic texts were to accomplish their writing tasks (i.e. completing their brochures) and to develop their English competence. It is obvious that the students had to read and understand a variety of materials so that they could achieve their writing objective. At the end of the study, 73% of the students stated that extensive reading using authentic materials enhanced their writing skills.

4.2.2.3.4 Conclusion.

In conclusion, the PBL approach used in this study focused on authentic reading. The students were motivated to read meaningful materials to help them connect with real-life learning tasks. With extensive reading, they further developed their reading comprehension skills and were able to summarise the information, understand the main idea, and improve their writing ability. It is clear that scaffolding, one of the main characteristics of PBL, played a major role in enhancing reading skills. Teacher modelling were used to support the students to achieve their goals and complete the task.

4.2.2.4 Writing skills.

With the students having to determine what they wanted to achieve by the end of the project, one of their goals was to develop their writing skills. Each group was responsible for their own learning and the students needed to spend considerable time examining the topic and absorbing the content in order to answer questions and solve problems. They had to write diaries to communicate with their teacher and write down ideas for their PowerPoint presentations and brochures to display content knowledge in the areas related to their topic. At the end of the study, 14 of the 26 students stated that they had achieved their goal of developing their writing skills. To assess whether the students improved their writing skills, the accuracy of their written English (diaries, PowerPoint presentations and brochures) and the performance of each group member during the writing process were assessed. Four areas were examined in relation to writing skills development:

- Grammar
- Sentence structures
- Spelling and use of punctuation
- Writing process

4.2.2.4.1 Grammar.

The researcher analysed the students' grammar from their diaries and underlined the most common problem areas, providing examples of correct sentences. The students were motivated to use the correct grammar in their next diary entry.

The initial stage.

Each student was asked to write a project diary in their choice of either English or Thai. The diary was to be started in week 3, to be continued in weeks 5, 7, 8, 9, 10 and end in week 15. It contained a guide as to the required format, specified by the researcher (Appendix 5). Two out of 26 students wrote in Thai language but only for the first two entries, while the rest of the participants started their diaries in English. It is clearly shown that students were determined to practise and improve their English from the start of the study.

However, every student had trouble with their grammar even though they had been studying English grammar for more than 10 years. Nearly all students wrote a few simple sentences in their diaries in weeks 3 and 5, but highlighted a weakness in grammar as one

of their difficulties. The researcher assured students that perfect grammar was not the priority. They were not to be graded on their diaries and no one would be singled out for making grammatical mistakes. After this was clarified, they began to write more but the grammatical errors remained, appearing particularly in compound and complex sentences.

Scaffolding students' writing.

To scaffold students' writing, the teacher selected only the recurring and apparent errors and showed modelled language so that students could extend their grammar knowledge and language rules while engaging in dialogue journals with their teacher. There were many different language levels and many students asked the teacher for direct explanations after class or after project discussions. The main reason was that they wanted to ensure that they understood correctly and that what they wrote was accurate.

The final stage.

After receiving feedback on some specific English usage, students' grammatical mistakes began to occur less often. The following table helps to shed some light on nine students' improvement in grammar skills as reflected in their diaries.

Table 4.36 Comparison of grammatical errors before and after scaffolding

Student' name	Grammar Point	Weeks 3 & 5	Weeks 7-15
Sa	Conjunction	This week I spoke English to a few tourists because of I wanted to find out which temples they were interested.	Because of time limitation, we didn't go to interview at a popular souvenir shop in the down town.
Wa	Discourse Uses	Even though it is hard to go on to next steps but I will not give up.	I spoke English with my roommate everyday even though we spoke in short sentences and wrong grammar.
Ba	Modal Verb	I must to interview Thai tourists this weekend.	I must interview the manager of tourist tram.
Ni	Subordinators	When I interviewed Mr. Klanarong. I knew more information about sightseeing.	When I finished correcting my questionnaire, I rode a motorbike to the city to interview tourists.

Pui	Past Tense	Last week, we go to see the location of Khek River.	This week I spoke English with my English teacher about our project for 2 hours.
Tee	Passive Voice	We assigned to do the project.	We were asked to resummarise the background information of the museum.
Kae	Preposition	Our group went to collect the data in Mother's Day.	To have data collection on Mother's Day was not a good idea.
Yo	Word Order	In the meeting, my friends and I discussed and planned how should we proceed with our next step.	I was thinking what we should do with these data.
Rung	Infinitives	Write English in <i>Hi5</i> is fun.	My favorite free time is to write various topics in English in <i>Hi5</i> blog.

Table 4.36 shows that the students improved their grammar accuracy in their writing. After exposure to the language and the grammar rules and being involved in their diary writing, they showed that they could apply the rules in a variety of contexts. The students continued practising their writing and correcting grammar where they were initially confused. These errors gradually disappeared and their sentences became more grammatically correct and understandable. Grammar reflections and direct teaching helped and contributed directly to their learning.

Even though their diaries and brochure drafts still had some mistakes with regard to particular areas of grammar, these errors could be corrected during the rewriting of their final draft. The teacher commented after reading the students' work in Week 9:

I can see now that students have improved their writing structure. I can sense a smooth flow of ideas and information. Their communication is clearer, less clumsy and awkward. However, I don't want to interrupt the flow of ideas at this point. Using correct grammar and structure will be focused in the final draft (Field note, August 1, 2008).

4.2.2.4.2 Sentence structures.

The students' sentence structures from their diaries were analysed. The researcher was aware that her feedback on sentence structures could discourage students' creativity,

communication and efforts for further writing. Therefore, she highlighted only the most serious area to each student and encouraged them to apply the concept of correct grammatical sentences to their next writing.

The initial stage.

Ungrammatical sentences such as run-on and fragmented sentences, as well as the use of definite and indefinite articles occurred in their written English. Structures from Thai grammar interfered with the way they wrote and with any direct translation from Thai to English. With Thai being their first language and an insufficient knowledge of English grammatical structures, no matter what their English level, students always had these problems in their writing.

Students created run-on sentence problems by writing more than one complete idea without using punctuation. In Thai written language, it is not necessary to use punctuation such as a commas, colons and full stops. Instead, Thai sentences use space to separate two or more ideas in their writing (The Thai Royal Institute Dictionary, 2007). Moreover, as students seemed unaware that they did not finish their thoughts, there were sentence fragments or incomplete sentences with a lack of subject and main verb. Also, Thai students were confused by the use of definite and indefinite articles (*a, an, the*) as Thai structure has no articles. These factors all combined to create a number of errors in their written and spoken English language. The following are examples of ungrammatical sentences found in students' diaries during weeks 3-7. The correct versions are shown in italics.

Influence of first language on writing in English

When I got my diary back from you, I read your comments which made me grammar stronger than. (*When I got my diary back from you, I read your comments which helped to improve my grammar.*) (Vin, Tham-Pha-Ta-Pol non-hunting area group, diary, June 18, 2008).

I opened TV to listen to English news. (*I turned on the TV to listen to the English news.*) (Ni, Boat tour group, diary, June 18, 2008).

In the past, I could not show face to face with friends in class because I was not confident to speak English. But now I can show face. (*I was shy to speak English in the class but now I'm more confident.*) (Yo, Tourist tram group, diary, July 18, 2008).

Run-on sentences

We aren't sure about our timeline we wanted to change it to be appropriate for our group but we have no time left we have no choice so we will follow timeline. (*We aren't sure about our timeline. We wanted to change it to be appropriate for our group but we have no time left. We have no choice so we will follow the original timeline.*) (Tee, Tham-Pha-Ta-Pol non-hunting area group, diary, July 4, 2008).

After collecting the tourists' opinions we will analyse the data and report the information to the class friends can get new information this time I'm excited so much to present this information. (*After collecting the tourists' opinions, we will analyse the data and report the information to the class. Friends can get new information this time and I'm so excited to present this information.*) (Sa, Kwae Noi dam group, diary, July 18, 2008).

Sentence fragmentation

My problem to make project more interesting. (*My problem is to make the project more interesting.*) (Pui, Whie water Khek rafting group, diary, July 4, 2008).

For make presentation PowerPoint gives technology skills. (*Making the classroom presentation using PowerPoint provides technology skills.*) (Yok, Boat tour group, diary, June 18, 2008).

Definite and indefinite articles

I listened to a music. (*I listened to music.*) (Su, Tham-Pha-Ta-Pol non-hunting area group, diary, June 20, 2008).

We had problem which was the changing of weather. (*We had a problem which was the changing of the weather.*) (Dee, Tourist tram group, diary, July 16, 2008).

The above extracts show some specific examples of students' difficulties with writing. They made errors and were not able to effectively communicate. For example, instead of writing a sentence, some students wrote a group of words which could not stand alone as a sentence (see *Sentence fragmentation*) and some sentences contained errors because of first language interference (see *Influence of first language on writing in English*). In addition, there were common mistakes such as grammar and punctuation errors which negatively affected their writing proficiency.

Scaffolding students' writing.

The students who had a problem with native language interference were reminded to correct the problem by gradually stopping the process of translation equivalence and replacing it with the ability to think in English. In addition, the differences in the structures of Thai and English were shown so that the students would be more aware when writing in English.

For run-on sentences, the teacher identified problem sentences then introduced and demonstrated connecting words or punctuation to be combined into those sentences to correct them. In addition, she identified sentence fragments and showed how these caused confusion. Being aware of the subject or verb was emphasised. Additionally, the usage of definite and indefinite articles was described.

Some examples of students' writing errors were shown and corrections provided. As students wrote their project diaries and included written information in their PowerPoint slides, the errors in sentence structure were frequently highlighted in their written work. The teacher always gave feedback and asked her students to rewrite and practise writing by applying grammatical rules. They were also told to reread what they had written before submitting it to the teacher.

The final stage.

After students were assisted in identifying their errors (e.g., interference of native language, run-on sentences, articles, and sentence fragmentation) and the grammar concepts, they were asked to apply this knowledge to their next writing to check their progress and to highlight any particular areas where they might need some individual assistance.

The following extracts display the students' writings in their diaries in weeks 10 and 15:

Tourists can see Japanese alphabets on the stone and local people believe that this area used to be a route for Japanese soldiers in World War II (Vin, Tham-Pha-Ta-Pol non-hunting area group, diary, August 8, 2008).

At the last destination on the trip, you can spend your time having lunch on a houseboat restaurant (Ni, Boat tour group, diary, August 8, 2008).

The tourist tram service operates every half an hour passing major historic places and attractions (Yo, Tourist tram group, diary, September 10, 2008).

In Fah Mue Daeng Cave's painting, you can see the picture of hands made of hematite and plant sap. This cave dates to 3,000-4,000 years ago (Tee, Tham-Pha-Ta-Pol non-hunting area group, diary, September 10, 2008).

It is a superstition that this dam has a guardian spirit who protects dam area from any demons (Sa, Kwae Noi dam group, diary, September 10, 2008).

85% of the non-Thai tourists thought that the cost of rafting is reasonable (Pui, White water Khek rafting group, diary, September 10, 2008).

The river can carry you along to see the way of life of the local people (Yok, Boat tour group, diary, September 10, 2008).

In the walls of caves, sea fossils can be seen and touched (Su, Tham-Pha-Ta-Pol non-hunting area group, diary, September 10, 2008).

87% of Thai tourists did not know the operation of tourist tram and they stated that they would have used the service if they knew (Dee, Tourist tram group, diary, September 10, 2008).

The above data shows improvement in the students' writing skills. Their sentences were more understandable and expressive (e.g., '*you can spend your time having lunch on a houseboat restaurant*' and '*this dam has a guardian spirit who protects dam area from any demons*'). This was clearly shown in the way that the nine students used correct English structures, such as punctuation, article usage, verb forms and tense sequence, and subject-verb agreement. The students, who used to have difficulties with interference of native language, were able to produce meaningful sentences. For instance, Vin, who used to adopt Thai sentence structure to help him write English sentences, gradually improved his writing. This is shown by comparing a sentence written on June 18 (*When I got my diary back from you, I read your comments which made me grammar stronger than*), with a sentence written on August 8 (*Tourists can see Japanese alphabets on the stone and local people believe that this area used to be a route for Japanese soldiers in World war II*). The later sentence uses better sentence structure and is more comprehensible,

When asked whether they increased their abilities in writing effective English sentence structure (open-ended questionnaire at the end of the study), 60% of the students stated that they gradually developed their ability to write correct sentences, while the balance of the students accepted that they were only confident with basic English structures. They struggled with complicated and varied sentence structures but were more aware of their writing.

Based on the last entry of students' diaries in week 15, every student still had incorrect sentence structure. However, their writing was now clearer and more understandable. The teacher did not have to reread their entries as previously before making any feedback. In addition, there was considerably less teacher assistance compared to earlier entries.

4.2.2.4.3 Spelling and use of punctuation.

Spelling and punctuation skills were examined to see whether the students understood the rules, as a lack of understanding in this area can affect writing competency.

The initial stage.

Students had difficulty with spelling, especially when writing their diaries without the help of the spell check on the computer. The two main reasons for this problem are that many English words are not spelt as they are spoken and many English words have identical sounds (homophones). Students were also confused about the use of punctuation. Below are some examples of spelling and punctuation problems collected from the students' diaries, presentations and diaries in weeks 3 and 5.

Spelling problems

From	or	form
To	or	two
Diffrent	or	different
Your	or	you're
Fare	or	fair
Ensure	or	insure

Punctuation problems

Commas

Whenever tourists get off the bus a few beggars go straight to them.
(*Whenever tourists get off the bus, a few beggars go straight to them.*)
(Bee, Boat tour group, diary, June 20, 2008).

I want to do more interviews, however I don't have time. (*I want to do more interviews; however, I don't have time.*) (Su, Tham-Pha-Ta-Pol non-hunting area group, diary, June 18, 2008).

Apostrophes for possession

This temple continues to renovate it's facilities. (*This temple continues to renovate its facilities.*) (Rose, Tourist tram group, diary, July 2, 2008).

Phitsanulok is famous for its main unique style of Thailand's most beautiful Buddha image, Phra Phutthachinarat. (*Phitsanulok is famous for its main unique style of Thailand's most beautiful Buddha image, Phra Phutthachinarat*) (Kwan, White water Khek rafting group, diary, July 4, 2008).

Colon

The transportation includes: buses, private taxis, and rental cars. (*There are various kinds of transportation at the airport: buses, private taxis, and rental cars.*) (Pom, Boat tour group, diary, June 20, 2008).

Tourists were upset with our interruption and yelled at me with these words "leave me alone, go away!" (*Tourists were upset with our interruption and yelled at me with these words: "Leave me alone, go away!"*) (Rung, Kwa Noi dam group, diary, July 4, 2008).

The above extracts show that students had difficulties with their spelling and punctuation. Even though errors in spelling and punctuation do not prevent readers from understanding, the students needed more care to create a good impression with their spelling and punctuation skills.

Scaffolding students' writing.

To reduce mistakes, the teacher conducted a thorough class discussion and gave a handout of frequently misspelled words. She supplied guides and worksheets on how to use punctuation correctly. She also introduced the concept of reading aloud after finishing writing as it helped to point out any punctuation mistakes. In addition, feedback was given to individual students after submitting their diaries in weeks 7-10. The teacher also helped by proofreading students' brochures, which highlighted mistakes and allowed corrections to be made.

The final stage.

During weeks 7-10, spelling and the use of punctuation in the students' diaries were examined. The students had made fewer mistakes, and their writing had improved in that it was more impressive and flowed more smoothly when read.

During the last work-in-progress discussion with each group and the teacher on August 29, 2008, everybody was asked if the teacher's guidance and spelling and punctuation handouts had helped improve their spelling and punctuation. Fifty-eight percent of the students stated that the feedback and basic rules helped them to improve their writing capabilities. They were satisfied with immediate feedback as it offered the opportunity to correct their work while it was still fresh in their minds. It also allowed them to gradually develop their end product with accurate spelling and meaningful punctuation. Also, students added that they had appreciated the teachers' comments and thought they were important. The feedback was considered as being very positive and rather than discourage them, it had encouraged them to develop better work.

Nevertheless, 42% of the students were concerned that the amount of practice they had was insufficient to improve their skills. They said, "*In my diaries, I didn't use a variety of punctuations. I'm not sure if I could use good punctuation in other situations*" and "*I have the teacher feedback but the recurrent errors are also found.*" Even though there were arguments from the students about whether they developed their spelling and punctuation skills, the majority of the students showed improvement in their final diaries which contained more effective and accurate spelling and punctuation.

4.2.2.4.4 Writing process.

Each group's phases of writing were examined from diary from week 3. As each group member wrote and revised a specific part of their presentation and brochure, their reflections of what they thought about the writing process were employed to see whether they had gained an understanding of it.

The initial stage.

When the students were given the *Driving Questions* (Appendix 14) in week 2, three out of five groups started to write a plan without organising their thoughts or without exploring before beginning to write. As a result, they could write very little as this was a

new subject matter based on a real-life situation which required facts and opinions of which the students had no prior experience. Since 20 of 26 students came from other cities, they did not have any knowledge about tourism in this area or what they wanted to improve or change to attract tourists into the city. Interestingly, two out of five groups used some basic brainstorming techniques to develop their plans but they failed to provide enough information. It was obvious that the students did not plan to investigate or explore ways in which they could obtain information, organise their ideas, and plan in order to answer the driving questions. Their performances indicated that they had little concept of the writing process.

Scaffolding students' writing.

The teacher organised scaffolding by explaining the stages of the writing process to students and then supporting them through it. They soon realised that listing ideas from brainstorming alone was not sufficient and started to look for information using various resources, planned to engage in conversations with people, and created the outline and schedule for information gathering. As soon as they finished their pre-writing, they started drafting their ideas (the process of putting their ideas into sentences and paragraphs). They recorded what they knew and thought about the topic without teacher intervention. The first few drafts needed changes, particularly to some significant points. The teacher was conscious not to impede their progress with too much intervention. After drafting, students working in groups sent emails to their teacher who commented on the outline, writing purpose, vocabulary, content and organisation. Subsequently, drafts were revised by refining the language and reorganising the content with smooth transitions and no major errors. The teacher helped learners develop what they lacked in their written work by providing clear models. Students then edited their final draft focusing on grammar, punctuation, and spelling.

The final stage.

Over the course of the study, each group's written work progressively improved. In final reflection, the students expressed their knowledge of the writing process and how it affected their projects. They wrote the following (translated from Thai to English):

In the beginning, we went straight to write a brochure without making an outline. We believed we could develop a plan while writing (planning was

not important at this stage.) However, after studying the process of writing, we started to explore and plan extensively. We finally were able to write a reasonable draft of the brochure. Even though it contained a few short paragraphs, we had done a lot of editing. We had to make it concise and accurate. We learned that we should not edit small things such as punctuation and spelling until our writing is as clear as possible (Bee, diary, Boat tour group, open-ended questionnaire, September 19, 2008).

In the beginning, we decided on making a brochure about Kwaie Noi Dam because we thought that we would write less than other products but we underestimated. We had to research a lot of information, even going to real places. After gathering enough information, we did the outline and still it was changed many times. We brainstormed our ideas, planned carefully and put ideas together. We revised and edited our brochure eight times with the support of teachers. At the end, our brochure looked great and it looked like a real travel brochure (Rung, diary, Kwaie Noi Dam group, open-ended questionnaire, September 19, 2008).

To make a brochure about the tourist tram as an end product was complicated. We wrote an outline and when we gathered enough information, we started to write. The brochure was rewritten so many times. In addition, we revised our plan so many times and we almost gave up. Even though we spared time for revising and editing, we almost ran out of time. We went through all the steps very slowly as we never did anything like this before. With assistance and support from the teacher, we kept working until we finished our last revision at the end. We spent time on writing more than any other process (Yo, diary, Tourist tram group, open-ended questionnaire, September 19, 2008).

The above feedback demonstrates that in the beginning, the students did not understand the stages of creating a piece of writing (e.g., exploring, planning, drafting, and revising). They were inexperienced writers. It took so long to get started they thought they would never finish. Some groups almost gave up the projects as it seemed that writing was an insurmountable challenge and far too demanding. However, after understanding what the

writing process encompassed, they reconsidered the approach by taking the task step by step. Their ability to write gradually developed. By the end of their project, they demonstrated an understanding of the writing process and felt proud of their achievement.

4.2.2.4.5 Conclusion.

In summation, the students gradually developed their skills in grammar, spelling, punctuation, sentence structure, and the writing process. Even though grammatical errors in their writing could still be found, they were not major mistakes which interfered with the comprehension or distracted from the message. Little mistakes such as subject-verb agreement, article usage and misplaced apostrophes did not affect the overall idea. In addition, with the opportunity to think, relate their knowledge to past experience and reflect on the ways of grammar usage and apply it to their writing, the data showed that they improved their major mistakes and developed their writing skills. As the students were responsible in their own learning, they decided what they wanted to write or to communicate with their teacher or their peers. The project diary was a good stimulus to encourage them to involve themselves in their English writing and to give an opportunity for them to reflect on their learning. Learner autonomy, a key feature in PBL, not only gives freedom of learning to the students but also a reflection on their language learning.

4.2.3 Conclusion: research question 1.

Overall, PBL had a positive influence on the development of the students' English language skills. The following table shows the students' improvement in English proficiency based on the results of the three tests.

Table 4.37 Summary of students' improvement in English proficiency

Test	A significant improvement in English proficiency			
	Whole class	Low	Medium	High
Test 1: TOEFL	√	√	√	×
- listening	√	√	√	×
- structure & written expression	√	×	√	√
- reading	√	√	√	×
Test 2: Speaking	√	√	√	√
Test 3: Writing	√	√	√	√

Table 4.37 shows PBL had no significant effect on the low achievers' structure and written expression and there was no significant improvement post-test for high achieving students in listening and reading. However, data from the qualitative instruments showed students' improvement in their listening, speaking, reading and writing skills. Even though the nature of the TOEFL test can distinguish the English abilities among test takers, it may not be a true indication of the students' ability in their English proficiency in this study. It should be noted that generally TOEFL is used by many universities and institutions for making admissions decisions (ETS, 2010).

The process of PBL in this study enhanced the Thai university students' English language and communication skills. PBL provided tasks that challenged the students' English language competence while encouraging the students to be involved in authentic language learning. The students were directed to design their own learning programme and set meaningful goals, something the students had never been exposed to previously. This process itself was a motivating concept for the students once they became aware of and could see the benefits of PBL. The opportunity to use English extensively in class as well as outside of the class situation is a beneficial process of PBL. PBL offered the opportunity for students to use English in order to communicate during their projects. This increased exposure and the use of English in authentic situations enhanced the students' learning, understanding and retention of English.

4.3 Research Question 2: Does the use of a PBL approach assist Thai university students to improve learning skills and self-confidence?

To examine whether PBL assists Thai university students to improve learning skills and strategies, five qualitative research instruments were employed: (a) students' surveys, (b) diaries, (c) open-ended questionnaires, (d) field notes and (e) work-in-progress discussions.

In this study, three types of learning skills and self- confidence were investigated. The skill development that emerged from the data involves:

- Teamwork skills
- Higher-order thinking skills
 - brainstorming skills
 - Planning skills
 - Evaluating skills
 - Problem-solving skills
- Presentation skills
- Self-confidence in using the language

4.3.1 Teamwork Skills.

PBL requires students to work together to complete a project. Students need the skills to be able to work efficiently and collaboratively with others. In this study, the students developed abilities to work with peers and built teamwork skills through PBL.

4.3.1.1 Initiating the teams.

In week 1 of the study, the teacher discussed the importance of having a diversity of skills and experiences to achieve the productivity required for shared goals. The students were given a handout listing a set of driving questions and asked to investigate the possible aspects that could promote tourism in the students' favourite location. Students were advised to discuss with each other and select their teams based on common interests.

It was found that 77% of the students were comfortable with working in the groups formed. However, four out of the eight high achieving students showed discomfort with the idea of working as a team. They asked in class if they could possibly work alone or at

least in pairs, but when asked for the reason they could not answer and just remained silent. The four high achieving students expressed their thoughts in the ‘problem section’ of their first diary entry as follows:

I haven’t had much chance to work with friends. It’s quite weird and I’m not sure whether we can work together for such a long time (Pom, diary, June 18, 2008).

I like to work alone. It’s quicker and easier to decide and complete work (Rung, diary, June 18, 2008).

The more people you have, the more chaos you get (Nit, diary, June 18, 2008).

I don’t like group work. I prefer individual work to group work (Vin, diary, June 18, 2008).

It is clear that these high achievers were uneasy about the prospect of working as a team. They seemed to believe that working alone could deliver better results because of fewer problems (and probably less anxiety and adjustment). Initially they did not join a group but when it became obvious that this was necessary, they approached the groups and were welcomed as team members. As described in section 4.2.2.1, five groups of five or six students were formed. They named their groups based on the activity or location they selected as follows: Boat tour, Tham Pha Ta Pol non-hunting area, Kvae Noi dam, Tourist tram, and White water Khek rafting.

The groups sat in a circle and students started to share opinions about ways to promote tourism in the city. During the observation, the observer wrote:

Overall the students looked relaxed and comfortable. Their teacher walked around each group listening to the discussion. Sometimes she asked questions to measure whether each team understood their work. They were laughing and smiling while answering their teacher. There were many shy students. They were reluctant to show their opinions. However, when the

teacher asked these quiet students to express their views in either Thai or English language, some decided to speak up in Thai while a couple decided to speak in English (Field notes, June 27).

The above field notes record a positive atmosphere of cooperation and teamwork. The students seemed to work and get along with each other well. Some students were not as expressive as others probably because they were nervous due to their lack of English language proficiency. It was possible that they lacked the confidence for teamwork as this was their first assignment requiring the use of teamwork skills.

4.3.1.2 Student challenges and teacher scaffolding.

As projects developed and became more intensive, challenges within the groups became evident. The following three extracts from students' diaries show difficulties related to the problems of teamwork:

Table 4.38 Common problems of teamwork

Student's Name/Group	Contexts	Skills lacked for teamwork	Comment
Kamol/Boat Group	<i>"We've had many quarrels and conflicts. Nobody listens to each other's ideas. We have a lot of different ideas. Each member thinks that their idea is perfect. One member wanted us to follow her entire idea because she doesn't trust others. We were upset with each other and we wasted lots of time."</i>	Listening & Respecting	Students wanted to dominate the whole project themselves without listening and respecting ideas and efforts of others.
Vin/ Tham Pha Ta Pol Non-Hunting Area Group	<i>"Working with team is boring but I can't do or say anything except keeping it in my mind. My team members are always late and some didn't show up for the meeting. Once I had to wait for 2 hours and most of the time I had to wait for 20-30 minutes. When I called them, nobody answered and later they said they were still in bed. I was so disappointed. Finally they turned up, they dominated their talks and I was always left out. They didn't accept my ideas even once which leads to confliction. Working together was not fun for me!"</i>	Cooperation	Students lacked commitment to the group's work, self-responsibility, negotiation, compromise and cooperation.
Nueng/ Kvae Noi Dam Group	<i>"We did not follow our timeline as too much time is spent off task. By the time to get back on project, most of us had to leave the meetings as we were busy and had a tight schedule. Sometimes my friends didn't talk about the project as they were unprepared for the meeting."</i>	Planning	Students had no clear focus therefore there was no contribution to the project.

Table 4.38 shows multiple teamwork challenges and problems. The students seemed not to take account of each other's ideas. They showed little respect for the opinions of others and little support for their team members' ideas. Students showed a low level of

development of the essential skills for teamwork such as listening, respecting, sharing, helping, participating, and planning.

To assist with good team work, the teacher asked each group whether they had problems within their group. The class fell silent. Some students avoided eye contact; some looked uncomfortable and embarrassed. Nobody mentioned any problems.

This attitude was not surprising for the teacher. Thai people are hesitant to express or share their opinion openly, and seldom do so. The situation becomes more difficult if they have to express their ideas in English. If they know that their opinion is different or may cause conflict, they choose to become quiet and do not want to get involved in discussion; they do not want to lose face. Hence, to ensure that students' learning was facilitated, some issues with teamwork skills were raised by the teacher, including listening and respecting, cooperation, and planning.

In the spirit of PBL, the teacher gave a series of scenarios to students depicting the problems of working in teams, and asked each group to suggest possible actions that would solve the problems. They were reminded that the solutions should be specific, realistic, positive and constructive. Students helped to identify possible actions that would solve the problems. They described a specific action that could be performed and said how it could be applied and implemented to eliminate the barrier.

Table 4.39 Examples of student responses to the problem scenarios

Group	Skills lacked for teamwork	Specific responses to the problem scenarios
Boat Group	Listening & Respecting	<i>“We should listen to each other’s ideas and take others’ ideas seriously. We should accept that everybody think differently and have different ideas. We can have lots of discussion and argument but we should see it as a good opportunity to learn new things, not a problem. When there are many ideas, we should identify which idea is more beneficial for our project. Then, if our team members are dissatisfied with the decision, we should vote for the best result. In addition, we should develop trust in each other on a project.”</i>
Tham Pha Ta Pol Non-Hunting Area Group	Cooperation	<i>“We should work co-operatively within our diverse group. Everybody is part of the team. Nobody should be left out. We should support each other’s ideas and cooperate in constructive feedback. We can disagree with our team but we should not put them down. The other thing is we should commit to the work. If we agree on something such as a meeting appointment and a given task, we should show up on time with an assigned work.”</i>
Kwae Noi Dam Group	Planning	<i>“We should communicate more. We must have enough time to complete our work. All members must participate. We should not let the others do the work. We should follow our timeline and must have a clear performance goal. We should not let socialising with friends come before learning. It’s time to grow up and commit to the work of the team.”</i>

Table 4.39 demonstrates a good understanding of teamwork skills which these students had gained from analysing the scenarios and designing solutions. They focused on what would work for them. The students seemed to understand that working as a team is important to achieve the end result and that individuals must complete their assigned personal tasks when working towards team goals.

After developing the solutions, there were still a few students who mentioned spending considerable time discussing and disagreeing. Interestingly, they no longer considered it a threat and treated it as human nature and an opportunity to evaluate, re-plan and accept new ideas.

4.3.1.3 Final stages.

Students in all groups mentioned that they had further developed their teamwork skills. During work-in-progress discussions in week 13, the researcher monitored the frequency of phrases which highlighted the skills they had gained. The results are shown in Table 4.40, starting with the highest frequency.

Table 4.40 Skills development of teamwork

Skills gained for teamwork	Frequency of each skill	Examples of students' comments
Life & Work skills	22	<p>การทำงานกลุ่ม ก็เป็นประสบการณ์ที่ดี เป็นเรื่องที่ได้เตรียมตัวสำหรับการทำงานต่อไป</p> <p>(English translation) Working as a team is a good experience for me and it is a good chance to prepare myself for employment in the future (Ni, discussion, Boat tour group, August 25, 2008).</p> <p>ในโลกของการแข่งขันธุรกิจ ผมว่าการทำงานเป็นทีมเป็นโอกาสที่ดีในการเข้าไปทำงาน (English translation) With this competitive business world, I think having teamwork skills is a good opportunity to enter the workforce (Tee, discussion, Tham Pha Ta Pol non-hunting area group, August 25, 2008).</p> <p>การเรียนรู้ ที่ทำงานร่วมกัน รู้จักสร้างความสัมพันธ์ทั้งใน-นอกกลุ่ม ช่วยเตรียมทักษะชีวิตและการทำงาน (English translation) Learning to work together and build relationship in and outside team prepares us for life and work skills (Dee, discussion, Tourist tram group, August 25, 2008).</p> <p>เราโตขึ้น คุยด้วยเหตุผล หนูก็ว่ามันดีสำหรับการทำงานในอนาคต (English translation) We're more mature, we talk with reasons. It is a good thing for our career in the future (Palm, discussion, White water Khek rafting group, August 29, 2008).</p> <p>หนูรู้จักควบคุมอารมณ์เมื่อโกรธ เคยแบบระเบิดออกเมื่ออยู่ในสถานการณ์ร้อนระอุเหมือนกัน (English translation) I can control my emotions when I'm upset. I used to react or explode immediately in the heated situations (Rat, discussion, Kwae Noi dam group, August 29, 2008).</p>

Listening & Respecting	15	<p>การที่มีไอเดียต่างก็ช่วยให้โปรเจกต์เราน่าสนใจและสร้างสรรค์ เราก็เคารพ และฟังกันมากขึ้น หนูว่าเราใช้ประสบการณ์และทักษะต่างๆช่วยในการทำให้เป้าหมายเราสำเร็จลุล่วงไปได้</p> <p>(English translation) Having different ideas makes our project more interesting and creative. We respect and listen to each other a lot more and I feel that we're using our experiences and skills to contribute to the success of our team's goals (Yui, discussion, White water Khek rafting group, August 29, 2008).</p>
A sense of cooperation, ownership and fair share of the work	11	<p>เราพูดคุยกัน ช่วยกันเพื่อให้งานสำเร็จ เราแบ่งงานกันให้เหมาะกับทักษะและความสนใจของกันและกัน ถึงแม้ว่าแต่ละคนมีงานต้องทำให้เสร็จ เราก็ช่วยกันเวลาที่เรามีปัญหา</p> <p>(English translation) We participate in the conversation. We have to help each other to complete the entire project. We divide each topic to each member based on their skills and interests. Even though each of us has own topic to finish, we help each other when we get difficulties (Tuk, discussion, Tourist tram group, August 25, 2008).</p>
Planning, Questioning and Helping	11	<p>เรามีแผนงานที่รัดกุม ทำให้กลุ่มเราก้าวไปยังเป้าหมายที่ต้องการ สิ่งดีคือว่า ทำให้รู้ว่าตอนนี้เราอยู่ตรงไหนของแผน ถึงแม้ว่าเราเปลี่ยนเวลาดำเนินการ เราก็ยังอยู่ในแผน เราต้องปรับงานให้เหมาะสมตลอด เราถามคำถามเพื่อระดมความรู้ เราทำการสำรวจเชิงลึก และเราก็ต้องเข้าใจร่วมกันในสิ่งเดียวกัน ทุกขั้นตอนต้องรู้ บางครั้งหาผลคนเดียวไม่ได้ เราต้องช่วยกัน ความสัมพันธ์เราดีมาก (English translation)</p> <p>We now have a careful planning so we can organise our team to head to the right direction. It's good that we know where we are and how far we will achieve our goals. Even though we reschedule our timeline many times, we're still on track as we focus on what will work for us. We asked questions to our team members to pool the knowledge and in-depth investigation and to make sure that we have the same understanding so that all the steps are in the process. Sometimes it's hard to get the outcome and one person cannot do this alone so we helped each other and this makes our relationship healthy (Pom, discussion, Boat tour group, August 25, 2008).</p>

Leadership	10	<p>เวลามีปัญหา กลุ่มเราโชคดีที่มีผู้นำแก้ปัญหา เช่น เมื่อเราไม่เห็นด้วยบางประเด็น คนนี้เขาเห็นข้อดี ข้อเสีย ทำให้เราตัดสินใจได้ถูก</p> <p>(English translation) We're lucky that we have one person who could take the lead when we ran into difficult time. For example, when we couldn't agree on a point, he could always see good points and as well as the weak points allowing us to make the right decision (Kwan, discussion, White water Khek rafting group, August 29, 2008).</p>
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Table 4.40 shows that the students had further developed their teamwork skills. They learned that working well as a team had a significant impact on their learning process and on the end products. The students learned to listen, accept different ideas, work collaboratively and constructively towards their group's goals, and to keep their feelings under control. They showed their competence and mastery of teamwork through punctuality, friendship, respect, honesty, encouragement, support and empathy.

In contrast, six out of 26 students had negative comments about their team members' development of teamwork skills. The following are examples of the three different types of negative comments reported in project diaries in week 15:

One of my team members always believes that his way is the right way and reluctantly accepts others' ideas (Yok, diary, September 12, 2008.)

My team members do not show that they can lead or convince others (Tee, diary, September 12, 2008.)

She shares her ideas but completes her assignment after the deadline (Palm, diary, September 12, 2008.)

The above reflections show that a few students did not function well in a team environment. There were conflicts among some team members, lack of leadership quality, and unequal contributions to the project.

Even though six students reported that they were not satisfied with the input of a small number of their team members, this does highlight that they were aware of the specific skills that are necessary for effective teamwork.

In conclusion, the PBL tasks in this study were all student-centred, focusing on the students learning and achieving their goals through group work. The students had an opportunity to work collaboratively with other students sharing skills and experience. During the research stage, there were complex issues that needed clarification by teams. The students had to share responsibilities, solve problems and work together in putting the various tasks together to finalise their projects. Cooperative and collaborative learning, a key feature of PBL, allowed the students to improve their communication and interaction with others while applying themselves to self-learning tasks and overcoming the many challenges they encountered. The application of PBL in this course developed effective teamwork skills which are rarely found in a conventional Thai classroom situation.

4.3.2 Higher-order thinking skills.

PBL provides challenging questions and problems of the real world to students. They have to explore and investigate their questions and finally come up with their own ideas or solutions. In week 2, each group was given ‘the Driving Questions’ handout which motivated them to investigate *how they could make Phitsanulok more attractive and tourist friendly for both Thai and non-Thai tourists*. It immediately captured the interest of students as it involved a real-life context.

Activities in this study were designed to encourage students to incorporate and use higher-order thinking skills. Thinking skills in the following four main areas were tracked and analysed:

- Brainstorming skills
- Planning skills
- Evaluation skills
- Problem-solving skills

4.3.2.1 Brainstorming skills.

In this study, students had to generate ideas to suit the topic selected by their team. As they had little prior knowledge of their project requirements, considerable thought was

needed to decide on the best way to achieve their goals. The introduction of brainstorming was of assistance and by the end of study they had developed much more effective brainstorming skills.

4.3.2.1.1 Initial stage.

Each group was supposed to identify the question and came up with a range of ideas of how to attract Thai and non-Thai tourists to visit Phitsanulok city. This activity aimed to promote thinking skills as the students had to generate ideas on topics. However, most students did not seem to try to think of as many ideas as possible. Some wrote one answer while some spent their time arguing about which place was more famous and interesting and why it would attract more tourists. They tended to jump to the details before brainstorming and creating an action plan. The observer described the lack of comprehension of brainstorming techniques in his field notes.

Some students jumped too far ahead without proper planning. They wanted to immediately allocate what each member should do; I heard one student say “I think we should divide work for each member to research more about Folklore Museum.” Immediately another team member agreed and offered to interview the curator herself as she has been there (Field notes, June, 12).

The above conversation indicates that students did not use a brainstorming strategy at the start. They jumped into the process of sharing responsibility without thinking through things related to the topic, studying the topic’s potential or ordering content around the topic. They were confused about the steps for brainstorming and organising their thoughts. It was obvious that this critical thinking process was new to them.

4.3.2.1.2 Scaffolding to build skills.

To help promote the brainstorming process, the teacher tried to scaffold the brainstorming ideas by showing how to define the question (problem) and generate ideas as examples. Next, students worked as a team and built up the ideas and came up with the topic. Time for comment, discussion and evaluation was not allowed at this stage. They stated whatever came to mind. The teacher-facilitator encouraged every student to put forward as many ideas as possible. Thinking outside the square was emphasised. Students

obviously enjoyed this phase, laughing when one of their team members wanted to create ‘the world biggest sundried banana festival’ to attract tourists. A relaxed atmosphere created a comfortable and engaging environment for language learning and developed a strong team spirit. Even the quiet students spoke and contributed their ideas. At this point, the teacher guided her students to eliminate duplication and ideas that were no longer appropriate. Subsequently, each group narrowed their ideas to one topic.

After the process of choosing the topic, the teacher wanted her students to compile a list on the topic. She challenged the students’ ideas by giving some questions to each group during the brainstorming phase. Examples of questions to get them started and guide their discussion were “Who is the Folklore Museum for?”, “Why will tourists choose to go there?” and “What can be done to promote the rafting concept?” The students seemed to understand the brainstorming technique. They generated a variety of questions using ‘*what, when, where, how, why*’ to plan the investigation. To make sure that everyone understood each other and went in the same direction, students were questioned to see what questions they proposed.

Some students could not remember their team members’ questions as they forgot to note each other’s ideas. Therefore, their teacher asked them to record their ideas clearly to allow everyone to see them and have a chance to add more ideas to the lists. Each group finally came up with their own long list of brainstorming ideas. The observer described the results of the brainstorming session:

The students really enjoyed it. They generated a large number of ideas. Some tried to draw new ideas and some started to connect the new ideas to what they already know and what they would want to know. They finally came up with interesting lists of questions and information (Field notes, June 12, 2008).

The above comment shows that the students learned to produce a wide range of ideas and organise their thoughts by linking new ideas to existing knowledge. They now showed that they understood how to brainstorm ideas from very basic thoughts.

The following extracts show the improvement in students' thinking skills. Five students reflected their brainstorming skills in their diaries:

“At first I don't know where and how to start. I always started my thought with detailed structured planning. I found that it's not right and too early to do that. Now I know brainstorm is a great way to begin. Now our team agree to share and write all ideas - the more ideas, the better we solve the problem” (Ni, Boat tour group, diary, July 2, 2008).

“It's good to learn how to brainstorm. The process is fun and exciting. It made me think and share my thoughts without embarrassment” (Ann, Tourist tram group, diary, July 2, 2008)

“I like the way that there are plenty of questions which allow me to think and bring out more ideas. It's a good start for any plans” (Kae, White water Khek rafting group, diary, July 2, 2008)

“I think a lot in this activity and its fun. I'm amazed how much information I could think of. It's a good stimulation”(Wa, Than Pha Ta Pol Non-Hunting area group, diary, July 2, 2008).

“The way the teacher modelled the process was good because to start doing things creatively, you need good ideas. I learned how to use diagram which helps me think clearer and arrive at the best ideas” (Sa, Kwa Noi dam group, diary, July 2, 2008).

These positive responses indicate that students understood the brainstorming process and its importance. In their opinion, brainstorming was a great tool to help them create new ideas and plan effectively. They gained experience in organising their ideas and learned that it was a good way to decide the way forward.

4.3.2.1.3 The development of ideas and brainstorming.

During the period of finding an appropriate topic, one of the groups discovered that their choice of topic from their previous brainstorm session were not of great interest for their

project. Everyone in the team agreed that the chosen topic was not interesting, memorable or unique enough to attract tourists to visit the city. They decided that their second option should be investigated and they should start at the beginning by pooling their ideas.

This time, it was considerably quicker to get everyone's ideas down on paper, and there was no teacher supervision required. As everybody was now familiar with the process, they started to think about which idea was the best solution to the problem. They started to show criteria to judge the ideas, for example, "it should be an impressive experience", "it should reflect the local people's lives", "it should allow tourists to visit historical sites" and "it should be possible to finish before August 25" (project completion date). They decided that the project should be '*Boat Tour*'.

This process shows that that students adjusted well to their previous knowledge gained in brainstorming and comprehended the brainstorming procedure. They generated ideas and built on the ideas of others. In addition, they created ideas faster and knew exactly what they were looking for. They identified a problem then came up with many ideas that were specific and narrow enough to provide a solution to that problem. It is clear that the activities in PBL allowed the students to think and to generate ideas in response to a problem or a question, allowing them the opportunity to proceed with their project. With careful scaffolding and skill building activities built into the process, PBL promotes and enhances students' thinking skills and brainstorming skills.

4.3.2.2 Planning skills.

After obtaining their lists of questions, students sorted and deleted questions that were duplicated or unconnected. Even though students were asked to write up their action plan, they were still beginning without prior planning.

For example, the leader of the boat group went straight ahead without specific responsibility being assigned to anybody and asked who wanted to be responsible for obtaining the information for the questions created by the team. Two members volunteered to go to the Tourism Authority of Thailand (TAT) to get a brochure while the rest of the team offered to find information on the Internet. As a result of this, the teacher offered some scaffolding, explaining the importance of planning skills by outlining the modelling and planning for her own class. She drew a table and wrote down a class goal

which was to allow the students to plan successfully. Next, she wrote a list of actions which would allow her to achieve this goal, showing her personal brainstorming by writing down as many different ideas as possible. She asked the students whether the example she was showing them sounded familiar. The observer wrote:

The students smiled, nodded and said ‘brainstorming!’ They quickly realised what they should have been doing. The teacher hadn’t stopped her scaffolding at this point. She wrote a few guided words on a whiteboard such as ‘duties, time to act and results’ to allow students to think critically and use them in their action plan. The leader of the boat group crossed out what she was writing earlier and copied her teacher’s table. The boat group finally came up with a table containing headings: ‘our goals/objectives, ideas of actions, who is responsible, when and actual result’. After that everyone in the team started with their goal, began to brainstorm their actions and filled the rest of the table (Field Notes, June 18, 2008).

The above field notes reveal that students had gained an understanding of planning and a sense of direction. To achieve the outcome of each team and to create an atmosphere for learning, at the end of class the teacher called each team to discuss their action plan with her outside of the class. At first they struggled with organising actions and decision making. They were not sure which action should be done first or later, or if their action plan was correct. The teacher helped them to focus their ideas and identify their key actions, after which the students were asked what other actions should be completed before or after that action. This assistance helped the students to understand the procedures of planning. They then reviewed their plan to make sure that it was organised and in order. In addition, the teacher suggested that they regularly review their plan to see if it was progressing towards its goal, or if there was a need to adjust or rearrange it so that the project could operate smoothly and efficiently. Towards the end of the discussion, the observer noted some improvement in the students’ planning process.

Discussions undertaken in a relaxed environment with the individual groups facilitates learning and comprehension in planning. The students looked and acted comfortably with each other and with the teacher and seemed more focused and did not hesitate to ask questions or answer

questions (usually in English). To establish if the students understand the steps and reasons for writing an action plan, the teacher asked ‘why do you need to modify the plan as you progress with your project?’ Student replied ‘it helps to minimise mistakes that could occur during working processes’. Other students said ‘sometimes we might have to change some actions if we are experiencing problems or we might have found a better way or alternative method to do something within the project’ (Field Notes, June 18, 2008).

The observer’s note shows that students gained insight into planning. By their creation of an organised action plan list, it is clear that students learned how to plan and arrange their ideas and activities in an ordered and efficient way, facilitated by specific questions and skill activities.

4.3.2.3 Evaluating skills.

In the area of evaluation, students needed to make judgements of their action plan. In this early stage of the study, they had to analyse and assess the value of their plan for its strengths and weaknesses.

4.3.2.3.1 Initial stage.

Though their plans were full of activities and strategies to allow them to achieve their goals, each group’s plans were not so different from each other. They had similar activities and processes, such as investigation, sharing of responsibility, survey, interview, questionnaire, data collection, brochure design, editing and proofreading and presentation.

When they were asked to evaluate their action plan by asking themselves what they needed, the students were confounded at first. They looked at each other and the class went quiet. Initially, there was no teacher input in this part. The observer wrote:

It took several minutes before each group started to look at their action plans. The teacher walked around the class and asked if they had finished their review. A lot of them shook their heads looking at the papers. There were yet questions to be raised at this stage. 15 minutes passed, three students raised their hands and asked questions as follows: ‘Why do we

have to evaluate it?', 'The plan looks fine and is it necessary to evaluate it?', 'Is the plan poor?' and 'Would you like me to add or delete anything?' (Field Notes, June25, 2008).

The above observation shows that the students were not quite sure what their teacher expected from them. They thought that their action plans were acceptable and ready to be used. They had no idea what criteria would be used in evaluating their plans.

4.3.2.3.2 Scaffolding to build skills.

To support students and to give the opportunity for students to apply evaluation skills, a plan for evaluation was provided. In the case of this study, the teacher explained what they had to look for during this early stage by reminding them about each group's goals and objectives. She explained that their project plans should be based on project goals by means of a variety of activities and strategies. The following conversation occurred between the teacher and five students from five groups:

Teacher: Tuk, **What are the goals that your current plan hasn't reached?**

Tuk: To develop vocabulary related to tourism and historical places.

Teacher: That means you want.....

Tuk: Language.

Teacher: Exactly. You may have to refine your plan and make sure that your activity includes authentic language. Do you understand? Ok. Can I go to Palm from white water Khek rafting? How's your action plan? **Does it reach your goals?**

Palm: No, it doesn't. One of the goals is to get positive feedback on language use.

Teacher: That means you want...

Palm: Feedback.

Teacher: From whom?

Palm: I guess... teacher and friends.

Teacher: Excellent. You can include feedback from friends and the teacher during the learning process. Next is Pom from Boat trip. **Do your methods reach the goals?**

Pom: No. We want to develop an effective brochure.

Teacher: **So how can you achieve it?**

Pom: I think first, information contained in the brochure needs to be correct.

Teacher: Right. Anything else? What about software?

Pom: We have to learn to use software programs to make a brochure.

Teacher: From whom?

Pom: You! (teacher and students are laughing) .

Teacher: I think our faculty's programming staff can give you some suggestions. Next is Vin from Tham Pha Ta Pol Non-Hunting Area. **What do you think about your plan?**

Vin: We need to add more process.

Teacher: Such as...?

Vin: We want to gain sufficient English language proficiency. While doing the project, we need your help because we want to develop knowledge about variation in language use and communication.

Teacher: Good thought. Looking forward to seeing your plan. Last but not least is Nueng from Kwae Noi Dam. **Give me your thoughts by telling me what you're thinking about your plan.**

Nueng: I think we have to add more process. We want to develop skills to create a powerful brochure...similar to Boat group.

Teacher: Ok. **What process will you add?**

Nueng: One of our team members knows how to make a brochure by using Microsoft Publisher. So we have to plan to learn the technology skills from her.

Teacher: Good job (Conversation, June 20, 2008).

The above conversation shows that the teacher helped the students to determine their learning goals by asking questions (shown in bold) so that the students could evaluate and see whether they could achieve their goals with their current plans. After showing an understanding of a plan evaluation, the students assessed their plans and came up with new ideas covering aspects that allowed them to achieve their goals.

4.3.2.3.3 The development of evaluation skills.

When the students were asked whether they were confident to achieve their goals with their improving plans, everybody nodded their heads. Each group speaker expressed similar opinions about their evaluation and agreed that evaluation skills were very important for doing projects and in the learning processes. However, they stated that they needed time to fully develop their evaluation skills and accepted that what they had learned during this process was a good start. Some students showed positive attitudes towards evaluation, for example, “I like to participate in the evaluation process. It reminds me to be responsible for my work and the learning goals”, “Evaluation saves us from being a failure”, and “Evaluation shows our strengths and weaknesses.”

After rewriting their plan, it was found that each group specified certain strategies for achieving their goals which covered language use, study and life skills, and their end products. This evidence shows that the students evaluated their plans and discovered the way to help their team to organise activities efficiently. Even though evaluation of their work at this stage focused on a small area of planning, they gradually developed their understanding of evaluation skills and were more likely to be confident about their evaluation ability.

4.3.2.4 Problem-solving skills.

Students are able to build their problem-solving skills once they experience problems and can therefore apply their problem-solving techniques in other situations. In this study, every group had different problems along the way to achieving their goals. In the beginning of the study, they showed that they were confused and anxious during engaging tasks, which generated problems. However, after engaging in a problem-solving process and coming up with a solution to their particular problem, each group showed that they were increasing their problem-solving skills. Evidence for particular aspects of the application of problem-solving skills follows.

4.3.2.4.1 Classroom setting.

After evaluating their plans, students had to implement their action plans. They were asked to fill out a ‘Student Investigation Brief’ handout. It functioned as a timeline for students to plan and work systematically from the beginning through to the end of their

project. At this stage, students knew what they needed to find out: (a) what they already knew, (b) who was responsible for what, (c) when and where to find the information they needed and (d) how much time they needed.

From weeks 5-13 (July 2 - August 29, 2008) students were in the process of investigation, data collection, data analysis, product creation, data organisation, and presentation preparation. It is to be noted that during these processes, students had to present their work-in-progress three times and have discussions with the teacher outside class hours three times. Peer and teacher evaluation was always available in each presentation.

4.3.2.4.2 Problems and solutions of each group.

The objective of each group was to find information, seek solutions and create an outcome for their chosen topic. The five groups had problems in almost every area during the first stage of their projects, as shown in table 4.41.

Table 4.41 Examples of the problems of five groups

Groups	Problems
Boat	Investigating problems: lack of information about their topic
Tourist Tram	Technological problems: problems with creating a brochure
White Water Khek Rafting	Interviewing problems: unsuccessful in an interview
Kwae Noi Dam	Time-management problems: tight schedule among team members and lack of time to prepare a presentation
Tham Pha Ta Pol Non-Hunting Area	Teamwork problems: conflict between team members

Table 4.41 illustrates that the students encountered different barriers (investigating, technological, interviewing, time-management, and teamwork problems). These obstacles occurred early and were important in that they allowed them to learn and use the problem-solving skills at that time and also at later stages of the learning process. Each of the above problems is described as follows:

Boat tour group: investigating problems

To begin their initial investigation into a boat tour on the river passing through the city, and not being local residents and only ever having seen a few boats and houseboats along the river, the students decided to telephone TAT in the city. They subsequently found that there was no sightseeing boat tour, although there was a dinner cruise available. However, from their conversation with TAT, they learned that a boat trip project had been planned as part of Phitsanulok's tourism project but was never instigated due to lack of finance.

When reporting this information back to the class, the students were in a state of panic and afraid that their project would be delayed as they would have to find a new topic. They thought that they 'were stuck' and that they could not go anywhere due to lack of information. In addition, they felt they had lost control when the investigation did not go smoothly. They were also extremely disappointed as they really wanted to create a boat trip. The teacher, as a result, provided support and integrated this problem into a problem-solving exercise in the classroom.

Scaffolding to build skills.

The teacher started to scaffold by asking questions and giving support. Eventually through discussion and treating this as a problem-solving exercise, the students came up with some ideas for their investigation.

Teacher: What is your problem?

Ann: No boat trip in the city and no information about it.

Yok: We don't know what to do next.

Teacher: You said there was a project planned for a boat trip but it was stopped because of insufficient funds. Can you tell me who looked after the project?

Ann: Umm...I'm not sure.

Teacher: If you know who created the project, you can research the information from them about the boat trip project such as their travel plan, activities, obstacles, etc.

Yok: Even though there is no boat trip in this city, we can still continue this investigation?

Teacher: Yes, you can start from the basics and design your own boat trip based on the knowledge that you already have. You may have to work harder as you have to collect data from scratch.

Ann: Is it possible to do this?

Teacher: Yes, everything is possible,

Ni: I think we have to prepare questions for an interview with TAT. Should it be in Thai or in English?

Teacher: Which one you feel comfortable with. If it's in English, you can develop your tourism specific vocabulary.

Puk: We think we will interview in English and report our progress next time.

Teacher: Excellent. I'm sure you will get some interesting information.

The above conversation shows that due to inexperience the students were not sure they could complete their investigation as there was no existing information available. It is clear that they needed guidance to gain confidence in investigation and problem-solving. With the teacher's help, students started to think of the best way to solve the problem.

They also began to take responsibility as learners and managers of their learning as they planned ahead to prepare questions for an interview. The teacher played a significant role as a facilitator and motivator, maintaining guidance to the students so they could carry the task to its end and achieve their goals.

Obtaining this information was not an easy process; students found that TAT was not involved with the boat tour project as it was a project of City Hall. This time they did not stop investigating as they really wanted to create the boat trip project. However, none of the students were residents of this city and did not know where City Hall was located. Ann expressed her experience as follow:

We really wanted to complete the assignment (investigating information of boat trip at the City Hall). We asked TAT staff about the location of the City Hall and he gave us a map. We rode motorcycles to the City Hall but we got lost. We rode to the wrong direction. Unfortunately, Puk didn't wear a helmet; we were stopped by a policeman on a bike. We begged him not to fine us and he's nice to us. He not only let us go but also showed where the City Hall was (Diary, July 9, 2008).

The above reflection indicates that the students aimed to achieve their immediate goal which was to investigate information at the City Hall. Even though they did not know where it was, they learned to seek solutions from the TAT staff and the policeman.

After arriving at the City Hall, they spoke with staff members who were happy to give them information about the previously proposed boat project such as (a) costing, (b) cost benefit, (c) management plan, (d) suggested itinerary, and (e) target group. The students thought that the information was not enough for them to find an effective solution for their project. Ni, from the Boat group, wrote:

We haven't got enough information from the City Hall. We thought that if we wanted to make a boat trip to become an attraction for tourists, we need to learn more about boat type, sightseeing along the river, and a cruise cost. Everybody presented their ideas to overcome this problem. Finally, we decided to ask the City Hall staff if he knew any boat owners. We then

got a telephone number of a boat owner and later rang him for a face-to-face interview (Diary, July 9, 2008).

The above description shows that the students learned to identify and analyse their problems and explored the outcomes. As they wanted to make progress on their topic, they needed to select the best answer so that they could achieve their goal. The students showed their knowledge and understanding of finding an effective solution.

Tourist tram group: Technological problems.

The tourist tram group had no knowledge about how to make their end product, a brochure. They expressed their problem to the teacher and asked whether they should change their end product to a video presentation. To promote problem-solving skills, rather than giving any immediate solution to the students, the teacher talked with them about their ideas. The following is an extract of the conversation taken from a discussion on July 11, 2008.

Teacher: First, please tell me what the purpose of making the brochure is?

Tuk: To help promote boat trip to tourists.

Teacher: Ok, what is the cause of the problem?

Rose: We know nothing about brochure software. We are only skilled in the use of Microsoft word.

Teacher: I see. What made you decided to make a brochure in the beginning?

Rose: We think brochure combines all information such as names of temples, history, where to go, cost, security and safety. We can give it to tourists. If they're interested in the boat trip, they can decide if they want to join us. Now we realised that nobody does brochure before.

Ann: So we think we should change it to video presentation because we have a video camera.

Teacher: Suppose you change to a video presentation, ok? After recording activities, sightseeing and services, do you know how to put each video clip together and how to add sound into video files?

Everyone: No, we don't.

Teacher: So that means you have to learn how to record video, convert files, cut and join slides, insert a video clip and add sound to a slide.

Ann: Umm.. You're right.

Dee: Can we come back and talk about this tomorrow? I think we need to talk in details.

Teacher: You can brainstorm solutions and think about the purpose of making your end product and then you can choose the best solution.

Students: Thank you. See you tomorrow then.

These reflections show that the teacher carefully scaffolded and stimulated the students to think and solve problems by allowing them to have open-ended experiences. She listened, talked to the students and asked open-ended questions to allow the students to explore, verify their ideas, take risks and make decisions. Students as performers had an opportunity to manipulate facts, ideas and their own abilities to organise their method to solve the problem.

Three days later, the students reported they had decided to produce a brochure as they planned originally. When asked how they had reached this decision they said that they used the process for solving problems.

Ann: From our past discussion, if we choose video, we have to learn how to manage video from the beginning. It needs time to learn. Now we have so many things to do. So we back to making a brochure.

Dee: We made a list of possible options and found that brochure is the cheapest and easiest. We talked to our friend. He's studying at Computer Science Faculty. He gave us some ideas and now we think we will use Microsoft Publisher program. It is similar to Microsoft word and all of us can work with Microsoft word.

Yo: In Microsoft Publisher program, they have similar toolbars as Microsoft word. They have various templates including layouts, photos and artwork. It's suitable for making brochure.

Teacher: You advised previously that you did not know how to use the Microsoft Publisher program.

Yo: We decided that three of us (Tuk, Dee and Yo) will learn how to use the program by ourselves.

Teacher: How?

Tuk: It's free software. We can download the program and manual from the Internet. We looked at it last night and we thought that we can make a brochure from this program.

Rose: Ann and I can help typing information in the brochure. We think this works for us and we can make our brochure and finish on time.

This conversation shows that the students gained competence in problem-solving skills as they understood their problem, brainstormed possible solutions and carefully studied each option. In addition, they evaluated if the solution would help finalise their project on time, if it was a realistic solution and how they would implement that solution to suit their problem. They also examined each member's skills and built on them. At the end of the project, the students in this group were successful in creating an interesting and informative travel brochure about the boat trip and are now aware that this is a powerful skill in looking at how to resolve problems.

White water Khek rafting group: interviewing problems.

A major problem occurred when the students had to collect data for their brochure by interviewing Thai and non-Thai tourists. They decided to interview tourists at Wat Yai, the major temple in Phitsanulok and one of the main tourist attractions. They chose to do it early in the morning during the weekend. It appeared that there were plenty of Thai tourists who were happy to be interviewed.

Their interview went smoothly with Thai tourists but not with non-Thai tourists. The followings are extracts from diaries showing unpleasant experiences with non-Thai tourists (in exact words):

Almost all of non-Thai tourists avoid answering. They may think that we are beggars. I start with ‘excuse me’ and they immediately walked away. I’m very angry. I tried to calm down (Palm, diary, August 8, 2008).

They didn’t cooperate. When we come to ask ‘Are you busy?’ they turned back and shouted ‘No, no, no!’ They didn’t want to speak with us (Pui, diary, August 8, 2008).

They may think we want their money. They looked at us strangely. I don’t like the way they looked. I hate it very much (Kwan, diary, August 8, 2008).

They are not polite and have different behaviour from us (Yui, diary, August 8, 2008).

The students experienced a problem with non-Thai tourists. On August 13, they addressed their problem with their teacher at her office. While explaining what had happened to them the previous weekend, they looked disappointed and upset. Later they asked whether they could reduce the number of non-Thai tourists to be interviewed from their original plan. The teacher observed that the students wanted to avoid communicating with the tourists. This was an alarming sign that they did not want to communicate (using English) with non-Thai tourists and therefore would not practise and develop their interview and English language skills as a result of the rejection by the non-Thai tourists.

Scaffolding to build skills.

Guidance was needed to address this situation. The following conversation shows how the teacher guided her students in solving the problem.

Teacher: **Tell me why you are unhappy with the current situation.**

Palm: We can’t find many non-Thai tourists and some of them are rude and most are uncooperative.

Teacher: **Now you have two problems. One is insufficient non-Thai tourists and another one is having bad experience with them.**

Students: Yes.

Teacher: We will go through each problem. Let's start with the first problem. **Tell me, when and where did you interview the tourists?**

Pui: Last Saturday we went to Wat Yai at 9 o'clock in the morning. We started early because it's hot. And another day was Mother's Day...a holiday. We also went to Wat Yai. We found a lot of Thai tourists with their family but saw a few foreigners at the temple.

Teacher: I think probably you went too early in the morning. Our city isn't a major tourist town. Normally foreign tourists arrive in the late afternoon and stay overnight here. They normally leave Bangkok in the morning and arrive here in the afternoon.

Students: Ah...

Yui: We should change our time to see them.

Kae: We should go in the afternoon or evening instead.

Teacher: It might be a good idea. Where else should you go besides Wat Yai?

Palm: What about a big shopping mall, Topland Plaza? I saw many tour buses and vans there.

Teacher: Yes, why not? Anywhere else?

Kwan: Umm...a city park along the river. Many foreign tourists walk and jog in the evening.

Teacher: That's right. I have seen them too. So now do you think you can find more foreign tourists for an interview?

Students: Yes (with smile).

Ba: But what should we do if they avoid answering the questions?

Teacher: This can be a language problem. Some people you approached may not have English as their first language; maybe they have trouble understanding you. Maybe they have trouble in answering your questions. Did you find out where they are from?

Ba: Yes, some come from Philippine, Korean, China, USA, Britain, Belgium, France and Switzerland.

Teacher: **Did you wear a university uniform?**

- Puk: No, it's weekend and holiday. We wear jeans and t-shirts.
- Teacher: I see. What about shoes?
- Pui: Sandals.
- Teacher: **Do you think it might help if you dressed politely?**
- Pui: Do we have to look serious?
- Teacher: *You should look professional - no thongs, jeans and t-shirts. Ok? I would suggest university uniform. First impression is very important. Did you introduce yourself at the start?*
- Kae: No. We said "Excuse me, are you busy?" and then they ran away (laugh).
- Teacher: It is a good idea to have a good introduction of who you are, what you're doing and why you are requesting an interview. It's not a good idea to jump straight into asking questions. *When I was a student, I was also turned away by foreign tourists and was so disappointed, but looking for a better approach was a challenge. I started by practising and improving my spoken English, this increased my confidence while I was interviewing. I made sure that my pronunciation was correct and I tried to speak naturally without hesitation. Finally, I was successful in my interviewing.* Remember, tourists are here to spend time with travel, not for interviews. So keep this in mind.
- Palm: In introduction of ourselves, can we write it first and you give us a comment later?
- Teacher: Sure, send it to my email. I can help you with the language. I'm quite sure you will be successful with your next interview. Hey, be prepared for a few more refusals from busy tourists (discussion, August 13, 2008).

The discussion above shows that the teacher used coaching methods in helping the students to realise their own solutions by asking questions (shown in bold) so that they could identify the solutions to problems by themselves. Some of the teacher's explanation where she showed her past experience in overcoming similar obstacles (shown in bold and italic) gave some hints about interview preparation. As PBL tasks engaged the

students in authentic problems, they were involved and motivated in attempting to solve the problems.

The development of problem-solving skills.

On August 25, the students came to see their teacher and reported the positive result from the second interview. This time they expressed enthusiasm and excitement when describing their experience. Discussion extracts are shown to demonstrate students' successes.

We decided to practise an introduction of ourselves. We asked questions in English to each other. We practised a lot. The reaction of non-Thai tourists is better than last time. I can't believe that I interviewed and talked to many foreigners in one day (Palm, discussion transcript, August 25, 2008).

I interviewed an English native speaking teacher and he suggested me how to pronounce some words. It's a good start. We agreed to interview foreigners in campus first so we have more confidence. On the interviewing day, sometimes we don't understand tourists' answer or their accents but it doesn't matter. We enjoyed our interview. Some tourists wrote vocabulary they used on my hand when I showed I was confused (Pui, discussion transcript, August 25, 2008).

I went to a shopping mall to interview. It's my choice to go there. I chose to go in late afternoon. I waited tourists at an exercise equipment section because I saw many tourists liked to look at the fitness equipment. They didn't buy any but just strolled in a mall so I had a chance to interview. They were happy to talk with me. They did not hurry to go anywhere. They looked relax (Kwan, discussion transcript, August 25, 2008).

I wear a university uniform. Our group decided to dress beautifully and we're successful in interviewing foreign tourists. They respected me when I told them who I was and why I was here. They asked questions about rafting and sightseeing in the city and I was able to answer (Yui, discussion transcript, August 25, 2008).

I talked to a guide to ask if I can interview their customers. I found that a few groups of tourists could not speak English so I moved on to other tours. Our group agreed to talk to each tour guide asking for their help. If they agreed to help, we could interview. Next time we should follow this step. It works (Kae, discussion transcript, August 25, 2008).

These extracts show that the students had developed their problem-solving skills with regard to interview techniques. The students used reasoning to investigate the problems, looked at possible answers, evaluated new ideas, finalised their solution, and modified and assessed the progress of their plan. They chose to dress properly, interview non-Thai tourists in many places, use an effective introduction, practise their English, be familiar with their own questions, show respect to tour guides and tourists, and evaluated how the interviewing was progressing with their new approach. This performance shows that the students developed problem-solving techniques.

In addition, in their diaries five out of six students from White water Khek rafting indicated that they enjoyed identifying problems and finding ways to solve them. They thought that it was challenging to face unexpected events and felt more confident in their problem-solving ability. They hoped that they could use these skills in their life and work. However, one student, Yui, did not share this confidence and felt that she had gained no problem-solving skills. She felt stressed and uncertain when facing problems.

Kwae Noi dam group: time-management problems.

According to their diaries, by weeks 8-9, 92% of students found themselves in the situation of trying to juggle their PBL life with other subjects' activities. They had very busy study schedules consisting of six or seven subjects and showed a lack of skills in time-management, especially for planning and prioritising. They admitted that they used to rely entirely on their teachers to tell them what to do and when, and found it hard to develop their own method of study and control of their time. The following example shows a time-management problem of Kwae Noi dam group and the teacher scaffolding and coaching strategies for supporting students in solving this problem.

Initial stage.

In week 8, each group had to report their work progress to the class and the Kwae Noi Dam Group did not show any clear organisation or organised verbal presentation. Compared to their previous talk, this presentation was not as smooth or neatly presented. After the presentation, they apologised for not being well-prepared. It was obvious that a problem had occurred within the group. In their diaries in week 9, they said:

It's frustrating. We had a meeting last week but three people didn't turn up. Two of us had been waiting for hours. They were very wrong (Si, diary, August 1, 2008).

I prepared to present on my part but because some members didn't come to the meeting, therefore, we didn't have a rehearsal. This causes a problem within a group (Rung, diary, August 1, 2008).

I hadn't finished my part until last night because I had other assignments to complete. So we didn't have time to put all the pieces together (Sa, diary, August 1, 2008).

I had trouble completing my part. I needed more time to finish it (Neung, diary, August 1, 2008).

I had to study for my exam so I didn't show up in the last meeting. I know somebody was angry (Rat, diary, August 1, 2008).

The diary excerpts show that there were time-management problems within the group. As midterm exams were approaching they were very busy with their study; therefore, they had no opportunity to practise their presentations with their teammates. Only two out of five students turned up for their scheduled meeting. This led to there being no practice for their presentation which was poorly delivered. To overcome the time issue, the teacher helped the students to look for a solution.

Scaffolding to build skills.

The teacher asked her students to speak about their problem. After a very lengthy pause, one student softly said that her group had fallen behind in their plan. After a further long pause, another team member frankly expressed that some of her teammates could not control their time and organise their lives. She also mentioned that because of time-management problems, she thought that her group would not be able to finish their project on time. Immediately, they started to argue and the teacher could sense the stress within the group; arguing had led to a negative atmosphere. The teacher asked the students to calm down, and tried to find a way to deal with their emotions and help solve the problem. She first asked them to explain what had happened. They told her that the conflict was due to poor time-management of some members. In addition, she found that the students appeared not to know how to work collaboratively. They believed that they had to wait for every member to turn up before they could start work.

She asked everybody not to look back but to concentrate on now. She asked them to define their problems and brainstorm how to accept these problems as belonging to the team, rather than to individuals. She then helped them to analyse the causes and also talked about collaboration. After that, everybody in the group generated ideas for solving the problems as follows:

- Prioritise which activities are the most important, they are non-negotiable. You can't avoid it.
- Write what has to be done on a calendar so you can see how busy your schedule is.
- Rework the plan, make a list of things to do and stick with it.
- It is important to make decision and share aspects of the project together.
- It is not necessary to have a meeting every week.
- It is not necessary that every group member is at every meeting.
- To finish the work, we have to rely on everyone's input; we need more responsible team members.
- More open communication is needed.

The above data shows that the students understood the problems within their group and had ideas on how to solve them. When they were guided through their problems, they were able to discuss and identify the key points, develop a solution and an approach to arrive at that solution.

In their diaries, they showed their understanding of problem-solving processes. They stated as follows:

We looked at the causes of problems and we brainstormed approaches to solve the problems. We then came up with good solutions (Nueng, diary, August 16, 2008).

I could see the problems and identified solutions which I think they were realistic and workable (Rung, diary, August 16, 2008).

I could analyse the problems, create the ideas to solve the problems and implement the solutions (Sa, diary, August 16, 2008).

We discovered the problem, we talked about it openly and now we are waiting to see whether the solutions are effective (Si, diary, August 16, 2008).

These reflections show that the students understood the steps in the problem-solving process. They gained knowledge of how to manage their problems. In addition, three out of five students mentioned that they looked forward to implementing their solutions and to see whether their plan was followed and the problems resolved as expected.

Tham Pha Ta Pol non-hunting area group: teamwork problems.

Initial stage.

While collecting data in weeks 6 and 7, the students reported that disagreement between members occurred with feelings of anger and frustration. The conflict was damaging to the team, as stated in the students' diaries.

We don't listen to each other. If one happened to say anything different, another one starts to argue and disagree. This conflict slows our work. It has been going on for two weeks now. We're in a difficult situation (Nit, diary, July 25, 2008).

Our group is a mess. Everyone comes to talk about their own problems. Nobody listens or gives suggestions. By the end of long meeting, the problems are not resolved and we go nowhere (Tee, diary, July 23, 2008)

When discussion time arrived, the teacher asked whether there were any problems to-date. One student, Nit, raised the issue of a poor working relationship within the group. The team members looked nervous but admitted that there were a number of arguments and tension between them. As they needed to work together to collect their data outside the class and the university, this tension was creating problems. In addition, they admitted that they never discussed or looked for solutions as they felt the issues would eventually resolve themselves.

Scaffolding to build skills.

As the problems had started two weeks previously and were likely to continue further, the teacher started to direct her students to view their problems. She started by asking when, where, how, why and with whom these problem were apparent. She kept guiding them to the stage of identifying causes and solutions. The students participated and gave their full attention. They brainstormed to find the best solution. While brainstorming, the teacher asked some guiding questions, for example, "What would happen if you employed the solution?" and "What should be changed to strengthen the support and positive feelings of team members". A few students looked bored in the beginning, but the teacher showed that she was concerned and wanted to help reduce stress within the group. She said:

When I was involved in group work, I always made sure that the group atmosphere was positive. We could raise points, discuss and share ideas with everybody. We didn't take it personally when somebody disagreed or had a different opinion. I don't like to work in a stressful atmosphere. Can you work in an unfriendly environment? (Discussion, August 15, 2008).

The above guidance shows that the teacher tried to build a rapport with her students by showing that this type of problem commonly existed and could happen to anybody. She encouraged her students to participate in solving their problems. By this point, the students seemed willing to try, and after considerable discussion and several attempts, they finally agreed to respect, negotiate and compromise so that they could work as a team.

In their diaries, three out of five students demonstrated that they understood the steps of problem-solving. They wrote:

I will start to explore the problem and ask myself what I want to achieve. I can look for various types of solutions and choose the possible and relevant to my situation. I then implement it and see how it goes (Nit, diary, August 22, 2008).

It is not easy to identify a problem because sometimes you have or don't have a problem. Sometimes it's just emotion that comes and goes and possibly can obstruct your goal. I think once I can identify the problem, I can find practical solutions for myself (Wa, diary, August 22, 2008).

A problem can happen to anybody but you can overcome it by seeking and implementing ideas. It may take some time to see whether your solution is effective. (Tee, diary, August 22, 2008).

However, another two students were unsure of what to do when they had problems. They stated:

If a problem means confronting people, I don't enjoy doing it. I always flow along with the group. It's normal to have a problem but it's something new for me to handle the problem especially within a group (Vin, diary, August 22, 2008).

I'm uncomfortable to solve a problem by myself. If it's a group's solution, I'm in with them. However, if a problem from the group affects me individually, I don't make an issue (Su, diary, August 22, 2008).

The above reflections indicate that most students in this group demonstrated their understanding of and ability for problem-solving skills. Nevertheless, negative interaction between students can affect their problem-solving endeavours because of potential problems confronting each other.

The topic of problem-solving skills was mentioned extensively by the majority of students in the final discussion with their teacher in week 13. Nineteen out of 26 students stated the importance of problem-solving skills that they may later employ in their future life or study. They added that they would be less frustrated and anxious and would not interpret difficult situations as a threat. They felt better prepared for any challenges they expected to come across in their lives, for example:

I easily got nervous before, but I've learned that no matter where you are, or how well you have prepared yourself, difficult situation can appear somewhere on the path (Bee, Boat tour group, discussion, Sept 26, 2008).

I used to feel pressured when asked to seek information outside university but now I'm better able to cope with and feel more competent in problem-solving (Wa, Tham Pha Ta Pol Non-Hunting Area group, discussion, Sept 26, 2008).

I completely changed my idea about problems. Big or small problems can happen even in a very prepared situation (Yui, White water Khek rafting group, discussion, Sept 26, 2008).

When we have a problem, we should decide what best solution is and take it step by step. It happens to everybody (Dee, Tourist tram group, discussion, Sept 26, 2008).

The above reflections show that the students gained a sense of confidence in problem-solving and understood the problem-solving techniques. They turned negative attitudes into positive attitudes and prepared themselves to handle problems effectively.

In conclusion, PBL provided some challenging tasks for the students and motivated them to investigate their topics of interest in more depth, undertake brainstorming sessions, develop plans, solve immediate problems and collaborate with their team members and people outside of the classroom during the projects' duration. Unlike a conventional class, they could not just memorise a few facts and sufficient information to pass a test. They were now actively involved with other students in creating a project based on the data they had sourced. In other words, they had to relate their learning activities to the facts and think creatively to build on ideas on the topic of their study. This result confirms that PBL activities provided the opportunity to sharpen advanced thinking skills such as brainstorming, planning, evaluating, and problem-solving skills, which are rarely emphasised in traditional classroom teaching. Scaffolding and coaching on the part of the teacher, one of the main characteristics of PBL, played a major role in helping the students to achieve their task.

4.3.3 Presentation Skills.

In this PBL classroom, students monitored their own progress and learning with the guidance of their teacher. The teacher kept track of the student's progress and ensured that the project's progress was well-timed for on-time completion. The students made oral presentations on a regular basis throughout the project which were critiqued by the teacher and peers, and feedback was given.

This section aims to investigate whether the students improved their presentation skills. Each group was to make a presentation of their work in weeks 4, 8 and 11, which was to be followed by immediate feedback on their progress by their peers and teacher.

4.3.3.1 Initiating presentation.

In the first three weeks of the study, students were asked to prepare a presentation of their investigation into an aspect of tourism that interested them, and determine the outcomes. They had to describe the types of language and the skills that were part of each objective, specify each member's role, sequence the project's tasks and discuss their final outcomes.

The teacher informed the students that she would comment on their presentations by breaking them down into the following sections: (a) content, (b) language, (c) gestures and (d) quality of presentation. She would also provide an overall opinion. Feedback from the students of the other groups was required in accordance with a prepared feedback form which was handed out at the commencement of the class. They could also include their own appropriate general comments.

In week 4, each group had 15 minutes to present their investigation in front of the class. As each member of the group was making their presentation, members of the other groups evaluated and recorded their feedback of each performance on the form together with the overall group performance. The students were given the opportunity at the end of each presentation to comment verbally, with the written comments given to the group at the completion of class. The teacher took notes and made general comments to the class on each group's performance. Individual group feedback was provided separately following class.

4.3.3.2 Teacher's perspective on the first presentation.

During the five group presentations, the teacher wrote general points of comment for class performance. The following strengths were found in the presentation performance of the first group:

1. The students had effective introductions. They welcomed their audience, introduced their subjects, outlined the structures of their talks and explained the purpose of their presentation.
2. The students demonstrated their knowledge of the topic. They included some information that covered each key concept. They showed that they were starting to understand their subject and were gaining knowledge even though it was in the early phase of the project.
3. The students ended their presentations by inviting the audience to ask questions, and showed appropriate slides during question period (question-answer period cartoons).

Nevertheless, the students showed some weaknesses in their presentation, and these are listed below:

1. The presentation was not well organised. Too much information was given on each slide.
2. The fonts and styles were ineffective. The chosen fonts were not appropriate or of the correct size for overhead presentations. There were too many font styles and colours used in a sentence.
3. Subject headings were not included and it was difficult to follow what they were discussing.
4. Graphics and pictures were over utilised. Some animations and colours were distracting. Too many background styles were used throughout their presentations.
5. Every presentation had spelling and grammatical errors. They spoke with several errors in pronunciation.
6. In terms of presentation skills, almost all presenters failed to use signposts to give direction to their presentations.
7. The majority read directly from their notes or PowerPoint slides and did not address their audience. Also, they needed to improve their body language and movements or lack of. There was no summary of the main points of the presentations nor was there any indication that the presentation was completed.

The presentations showed that the students' message was disorganised and contained errors. They failed to convey their thoughts and ideas appropriately and their communication skills needed to be improved. In addition, they had problems with the visual component of their presentations. Instead of adding impact and interest, their PowerPoint slides were cluttered, confusing and difficult to see and read. Also, during the delivery of their presentation, most students were stiff and read from their notes too quickly.

4.3.3.3 Students' perspectives on their first presentation.

More than half of the students expressed that their presentations were not successful in terms of conveying their thoughts to the audience. To receive a more in-depth feeling without second language interference, and as it was their first presentation in the early stage of creating their project, they were encouraged to express their feelings in their first language. As a result, the students showed enthusiasm and confidence to explain the

reasons, for example, *“We panicked as we ran out of time so we skipped a lot of slides”*, *“I felt that my group’s presentation was boring because our audience looked emotionless”*, *“Friends had no questions during question-answer period. This showed the presentation was either absolutely clear or completely boring”* and *“Our PowerPoint slides did not display at the same time as we were presenting because we overused slow fonts and special effects.”*

In relation to body language, nearly all students stated that looking at their friends or integrating movement into their presentations could lead to losing their train of thought. Therefore, they were likely to stick with their notes or the slides instead of interacting with the audience.

The above comments show that the students had problems with their communication and presentation skills. They did not know how to prepare an effective oral presentation and integrate body language and non-verbal communication into it. In addition, they did not know how to make the best use of visual aids to clarify their presentation. They understood that PowerPoint assisted in enhancing a presentation but were not aware of how to make the best use of it. Twenty-four out of 26 students knew how to create a PowerPoint slide presentation but incorporating it into a verbal communication was something new for them. From this first presentation, it was clear the students needed assistance with preparing academic verbal and visual presentations.

4.3.3.4 Students’ view on teamwork.

Three out of five groups stated that they did not prepare themselves as a team prior to the presentation but instead worked independently. As a result, whenever there was a change of presenter, the presentation came to an abrupt stop and then restarted without a smooth transition from speaker to speaker. Also, the subject matter was not compatible between speakers and the language use was not consistent.

In addition, nearly everyone admitted that they were terrified while delivering their presentation. They said *“I was frightened to speak today. I had to do the best to show my team that I worked hard”*, *“I was worried to present today. It’s a group work and I can’t let my team members down”* and *“I was embarrassed and looked stupid as my English speaking skills are not as good as other team members.”*

It is clear that students were stressed and under pressure in adapting themselves to work in teams and do their best to please their team members. Their fear affected their confidence and performance as this was the first time for these students to make an oral presentation as a team. It was evident that they needed guidance, techniques and suggestions on handling nervousness, as well as time to adjust to the new way of working together. This was discussed with the students and they were advised that help would be given in this area.

4.3.3.5 Teacher's scaffolding of presentation.

After observing the students' presentations and assessing the group work, the following week (week 5) the teacher commenced some scaffolding to support learning by modelling her own presentation on 'how to create a PowerPoint presentation' and showing a PowerPoint presentation on the "Dos and Don'ts" of presentation. She asked the students to comment and ask questions as she presented, and gave clear answers to student's questions

The teacher also discussed her presentation experience and how she managed to overcome anxiety and nervousness when presenting. She explained as follows:

When I was a student, I would be nervous before starting a presentation. I could feel my face going red, my heart would beat quickly. I, however, had to overcome it or at least calm my feeling down. I thought about what went through my mind at that time and found that I was nervous because I was afraid that I wouldn't do it well enough. Therefore, I practised many times prior to presentation. I also spoke slowly to keep my nerves under control.

This admission from the teacher amazed some of the students. The observer described the students' reaction in his field notes.

They looked surprised to hear that their own teacher is also nervous when delivering an oral presentation. While she was explaining her feeling, the students were smiling and laughing. They looked relieved and started to

talk about their feeling while giving presentations (Field Notes, July 2, 2008).

The field notes show that the teacher tended to be fairly relaxed, open and not overtly formal. She revealed her experience to establish rapport with her students so that they could develop a willingness to interact with her and access her assistance. The teacher also wanted her students to relax and have some fun so they could become less nervous and practise and improve their performance.

At this point, the students appeared calm, comfortable, and confident and started using English to ask questions about how to handle their fear and nervousness, how to verbalise in the presentation, what techniques to use to give a natural presentation, how to create a smooth presentation and how to switch among presenters, etc. It was surprising to hear so many questions from the students. They were actively engaged in the process of learning. It is clearly indicated that the students were gradually thinking, gaining confidence and engaging in learning.

The teacher also reminded the students that the presentations in week 8 and week 11 would be evaluated by their content first (focus, organisation, supporting information), next by the multimedia-PowerPoint (style of the writing, the appearance of the slides, layout of the slides, grammar, spelling, and usage) and lastly by presentation skills (how the oral part of the presentation relates to the multimedia portion and body language). To assist the students in becoming more focused and organised, the teacher showed a sample outline of a presentation and explained the order of the various topics. This helped the students to have clear understanding of what they were expected to do and how to proceed. It was a good opportunity for students to prepare their abilities and demonstrate what they had learned.

4.3.3.6 Teacher's scaffolding on grammar patterns and structures related to their presentation.

The classroom's atmosphere and students' attitude in week 5 looked very positive as the students were interactive and willing to ask questions, which were sometimes answered by the class instead of the teacher. Most of the students were concerned about communicating their ideas using perfect English grammatical structures. Therefore, the

teacher tried to convince students that making errors in English was a natural part of the process of second language learning, and it needed time to earn a good command of the grammar of a language, especially when going from not speaking or writing English to fluent use of English in such a short space of time. In addition, it was acceptable for the students to make mistakes and if their errors obstructed their communication, then the teacher would make corrections. The mistakes were divided into two types: written mistakes and spoken mistakes. For written mistakes, the teacher underlined only major mistakes, gave some examples related to the mistakes and allowed the students to correct their work themselves. For spoken mistakes, the teacher corrected common errors, and then during discussion time she introduced the mistakes, encouraged the students to spot the mistakes and presented correct words, phrases or sentences.

4.3.3.7 Teacher's scaffolding on peer evaluation related to their presentation.

After observing the peers' initial feedback in week 4, it was found that the students rarely gave useful or informed feedback. They mostly ticked off the provided space for what behaviour occurred without giving constructive feedback. Some feedback such as "*It's a good presentation*", "*Good job*", "*The content is ok*" and "*Your presentation isn't good*" did not actually give any benefit or cause have any effect on the students. Each group showed the opinion on peer feedback they received, as follows:

กลุ่มเราไม่เข้าใจว่าต้องแก้ไขอะไร

(English translation) Our group did not know what to improve (Ann, Boat group, diary, July 9, 2008).

เพื่อนบอกว่าเรานำเสนอดี แต่ใจเรารู้ว่า มันต้องมีบางจุดไม่ดี

(English translation) They said our presentation was good but we knew that there must be some bad points (Nit, Tham Pha Ta Pol Non-Hunting Area group, diary, July 9, 2008).

เพื่อนบอกว่า ช่วงนี้ไม่ดี แล้วอะไรห่วยๆ ที่ไม่ดี

(English translation) When they said it's not good - what is not good? (Tuk, Tourist tram group, July 9, 2008).

ข้อไม่ดีกลุ่มเราคืออะไร ไม่เห็นมีใครเขียนบอกเลย

(English translation) What are our weaknesses? Nobody wrote anything (Palm, White water Khek rafting group, diary, July 9, 2008).

เราต้องการคอมเมนต์ที่เพื่อน แต่เขาไม่ได้บอกอะไรมาเลย

(English translation) We need feedback from friends but they didn't say much at all (Si, Kwae Noi Dam group, diary, July 9, 2008).

The above comments imply that the students valued the feedback and expected to receive descriptive and constructive comment which focused on both positive and negative points. However, the received feedback seemed unhelpful as it was too general and too vague. The students wanted more engagement from their friends. Nevertheless, some students mentioned that they did not want to give feedback as they did not want to offend or cause discomfort to their friends.

To assist the students in providing feedback to their fellow students, the teacher spent time in coaching them by showing her own feedback. This was actual feedback which had been given to individual but unidentified students. The students could see the appropriate language used as well as being made aware of what constructive criticism was. They also were trained how to present feedback.

To ensure that the students were confident, relaxed and less fearful in giving feedback, the teacher emphasised that the main reason for constructive peer feedback was to improve their friends' performances, not for grading purposes. Feedback should not be interpreted as a personal attack but as a tool to gauge performance and to enhance meaningful student learning. They could learn from each other as their friends were a real audience who could deliver instant feedback.

At this stage of the study, peer feedback was not an easy task for the students. However, the best way to handle the challenge was to ask them to provide feedback by writing at least one strength and one weakness together with suggestions for improvement.

4.3.3.8 The development of presentation (from teacher's notes).

With the teachers' scaffolding in and outside the classroom, the teacher's notes show that the students as groups demonstrated improvement in their presentations, as shown in the table below.

Table 4.42 Improvement of group presentations

Comment on Overall Group Presentations	
Week 8	Week 11
<p>Strengths Overall, the students become better oral communicators. They welcomed their audience, introduced the outline of presentation and gave time for questions after the presentation. Their content is more focused and organised around the chosen topics. Supporting information and evidence were used (e.g., examples and statistics). In addition, the slides of PowerPoint were written in bulleted format with appropriate headings. The same slide backgrounds and signposts were used consistently throughout the presentations. Last presenters of each group summed up the whole presentation and thanked the audience. In general, all students seemed to be in control of their nervousness. They looked more relaxed and less fearful.</p>	<p>Strengths Overall, they improved even further. They spoke clearly, confidently and at a well-modulated pace. The content was focused and organised. They were not hurried and ended their presentation on time. They used excellent signposts from the beginning to the end. Everybody used their note cards and they sounded natural. Their facial expression and eye contact were properly used.</p> <p>During changes of presenters, they maintained the audience's interest very well with proper voice, volume and speed. Even though they still looked nervous, they were energetic giving successful presentations. Effective animation, graphs and tables captured the attention of the audience. Each slide had heading and one bullet point was shown at a time.</p>
<p>Weaknesses As they had gained a lot of in-depth information, they made too many points and too many bullet lists. They tried to show how much information they have assembled and tried to make every single piece of information self-standing. With limited time, they spoke too quickly trying to include all of the information. The audience, consequently, were switched off with information overload long before the end. Some groups could not finish their presentation as they were stopped as soon as they used the time allocated. Some students still used long sentences with complicated grammar (e.g., passive voice and complex sentences). Their eye contact and movement slightly improved as some students still looked at their notes too much. Therefore, their talk sounded boring and unnatural. Major spelling mistakes and grammatical errors were found in every group's slides.</p>	<p>Weaknesses Two out of 5 groups chose the wrong types of charts and graphs (e.g., a bar chart is the most appropriate for comparison, a pie chart is for displaying data as the percentage of the whole.) Only a small number of spelling mistakes and grammatical errors were found.</p>

Table 4.42 demonstrates that the students as groups showed improvement in their presentation skills. They presented full knowledge of the content with confidence in a loud and clear voice. They communicated their messages successfully even though they had a few grammatical errors. They effectively used body language and maintained the interest of the audience. Three of the groups used graphs and charts to enhance their presentations while the other two had poorly designed graphs. Finally, all of the groups showed they were well prepared and had rehearsed their presentations. To look carefully at individual student's improvements, the researcher randomly selected a student from each group, as shown in the table below.

Table 4.43 Improvement of individual presentations

Student's Name/ Group	Comment on individual student's presentation	
	Week 8	Week 11
Pom/ Boat Group	While presenting, you looked really worried and your voice was very soft and monotonous.	You spoke more confidently with clear and varying voice. You looked like you enjoyed your presentation.
Wa/Tham Pha Ta Pol Non-Hunting Area Group	Some vocabulary was complex (erosion, shields, stalagmites, stalactites, column, medicinal plant, evaporation and predator). It's better to provide your audience a glossary with clear definitions of difficult words. You also used long winded extended sentences.	Your audience looked more understanding when having a vocabulary handout to refer to. Your simple, short but effective words and sentences were constantly clear to the audience. Good word choice had a positive impact on your presentation.
Nueng/Kwae Noi Dam Group	Your standing still with your eyes fixed on the PowerPoint's slides was not appropriate. It looked like you were talking to yourself, not the audience.	I like your movement (walking and standing). Use of body language was appropriate. Your use of the PowerPoint slides was much improved. You should look at everyone, not just some of the audience.
Yo/Tourist Tram Group	You looked upset and stressed and finally lost your temper when one of the audience asked you an unexpected question that didn't fit your context.	You stayed positive when your audience asked a tough question. It's good to see that you repeated the question and slowly answered it. Your answer was precise!
Pui/White Water Khek Rafting Group	You're the last presenter and haven't summarised what you and your friends have said in the body of your presentation.	Your conclusion was clear but a bit too long. However, it was comprehensible and I think your audience definitely remembered your message. It was a smooth landing.

Table 4.43 shows that the students as individuals demonstrated improvement in their presentation skills. They organised their ideas, stayed on topic and summed up key points.

They effectively used body language and appropriate handouts. Their presentations had more life which maintained the audience's attention.

4.3.3.9 The development of oral PowerPoint presentation (from students' reflections).

In week 16, the students were asked to reflect on whether their presentation skills had improved. Eighteen out of 26 students stated that they further developed presentation skills as follows:

I can make an effective PowerPoint presentation because I had a chance to use the presentation techniques during my project (Ann, Tourist tram group, diary, August 22, 2008).

I gained presentation skills. When I listened to my teacher's and my friends' presentations many times, I could see what good techniques are and started to practice and use them in my presentation (Kae, White water Khek rafting group, diary, August 22, 2008).

I presented information about my project many times. I felt more and more comfortable and understand presentation style. This raised my confidence and my presentation skills (Puk, Boat group, diary, August 22, 2008).

The first time I made a presentation, I was so anxious. I worried about my grammar, accent and vocabulary use. After making a few presentations and learning from my teacher and friends, I'm now more relaxed and gained confidence in my performance (Rung, Kwae Noi dam group, diary, August 22, 2008).

I have previously made an English oral presentation many times but just once per semester, it always happened at the end of the course so when I finished, I never got any feedback. I didn't know my presentation was good or not. But in this course, I practised and presented to my group and then to my class many times. I knew my good and bad points. Now, I think

I can make a good oral presentation (Su, Tham Pha Ta Pol Non-Hunting Area group, diary, August 22, 2008).

These reflections show that the students developed their presentation skills during the learning process. The feedback and assistance from teacher and friends helped the students create more effective oral presentations. They understood what they had to do to be successful with their presentation. Since they were given the opportunity to frequently make presentations, their presentation skills and oral presentation confidence were greatly enhanced.

Besides reflecting on their presentation development, many students mentioned that their presentation success could not happen without their teacher's feedback. They believed that the constructive and timely feedback helped them and their teams to present better and motivated them to improve their presentation. They were very pleased with the feedback, which showed how their teacher was involved and interested in the students' learning progress.

In conclusion, PBL allowed both the students and the teacher to track and evaluate the project's progress through the various presentations. This also offered students the chance to refine and improve their own work. They were aware of the strong and weak points of their presentations. Since PBL fostered group presentations and engaged the students in meaningful activities, the students further developed their confidence in PowerPoint and oral presentations skills.

4.3.4 Self-confidence in using the language.

Working on projects allows students to select their own learning path, use their ability to complete the task and receive feedback on their learning achievements. This is believed to lead to the development of motivation and self-confidence (Stoller, 2006). In this study, student involvement in project work was shown to have an effect on their self-confidence which is demonstrated in the following section:

- The teacher's view
- The students' view

4.3.4.1 The teacher's view.

The teacher monitored the level of students' confidence in the use of the English language during weeks 3, 7 and 13 and found an improvement in self-confidence in students as they worked on their project. The following field notes show how the students built their confidence through group discussions between the teacher and an observer and with the other student groups (shown in bold).

Week 3

Every group was given a number of questions one week prior to the planned discussion. When asked to answer the questions, all of them read from their notes, **there wasn't any eye contact** and they were **extremely uneasy**. They became even **more nervous** when asked a couple of follow-up questions. I could only manage to get three groups to answer the follow-up question in simple conversational English. The other two groups seemed **less enthusiastic** in using their English. When they answered, they answered with words, not sentences. They endeavoured to use Thai language most of the time. If they didn't understand the questions, they remained **silent and smiled**. Overall each group had to be pushed to answer. I could feel that the students were under extreme **pressure** when they tried to speak in English. I had to encourage them to answer and kept saying 'you'll be alright', 'you can speak English', 'Come on, you can do it'. **Nobody asked any questions**. Most of my time was spent on reassuring them that they were capable of using English. (Field notes, June 20, 2008).

Week 7

Again each group was given a number of questions one week prior to the planned discussion. Four out of five groups could answer in English while one group spoke both Thai and English. Everybody prepared their answers ahead. This time they **talked** instead of reading off their notes. They **tried very hard** to talk even though they had to glance at their notes sometimes. For the follow-up questions, some language was a challenge for the students. However, they did **ask for clarification**. Each group seemed to **understand the questions** as they could answer in a simplified manner.

They used vocabulary related to tourism in their conversation. Everybody appeared **relaxed** during conversation. Even some of the quiet students **asked questions** about language use in their projects, although they still looked **nervous** and looked at the floor, they were strong enough to ask aloud. These shy students did not converse a lot in English and tended to remain **silent** throughout the discussion period. The Tourist tram group showed difficulty in expressing their ideas; I could see their **frustration** when they tried to communicate in English. However, they **kept trying** until they were asked to speak in Thai. In Thai they were quite confident in expressing their thoughts. This week most of my time was spent listening to each group speaking in English (Field notes, July 18, 2008).

Week 13

Compared to my past teaching experience, I liked the fact that I had many students who now **asked questions** about their presentations and projects. They were **not afraid of speaking up, asking for, or giving opinions**.

The quieter students were improving even though some still needed a little encouragement. They needed time to gather their thoughts together to answer in a meaningful way. They **did not look at the floor or remain silent** compared to the earlier discussions.

As only English was to be used in these sessions, a number of the students were starting to **make fun and joking** with each other in English. They even started converting jokes and comments from Thai into English which made for some humorous interchange. Four out of five groups made **a lot of noise** and some **laughter**, while the Tourist tram group were usually quiet. Even though they appeared quiet, they were ready to speak each time I asked questions and everybody looked **more confident** in contributing to the discussions.

The atmosphere was **relaxing** and **engaging**; they could **laugh** at their mistakes and **didn't show anxiety** when using English. The discussions were definitely becoming **great fun** for students. These sessions always ran well over time, which indicated that they were enjoying themselves and not rushing to get it over with (Field Notes, August 29, 2008).

The above field notes indicate that the students became more confident in using the English language. Initially, they were hesitant to communicate in English and had little confidence to use the language (shown in bold in week 3). Four weeks later, the students showed signs of gradually gaining confidence and were more likely to have a conversation in English. Even though some students found it hard to communicate in English, they worked hard trying to express their responses in English (shown in bold in week 7). Finally, as the project progressed, they were exposed to a wide range of texts related to tourism and to experiences where the target language was spoken. They developed interests and increased their confidence in using English in class. The atmosphere during discussions had changed from a feeling of ‘anxiety’ to ‘relaxed’. The learning environment became fun and joyful which promoted and strengthened their confidence (shown in bold in week 13).

4.3.4.2 The students’ view.

4.3.4.2.1 Initial stage.

At the beginning of the study, a general survey was given to all students asking about their confidence to use English with native-English speakers. As it was an open-ended question, the researcher categorised their answers into four responses: high confidence, medium confidence, low confidence and very low confidence. Nearly 12% of the students said that they had medium confidence in using English, 77% reported that they used English with low confidence and nearly 12% advised they had very low confidence in using English, claiming a fear that foreigners would not understand them as their main reason. The students with low and very low confidence stated that their vocabulary, idioms, phrasal verbs, grammar usage and the chance to use English in daily life were limited. These students considered themselves incompetent in using English and felt they would embarrass themselves by trying to speak it.

The students rating themselves as having very low confidence described their discomfort in using English as follows:

หนูว่าเวลาที่ภาษาอังกฤษดี มันก็ช่วยให้เรามั่นใจ แต่ไม่ใช่หนู ภาษาอังกฤษไม่ดีเลย หนูไม่มั่นใจ แบบมันกังวลที่
จะใช้ภาษาอังกฤษกับฝรั่ง

(English translation) I believe good English brings confidence. Unfortunately, my English is not good and I'm hesitant to use English with foreigners (Sa, survey, June 6, 2008).

หนูขี้อายและรู้สึกอายหน้าที่ใช้ภาษาอังกฤษกับฝรั่ง หนูเคยคุย แต่เขาไม่เข้าใจหนู หนูก็ไม่เข้าใจเขาด้วย
(English translation) I'm quite shy and have been finding it very embarrassing to use English with English native speakers. My experience showed that they had trouble understanding me and it is difficult for me to understand them too (Nueng, survey, June 6, 2008).

เรียนภาษาอังกฤษก็หลายปี หนูก็อ่านมาก แต่เวลาพูดฟังเนี่ย หนูทำไม่ได้ โง่มาก ไม่กล้าใช้ภาษาอังกฤษ
(English translation) I have studied English for years. I read it a lot but when it's time to speak and write, I feel foolish and shy to use the language (Wa, survey, June 6, 2008).

เคยโกรธว่าทำไมเรายังใช้ภาษาอังกฤษแบบเรื่อยๆ เหมือนเขาคุยกันปกติไม่ได้ คิดว่าเรียนไปเนี่ยเสียเวลามาก
(English translation) I'm angry that I still cannot use English easily and I think I wasted all of my study time (Ba, survey, June 6, 2008).

The above opinions demonstrate that these students used English at the beginning of the study with little confidence and poor fluency. These students had been studying English for more than 10 years and believed they had low confidence to use English. They felt they did not have sufficient English proficiency to use in real situations.

4.3.4.2.2 Exposure to English during the study.

While undertaking their project work, the students had a chance to use the target language as a means of real communication. They had to go to the tourist offices and sightseeing locations such as temples, monuments, river cruise, rafting route, and waterfalls to collect the project data from both Thai and non-Thai tourists. They used English (sentences, vocabulary, phrases, grammar and pronunciation) repeatedly while interviewing non-Thai tourists, as well as in the language classroom. This allowed them to participate in authentic spontaneous language.

In addition, they were consistently exposed to the English language by speaking English during four scheduled discussion periods with their teacher (weeks 2, 7, 10 and 13), three presentations on works-in-progress in front of the class (weeks 4, 8 and 11), and a number of after class informal discussions. These activities involved interactions between teachers and students and between students and students. The communications in the classroom

and discussion periods were real as they used English to genuinely exchange information. They did not spend their time focusing on accuracy of the language being used, which is the norm for a conventional classroom setting, but endeavoured to communicate in a meaningful way.

As every student used the target language extensively and experienced a broad range of authentic language while completing their project together with support and feedback from the teacher, they commented on their confidence in their diaries in week 15, for example,

I feel less pressured when using English in front of non-Thai tourists and English native speakers even though my communication is not grammatical correct. With the support from the teacher and the more opportunity to practise English, I gain more confidence to use English (Sa, diary, September 12, 2008).

I have spent less time to think in English and then produce questions and answers. I think I'm happier to use English or do anything with English. In addition, the teacher helped building up my confidence by giving support and advice throughout the study (Wa, diary, September 12, 2008).

In the beginning of the study, open my mouth in English was a big deal but now as I have used the language more often and with the support of the teacher, I feel more confident in communicating with people in English. I think feedback with regard to my performance on English from teacher was a major part in developing my confidence (Ba, diary, September 12, 2008).

It was a wonderful experience to make a brochure in English. I feel I can do anything that I used to think it was impossible. Having a teacher support and an opportunity to use English were the ways to build my confidence (Yui, diary, September 12, 2008).

These reflections show that the students increased confidence because of the support from their teacher and extensive opportunity to practise English. A number of similar responses can be seen in the students' diaries indicating that generally they were confident and able to use and apply the skills learnt during project work in a variety of wider social contexts. Interestingly, some students showed the relationship between their confidence development and self-directed learning. They commented as follows in their diaries:

I had never edited our project as we normally did it as a team or the teacher pointed out the mistakes but this time I volunteered to revise the final draft by myself. Because first, I am confident in my own ability to communicate, second, I can check the errors in grammar textbooks and grammar websites which we were shown by the teacher in previous classes. Finally, I was not too worried as I understand that mistakes are unavoidable. I will try not to make any serious grammar mistakes. I wish I learned PBL sooner than this (Neueng, diary, August 20, 2008).

I used to be frustrated when I saw any corrections circled in red ink or heard any corrections in the middle of a conversation. PBL has allowed me to investigate information, control my learning and enhance language proficiency. I wish other Thai students had a chance to learn like me. I now believed in my language skills that I can communicate in English and at the same time I have learned how to correct my own mistakes as a part of learning process. Therefore, I think I can correct my own work in most cases without referral to the teacher even though it may not be perfect. I think it is understandable (Pom, diary, August 20, 2008).

The above comments indicate that the students showed signs of becoming autonomous learners as their confidence levels rose. In the initial stage of the study, they were supported in terms of language production by their teacher who helped to give feedback on language awareness. However, towards the end of the project some students were able to rewrite and correct their language mistakes by themselves, without assistance from their teacher. It seems that regular use of the target language together with the teacher's scaffolding and coaching promoted students' confidence in language use to the extent that some became competent and autonomous developers of their own language skills.

4.3.4.2.3 The development of student confidence at the end of the study.

In week 16, the students were given an open-ended questionnaire to describe their confidence in language use. Their judgements about their level of confidence were then compared with the results from the beginning of the study. The table below shows a dramatic increase in confidence after using PBL.

Table 4.44 A comparison of student confidence before and after employing PBL

Week	High Confidence	Medium Confidence	Low Confidence	Very low Confidence
1	0	11.5%	77%	11.5%
17	38.5%	42.3%	19.2%	0

N=26

Table 4.44 shows that the students significantly improved their confidence by the end of the study. Almost 39% of participants described themselves as having high confidence in language use, and 42% of the students said that they had medium confidence in using English. The level of low confidence dropped from 77% percent to 19%. Interestingly, nobody said they had very low confidence after learning with PBL. The result was found to correlate reasonably well with the data reported in their diaries and in their teacher's field notes.

In addition, when the students were more confident in their language skills, they were surprised to find that they were able to succeed at being self-directed learners. In final discussions with their teacher in week 13, 24 out of 26 students stated that the process of PBL continuously built not only their confidence but also their independent learning ability, and that they would like to see it implemented in more courses in the future, especially in English language teaching. They believed that the combination of self-confidence and self-directed learning could improve their study skills and tackle academic problems.

It is clear that the PBL approach used in this study fostered students to gradually increase their confidence in the use of English language skills. A description of self-directed learning gradually emerged as a result of building confidence. PBL involved the students in authentic tasks, actively engaged the students in their learning, and allowed greater quantities of target language production during the course. As a result, PBL engendered

higher levels of confidence in language learning and language use. As the students were able to develop confidence and language skills, they felt more secure to rely on themselves and to actively use more English language. Their independence at this level of language use contributed to developing their capacity in the autonomous learning process. In addition, the teacher in this study constantly employed teacher scaffolding and coaching as a strategy while students progressed through the tasks.

4.3.5 Conclusion: research question 2.

The PBL approach in this study provided the students with real-life learning, which allowed them to discover new knowledge through logical thinking and reasoning. They worked collaboratively with peers who had individual strengths and varying thoughts and ideas but who all shared a common goal. During the course, PBL required the students to learn, think, create new ideas, solve authentic problems and apply knowledge to their learning activities. They had to spend more time on acquiring, organising and relating information into meaningful learning. Memorising data or learning isolated concepts was not a requirement. In addition, the learners were (a) involved in authentic activities; (b) exposed to English by using the language to perform the tasks, for example, developing a plan; (c) interviewing for information; (d) writing a brochure; and (e) preparing a presentation. Since the progress of projects and the students' language proficiency needed to be tracked during the course, the students integrated the use of PowerPoint to support learning. It is clear that PBL helped the students to further develop teamwork skills, higher-order thinking skills, PowerPoint presentation skills and self-confidence in the use of English.

Chapter 5 - Discussion

The purpose of this study was to investigate whether PBL could enhance Thai tertiary students' English language skills, learning skills and self-confidence in an *English for Tourism* course within a Thai university. Some characteristics of PBL were noteworthy in contributing to the enhancement of English language proficiency, learning skills, and self-confidence, in particular, those tasks and activities that were authentic in nature and provided feedback and support, learner autonomy and a collaborative learning environment. The advantages and challenges for students in implementing PBL are discussed below for each of these characteristics. The advantages and challenges from the teacher's point of view are also presented.

5.1 Authentic Activity

The PBL environment engages students in a meaningful learning process by using authentic activities as the reason for learning (Markham, et al., 2003; Stoller, 2002). In this study, authentic tasks were used as recommended by Reeves, Herrington and Oliver (2002). These matched a typical real-world situation, allowing the students to investigate and develop a tourism plan using a number of strategies and subtasks to complete their projects. In addition, the task provided the opportunity to use several resources and investigate a variety of perspectives, enabling learners to make choices and interpretations and find solutions. Working in collaboration, the students were encouraged to adopt diverse roles and integrate interdisciplinary perspectives.

5.1.1 Enhancement of English language.

The authentic nature of these projects allowed the students to speak and listen to English in a variety of language functions. For example, in relation to spoken language, they successfully used interviews as a means to interact with native-English speakers as part of their learning and data collection process (as suggested by Lal, 2007). The five groups used speaking and listening skills when interviewing native-English speaking teachers as well as non-Thai tourists about their subjects. In addition, they presented their work-in-progress reports to their teacher and class in English. To optimize their speaking and

listening skills, all student discussions with their teacher and native-English speaking observer were conducted in English.

This study gave the students the opportunity to acquire listening comprehension and spoken-language skills through social interactions, which may well explain the high skill levels gained by the students in these areas, reported in the findings in Chapter 4. Sociocultural factors and aural medium are considered to be essential to EFL learners' oral communication, as students can acquire knowledge of how native-speakers use language in social interactions. Being able to listen and speak a foreign language in real conversation positively affected the development of these students' listening and speaking abilities, as it did in Shumin's (2002) study. The choice of language made by students in this study came from both social and functional considerations. They learned how to use the language outside academic settings and to conform it to social settings with their friends, teachers, and others engaged in conversation with them.

Using authentic activities is one way to activate student motivation which in turn helps students engage in the learning process (Flynn, Mesibov, Vermettee & Smith, 2004). Positive motivation is an essential element for success in second language learning (Brown, 2002; Hutchinson & Waters, 1987) and PBL is seen as a means for creating this positive motivation (Hutchinson, 1996). According to the survey at the beginning of this study (see section 4.1.2), the learners indicated that they were motivated to participate as they wanted to be able to better communicate in English and to work in the tourism industry. These data showed that the students had strong instrumental motivation. Studying English was seen as an opportunity to develop their English proficiency together with assisting their future careers. As suggested by Vaezi (2008), students' instrumental motivation is one of the keys to successful language learning, especially for non-English speakers learning English, as when they are motivated they make an effort to learn and sustain their tasks. Vaezi further claims that it is important for teachers to maintain students' motivation.

In this study, the students were motivated by the challenging topics and authentic activities that encouraged them to communicate meaningfully and purposefully. They had a chance to use what they had learned from previous and present language classes to communicate and provide ideas in realistic ways. They conversed with people outside the

classroom and interacted with non-Thai tourists. As suggested by Lal (2007), this study emphasised the real-world problem that captured the students' interest that in turn motivated them to learn and be actively engaged in the learning process. It is clear that the authentic use of the language through PBL in this study influenced the students' learning motivation in a similar way to those in the studies by Curtis (2002) and Tekinarslan (2001). This finding implies that having the opportunity to use English for real-life communication in a real-world context and being motivated while using English assisted in the enhancement of students' listening and speaking skills.

Authentic materials have previously been shown to promote the development of reading skills and reflect on how a language is used (Berardo, 2006). The authentic nature of this task led to multiple opportunities to develop reading skills. The students read a number of travel brochures, tourism websites, travel guides and magazines. In this way, they chose their own authentic reading texts to suit their interests and read the materials in a way that matched their needs and goals. Grabe (2002) found that an effective way of enhancing second language reading was to simply read extensively. The students in this study were required to read extensively as they needed to learn more vocabulary related to tourism and acquire correct grammatical structures in order to become better readers and writers. The findings in this study showed major improvements in their reading skills and vocabulary knowledge, as evidenced by the use of these in their oral discussions and diaries. This finding suggests that having an opportunity to interact in real language through extensive reading develops reading skills and builds vocabulary knowledge.

Even though the students were allowed to choose what they wanted to read for their general knowledge of tourism, as suggested by Birch (2007), the teacher played a part in reading activities by monitoring, guiding, and modelling strategies for reading comprehension. Therefore, students not only read the topics that they liked but also read to understand the tourism content, to extract main ideas and to gain specific information from the text. They were given opportunities to talk about their reading experience, their progress and their problems. This was found to be an important, relevant and enjoyable activity for these students. The outcome implies that one of the effective ways to improve language proficiency, especially in reading, is to encourage the students to read independently and discuss their reading in interactive and meaningful activities. This interpretation supports the notion of Renandya and Jacobs (2002) that integrating

learners' interests, purposeful reading, and self-selection of texts enhances language proficiency and conforms to the current developments in second and foreign language curriculum. In addition, Aebersold and Field (1997) showed that using authentic materials helped in building students' language learning confidence and their skills in handling texts.

It should be noted, however, that authentic materials can also have disadvantages. This study supports the notion of Hyland (2003) and Meng (2009) that authentic materials can cause de-motivation and frustration if students do not choose reading materials at an appropriate linguistic and structural level. This situation arose at the beginning of the study. The students were upset and did not enjoy the experience because the texts were much too difficult for them. The students in this study were required to indicate the names of material they read, the reading duration and a summary of these materials. This procedure allowed the teacher to monitor students' reading to ensure that the students were exposed to real and well-written language, and were reading information based on their needs, interest and proficiency level.

The authenticity of the task contributed to the development of writing skills. In this research, the students produced a variety of written materials in English, including project plans, project diaries, a group PowerPoint presentation, written comments on other groups' presentations, and brochures.

The students' diaries played a major role in developing their writing skills, as shown in a study by Genesee and Upshur (1996), as the diaries motivated the students to write and enhance their written communication skills. The students had to make seven entries into their project diaries and received timely feedback and comments on these from the teacher. In this way, they were able to write and participate in a real writing exchange using authentic and purposeful communication. Even though the diaries had guided topics for students, they were allowed to express ideas and experience beyond the scope of these topics. Since the diaries related to functional communication, the students had to use English language in authentic communicative situations. Ying (2006) is similarly convinced that EFL learners become independent writers if they write for real authentic purposes (e.g. real-life problem-solving topics). When given the opportunity to use real language for meaningful communication, creative thinking is stimulated.

The use of authentic materials as examples has been shown to help EFL students to enhance their written tasks (Zhu, 2005). Similarly, when developing projects in this study, the students were required to produce an end product which was an integral part of the PBL project. They decided to create travel brochures and were therefore required to read and be exposed to many styles of writing to understand the use of authentic tourism language. During the preparation and writing of their brochures, the students experienced the full range of writing processes, (e.g., planning, drafting, revising, proofreading, evaluating, and production), as proposed by Hyland (2003). The results detailed in Table 4.35 show that incorporating authentic written materials into the learning process, with the focus on the writing process, helped the students in developing their abilities. Undertaking the writing tasks led to a gain in vocabulary, grammar, sentence structure, spelling and the use of punctuation. Peacock (as cited in Mishan, 2005) suggested that the use of authentic materials in the classroom could be a vital motivator for language learning and motivation is one of the effective factors that most influences second language acquisition.

In sum, it is clear that authentic activity in this study promoted the development of Thai university students' English language proficiency in listening, speaking, reading, and writing. The evidence showing the gain in English language skills (see Tables 4.2, 4.6 and 4.10) is close to that of Termprayoon's (2002) study of the development of English language learning of Thai sixth grade students. This is also supported by Sarwar's (2002) study of the use of PBL in English language classrooms of Pakistan college students, and Sidman-Taveau's (2005) study of computer-assisted project based learning of adults studying English in a second language class. The evidence showing the gains in all four language skills corresponded to the recent findings of Fragoulis (2009) in his study on PBL in the teaching of English as a foreign language in Greek primary schools. In this study, the difference when compared to other research was that the participants were divided into three English proficiency levels (see Table 4.1), allowing the researcher to evaluate improvement between the different levels of students.

The data collected based on pre- and post-testing using TOEFL scores indicates that the low and medium achievers benefited the most from learning English with PBL (see Tables 4.3 and 4.4). This raises an interesting question as to why the low and middle ranked students showed greater relative improvement in their language skills. In their past

studies, there would have been several factors impeding their learning, for example, limitation of vocabulary, little exposure to meaningful language, and a lack of confidence. This does not mean that students had no knowledge of the English language. They had been exposed to English language training throughout their previous schooling but given little if any opportunity to practise and use the language in a real context. Therefore, when given the opportunity and guidance to learn in a meaningful way and to apply their knowledge to real-world experience, the students' language skills improved, as did their confidence to express themselves and their desire to learn.

It is important to note that the low and medium achievers within the groups were encouraged by their team members to use English and to interact with the teacher and the non-Thai tourists, as all students needed to contribute equally to their group project (see *Interviewing non-Thai tourists* in Chapter 4). Giving the low and medium achievers the opportunity and exposure to the target language in an authentic learning environment was a crucial factor in the development of their English proficiency

The high achieving students showed progress in speaking and writing but their listening and reading skills showed little if any significant improvement after using PBL. This indicates that the PBL approach might not suit all learners or that it may require modification for high achievers to improve their skills in these areas. Further research to investigate the factors that influence high achievers' performance in listening and reading would be beneficial in improving the effectiveness of PBL.

To conclude, as in Littlewood's study (1981), the PBL tasks in this study gave the students an opportunity to use and practise English in real situations for communicative purposes. The students were exposed to written and spoken English language in meaningful and authentic learning situations in a similar way to those in the study by Johnson (2003). The method of learning language through PBL was in complete contrast to the current teaching of English in Thailand, where it is treated as a subject rather than a medium of communication (Forman, 2008). Currently the teaching of English only focuses on reading and grammar with the aim being to pass the English exam (Foley, 2005; Noppakunthong, 2007). One of the English learning aims for Thai university students is to develop competence in English in both academic and social contexts (Wiriyachitra & Wudthayagorn, 2007). Applying PBL is a positive approach that allows

students to develop English language and content in a non-English-speaking environment (Desiatova, 2008; Fried Booth, 2002; Guo, 2006) and develop their English skills in meaningful social contexts (Postholm, 2005).

5.1.2 Enhancement of learning skills and self-confidence.

The authentic nature of the tasks provided many opportunities to develop teamwork skills. The students undertook numerous authentic activities outside of the classroom. These activities allowed them to construct new and in-depth knowledge and required them to reflect on their learning both individually and as a team. Students not only worked together to accomplish shared goals but also interacted and socialised with each other. They learned how to work together as a team and developed essential skills including brainstorming, planning, evaluation and problem-solving. They took the opportunity to integrate interdisciplinary perspectives and multiple resources to complete their projects.

PBL placed the students in a real-life work setting where they could see the complexity of the tasks. They were forced to be as disciplined as they would be in a real-life, competitive working environment. As they were engaged in a complete learning task acquiring content and knowledge while planning, evaluating, making decisions, arguing and solving problems, the open-ended tasks connected the students to the real world and in the meantime stimulated their complex thinking. PBL learning contrasts with the traditional Thai EFL classroom that provides knowledge by memorisation (Mackenzie, 2002). This only requires low-order thinking skills rather than through deep and meaningful thinking. Consistent with the findings of Bergh et al. (2006), in this study PBL enhanced the students' teamwork and higher-order thinking skills. This level of teamwork would not have occurred without the undertaking of an authentic project. Teamwork skills will be very useful to the students in later career situations as well as in further academic studies at university but are not normally included as part of an EFL course.

The authentic activities helped the students to construct understanding and skills relevant to their projects. The development of presentation skills was clearly seen as a benefit of PBL as the students were required to communicate ideas about their projects. The presentation process was one of the authentic activities in this learning environment and served to reflect the students' learning process and skills both individually and as a team.

Students learned special techniques for communicating particular aspects of their projects (e.g. data collection, problems, solutions, results of research). Each group endeavoured to make their presentations effective and meaningful by the integration of non-verbal communication and the use of visual aids. These regular presentations promoted ownership at all stages of the learning process. PBL is a completely different learning approach when compared with current English teaching in Thailand, where students are involved in a passive and unreflective education system (Mackenzie, 2002). In this study, student learning was embedded into a realistic way of learning which required involvement in the learning process through the use of both oral and written communication and presentation skills. The results (see Tables 4.40 & 4.41), similar to those found by Postholm (2005), indicate that the students were successful in their presentations as they used meaningful language both in speaking and writing. They learned how to highlight key words, to use abbreviations and to speak more naturally when presenting their project work. This study confirms that putting students into a real-world project develops their presentation skills, which Pearlman (2007) considers as one of the skills necessary for real learning and a real workplace requirement for the twenty-first century.

Authentic learning tasks provided the opportunity for students to build self-confidence. The findings reveal that the input and exposure from a number of language sources helped them to boost self-confidence in using English. As shown in Table 4.42, the students were positive about their own learning as they could accomplish real tasks within real contexts. This outcome suggests that when students are motivated, self-confident, and comfortable with meaningful learning situations, they can comprehend and effectively use the target language. The findings from this study support the opinion of Krashen (1982) that self-confidence together with a positive attitude and motivation are essential factors for second language acquisition.

It is clear that authentic activity in this study improved students' learning skills and fostered the self-confidence of the Thai university students. This reinforces the findings of other studies showing that PBL helps students develop several important abilities such as evaluation and presentation skills (Desiatova, 2008), higher-order thinking (the ability to analyse, deduce and think logically) and team work skills (Arbelaez & Millan, 2007;

Termprayoon, 2002), problem-solving skills (Frank, et al., 2003) and self-confidence (Finch, 2003; Suriya, 2000).

5.2 Support and Feedback

Support and feedback given by the teacher is an essential component of PBL teaching and learning. In this study, teacher feedback helped students gain control in their learning as it provided guidance and strategies for improving their performance. The students had to perform meaningful tasks while the teachers determined the skills and content knowledge students already possessed together with what was needed to enable them to complete those tasks. The teachers assessed students' learning and performance by carefully examining several forms of evidence, including observing the learning process and the end product as recommended by Markham, et al. (2003). Pearlman (2007) claims that learners within a PBL approach will not develop their learning unless they get constant feedback.

Feedback is an essential activity in the learning process as it provides learners with the opportunity to view their strengths and weaknesses in performance (Littlewood, 1981). Learning through instructive feedback enhances student achievement as it provides specific guidance for improving particular aspects of a task. This type of feedback gives the extra information and knowledge that students need to acquire (Latham, 1997). All students in this study received feedback in a number of ways, for example, from written feedback notated in their diaries and verbal feedback through discussions, conversations and presentations.

5.2.1 Enhancement of English language.

In terms of developing the four major English language proficiency skills, the students in this study needed teacher feedback and scaffolding throughout the program. They had to hear, read, write, and speak English with each other and those they interacted with in a meaningful way. Since most of these Thai students had low English proficiency due to insufficient exposure to the English language, they needed English language learning support from the start of the study through to its completion.

In this study, feedback on English usage was provided for individual students and groups after each presentation in terms of how successful their communication had been. Every time the students submitted their project diaries, they would receive specific, written feedback within two days. Furthermore, they were provided with verbal feedback after each work-in-progress presentation. This feedback was given to them as a group so that it reflected their performance as a whole. Rowe and Wood's (2007) study on what feedback students wanted showed that students preferred timely and meaningful feedback as it developed their learning and helped them to recognise how they could improve to achieve their learning goals. For group presentations, they preferred verbal feedback addressing the group whereas for individual assignments, written feedback with specific comments was their priority. When comparing Rowe and Wood's finding with the results of the present study, the students' reflections indicated that they were satisfied with the specific and timely feedback for group and individual performances (see section 4.3.3.9) but preferred consistent and constructive feedback as provided in their diaries. They felt that feedback not only improved their learning but also maintained their motivation level throughout the project development and showed that their teacher was involved and interested in their progress. It shows that to enhance student achievement in English language skills and maintain the enthusiasm, feedback is an important component of instruction.

The students in this study received feedback through many channels: their project diaries, conversation in the class, and discussion. PBL allowed the students to work at their own level. Students had to record their personal language development and language learning experience through their project diary. Feedback on different language skills (grammar or pronunciation problems) through any journal or diary use allows the teacher to give individual language teaching which increases communicative exchange between teachers and students (Genesee & Upshur, 1996).

In this study, written feedback given to the students typically focused on communicative functions. However, to facilitate the success of communication, the teacher selected linguistic content and forms that the students should master for their projects (as suggested by Littlewood, 1981). The teacher normally used phrases such as, 'I'm confused' or 'I don't understand' to give the students an opportunity to consider what had been presented and to provide corrected or expanded answers. The teacher also underlined

and coded the grammatical errors. This style of feedback gave the students an opportunity to self-repair their work, and was also used by Ferris and Roberts (2001) in their study on the various types of feedback which can be utilised in second language writing classes. The findings (shown in Table 4.35) indicate that most of the students could self-edit their work. This is consistent with the study of Ferris and Roberts (2001) which found that university second language learners were able to self-edit their work when given less explicit feedback.

However, when the students were not able to self-correct or could only partially correct their mistakes, or repetitive mistakes were being made by the majority of students, direct feedback was given with a clear indication of the error and its correction. It was found that direct feedback helped the students improve their writing accuracy. This finding was basically in line with Ferris's (2006) study which found that integrating direct feedback into second language learning classes improved students' ability to rewrite their revision.

According to the open-ended questionnaire after this study, all students preferred direct feedback from the teacher as this provided specific correction and explanation of their errors, especially with regard to grammatical usage. However, as students had the benefit of some ten years of English training, direct feedback was given only where it was deemed necessary. The open-ended questionnaire also indicated that 60% of students believed that they gradually improved their accuracy in writing (see section 4.2.2.4.2). The balance of the students considered that they were more aware of their writing and more confident in the accuracy of their basic English structures, although complicated sentence structures still caused them problems.

Feedback relating to linguistic form was provided to the students not only through the project diary but also through class conversations, modelling correct pronunciation (as suggested by Brookhart, 2008), word choice, grammar, and sentence structure. Not only linguistic forms but also necessary language items (communicative and structural types of sentences and expressions) were modelled as a part of this study.

Informal discussion was used as feedback as an integral part of the support given. In this context, one of the teacher's aims was to monitor the students' language and give feedback on its use. Four informal discussions in English with the teacher, a native-

English speaking observer and other students were conducted for each group. The students were prepared with guided questions before the sessions so that they would feel secure and confident, and to help them with their language fluency during these discussions, as suggested by Green, Christopher and Lam (2002). In this present study, the students' conversational proficiency rose and appeared natural containing back and forth discussion. They participated in these discussion sessions, taking turns in the conversation. Some groups and some students received extra time for consultation and support. Open-ended questions, follow-up discussions and student-led discussions were used to direct their involvement in the discussion process, as recommended by Jarvis (2004).

As the semester progressed, the students became more confident in communicating in English and acquired a greater depth of understanding of the tourism content and language use. The quieter students were able in later sessions to ask questions and were more willing to express their opinions. They reported that the feedback from the teacher during and after discussions helped them to ensure their linguistic accuracy. The evidence from the study supports the contention that the teacher - student interaction is central to the success of both linguistic and communicative competence (Savignon, 1983). The use of teacher questioning in scaffolding concurs with Sharpe's (2001) notion that interactive talk between teachers and students, with the use of questions and follow-up questions, is an effective way to scaffold students in enhancing and extending their understanding and thinking of the topic. Sharpe highlights that when students 'engage in further talk' (p. 40), they are pushed to do more things within the *zone of proximal development* (ZPD, described in Chapter 2). In this current study, teacher guidance was required as the students needed to be supported through this zone so that they could complete their project. Hammond (2001) states that in relation to language learning, scaffolding and support together with language interaction from the teacher helps students to achieve their language goals. This study demonstrates that these students could be helped to achieve their particular goals by interacting with more experienced people in a social setting and that overtime they could undertake the tasks on their own. It is suggested that, in this study, the use of discussion as a feedback tool to enhance students' language proficiency in this study could not have been successful if the teacher did not understand the Thai socio-cultural value of 'saving and losing face'. As noted by Lim (2003), ESL/ EFL teachers should understand not only how the students learn but also understand and

connect with their lives and cultural background, and teaching in a way that helps ESL/EFL students develop their language skills.

5.2.2 Enhancement of learning skills and self-confidence.

Support and feedback from the teacher led to the enhancement of learning skills and self-confidence. The teacher's conversation sessions and specific questions which were used throughout the study enhanced the students' performance in meeting their learning goals. The teacher in this study prepared exercises in developing learning skills for the students so that they could complete their projects (as suggested by Alan & Stoller, 2005). Most students needed support and feedback or scaffolding (as defined by Hammond & Gibbons, 2001) to enable them to perform the complex tasks of the projects on their own, as suggested by Blumenfeld et al. (1991).

In this study, cognitive coaching strategies were used as scaffolding to enhance the students' learning skills throughout the study. As shown by Ellison and Hayes (2009), cognitive coaching is an effective tool in developing cognitive abilities and enhancing the internal thought process of individuals or groups 'in becoming more self-managing, self-monitoring, and self-modifying'(p.72). Strategies used in this study were: scenario coaching, which is used for the enhancement of teamwork skills; modelling, which is used for the enhancement of brainstorming skills, planning skills and presentation skills; and reflective dialogue, which is used for the enhancement of evaluation skills, problem-solving skills and presentation skills. After extensive scaffolding, the students became more aware of their learning process and demonstrated metacognitive development as they increased their reflective thinking on their tasks, and consequently acted more effectively to achieve their goals. For example, in this study increased metacognition by the students was shown clearly in the development of problem-solving skills (described in sections 4.3.2.4). The teacher questioned the students about their project goals, their problems, and the solutions that they would use to direct their own learning.

The teacher's questions in this study were open-ended, which required the students to analyse, think about and determine their learning needs and problems. The teachers' questions helped the students to become aware of the various questions they should ask themselves to solve specific problems. Thus, the students had the opportunity to discover the solutions themselves without being told what to do. The teacher introduced the

students to a problem-solving model and self-reflection questions, and provided examples of how to make a plan in the classroom. She gradually reduced the scaffolding and asked the students to take steps in their own learning. They had an opportunity to look back at their goals, develop a plan and monitor their learning. Metacognition assisted in the process of self-reflection and helped students to apply strategies on their own and transfer them into new activities as self-directed learners, as recommended by Hartman (2001). Metacognitive skills are said to help ESL learners to learn more quickly, more effectively and more enjoyably (Oxford, 2002).

It is clear that in this research, metacognition enabled the students to more effectively analyse their learning skills, including teamwork, higher-order thinking and presentation skills. This clearly reveals an important relationship between teacher scaffolding and student metacognitive reflection. Previous research has also shown that appropriate teacher support, focusing on the process of learning promotes students' metacognitive processes (Reingold, Rimor and Kalay, 2008).

The support and feedback given by the teacher enhanced self-confidence in this study. The teacher built students' self-confidence by convincing them that they were capable of accomplishing the tasks, as suggested by Brown (2002). This result was achieved through both verbal language (discussion and conversation) and written language (students' diaries). Positive and immediate support is said to enhance self-confidence (Hunt, Hunt & Touzel, 2009). The students' diaries and discussions confirmed that the positive, constant and specific feedback and support given through this study were helpful (see section 4.3.4.2). The feedback helped develop students' self-confidence in using the target language. They said they were less nervous, felt more secure, and were more open to independent learning. The evidence from the study (see section 4.3.4.2.2) supports the contention that when second language learners are less anxious in the use of the target language, they are more self-confident. With increased in self-confidence, second language learners are said to be more likely to be motivated to learn and to use the target language during social interactions (Saville-Troike, 2006).

This study adds to the PBL pedagogy in showing that feedback and support from the teacher is necessary for all students, especially for low achievers who are trying to improve their self-confidence in the use of English. In this study, the low achievers

needed support for the daily challenges or complex problems relating to their projects. At the beginning of the study they tended to rely on their teacher most of time. However, by the end of the study they had gained sufficient confidence in their language skills to be more self-reliant.

To conclude, the support and feedback given by the teacher helped students to see the connection between English language, subject matter content and learning skills. Therefore, they were able to gain a deeper understanding of ways to identify “what they want to learn and how they want to learn” (Nunan, 2002, pp. 143). Additionally, the support and feedback received during project work enhanced the students’ confidence in their ability to use English language.

5.3. Learner Autonomy

Learner autonomy is described as the ability to be responsible for your own learning and to be actively engaged in the learning process at every stage, together with the ability to employ appropriate learning strategies during the management of your learning (Gatt, 1999, Penaflores, 2002). PBL requires students to take control of their own learning, rather than to be constantly directed by a teacher.

5.3.1 Enhancement of English language.

Autonomous learning is a crucial characteristic of this PBL teaching and learning. In this study, the students were required to take charge of their own learning. They needed to guide themselves throughout the study concerning the language needed to achieve their planned learning goals. They selected their own learning strategies and worked at their own pace as recommended by Little (2007). They spent considerable time and effort in utilising English for communication purposes. Therefore, constructing their knowledge acted as a plausible incentive and a tool in language learning. These strategies assisted in the development of the learners’ language proficiency.

The present study shows that, initially, the students were frightened by this notion of learning at the beginning of the study. They were hesitant to use English both in and outside class. This reluctance to use English is prevalent in Thailand and has been found in previous studies as one of the most significant barriers to learning for Asian students

(Christopher, et al., 2004; Lim, 2003; Norris-Holt, 2002; Ping, 2010). However, their anxiety was reduced when the teacher-facilitator guided them in their learning especially at the beginning of their projects (as suggested by Postholm, 2005). The teacher's role in promoting successful language learning was shown to be indispensable (see student quotes in section 4.3.2.1.2, 4.3.3.9, 4.3.4.2.2). The effectiveness of the teacher in reducing students' anxiety within this autonomous learning setting was found to be consistent with the findings from other studies (Fragoulis, 2009; Little, 2007; Zhuang, 2010).

Because of the autonomous nature of the task, English language was used as a tool for communication, not a means for passing exams. Students made the connections between completing the project, practising skills and using the target language. Having to determine their own learning pathway meant that the students needed to regularly monitor and evaluate their language performance and establish the knowledge which they needed to complete their projects.

In this study, to enhance the students' autonomy in developing their English language proficiency, the extensive use of discussions/dialogues between teacher and students was implemented. This was also been suggested by Little (2007) and Postholm (2005).

Therefore, this study confirmed the finding that autonomous learning settings can enhance students' performance in English language proficiency. This finding supports the findings of Sarwar (2002), who found that an autonomous learning setting of PBL enhanced EFL college students' English proficiency in Pakistan. These findings are similar to those of Naizhao & Yanling's (2004) study of Chinese university students which indicated that an autonomous learning group's English proficiency results were higher than those of a traditional learning group.

This present study adds to the above findings, however, in showing that when a group of low achieving students were given the opportunity to take charge their own learning, they benefited less than other groups in terms of the development of their English grammar and written expression (as shown in Table 4.11). This group of students believed that form-focused instruction (grammar drills) was the only path by which they could acquire language competence. As a result, when given responsibility for their own learning, they had difficulty adjusting to their roles to autonomous learners and felt overwhelmed when

faced with learning challenges. They also failed to fully engage with their learning during the first half of the study.

However, as they started to acquire knowledge on their own and accept the fact that learner autonomy was not easy in the initial stages, they gradually engaged with autonomous learning and commenced working on their own. At the end of the study, they commented that they wished they had been exposed to this learning style earlier, and would like to continue with this type of learning in the future (see section 4.3.4.2.2). The results imply that it is necessary for learners to have teacher support and that the teacher plays a major role in motivating students to learn, especially those students who have only experienced a traditional learning background. Guidance, support, and training from the teacher are initially needed to help students in taking the first steps to understanding their new active learning roles. When these learners became active participants, they began to develop a sense of ownership and a strong sense of engagement with their learning.

5.3.2 Enhancement of learning skills and self-confidence.

According to this study, the freedom of autonomous learning that derived from the collaboration between the teacher and the students enhanced learning skills (teamwork skills, higher-order thinking skills, and presentation skills). Macaro (1997) asserts that students learn how to take charge of their own learning and make decisions on what particular skills are needed to achieve their learning objectives.

In this study, the students came to the situation where they had to work as a team, plan, monitor, and evaluate their learning as well as select learning styles and content. Multiple sources of information including observations, presentations, discussions and diary were used (as recommended by Thanasoulas, 2000a) as tools in encouraging the students to think about the skills they needed to complete their projects successfully. This is called *reflective intervention* as it is the way to develop students' skills explicitly in the process and content of learning (Little, 2007). Candy (1991) states that given a learning environment that allows the students to direct their own learning activities, the students will be able to experience a variety of tasks that help improve their capabilities, including time-management, planning, goal setting, evaluating, problem-solving, and teamwork skills. As the students were exposed to many stages of PBL, this process provided

continual meaningful and autonomous periods to develop their learning skills, or *noncontent outcomes* (as suggested by Mergendoller et al., 2006).

The findings in this study indicate that students' learning skills (teamwork, higher-order thinking, and presentation skills) were enhanced. Such findings are consistent with those of Vaughan (2005) who reported that by integrating learner autonomy in a Math class, the high school students could develop their learning skills, including time-management, planning, goal setting, evaluating, problem-solving, and teamwork skills, and Fragoulis (2009) who found that autonomous learning enhanced EFL students' problem-solving, teamwork, and social skills.

It should be noted that besides taking responsibility for their own learning instead of depending on their teacher, the students showed a dramatic increase in their self-confidence. For all, it was the first time they had truly been empowered by their own learning process. Each chose a path using activities that helped them master English and foster their language development. They gradually increased their confidence in language ability and directing their own learning. This study adds to language learning research showing that the use of PBL can be successful for students from a very traditional educational background.

The combination of skills acquired by students in this study is essential for their career success in later life. In fact, the majority of the students expressed their belief that skill development is the first step to being autonomous learners and successful employees (see section 4.1.2). However, it should be noted that it takes time and effort for students to become autonomous learners, particularly within the Thai educational system where students have only been exposed to passive learning. Even with a change of learning style, different learners will demonstrate different skill levels (Candy, 1991). Nunan (as cited in Stoller, 2006) argues that PBL "has the potential to narrow the gap between traditional classrooms and more learner-and learning-centred settings" (p.33). Considerable research has shown that the characteristics of PBL promote positive outcomes for second and foreign language learners in terms of "language skills, ability to function in groups, self-confidence, and decision-making abilities" (Stoller, 2006, p. 34).

5.4 Cooperative and Collaborative Learning

Analysis of findings show that the Thai students worked together through cooperative and collaborative learning to achieve the same goal. They supported each other and demonstrated their personal knowledge and skills, which contributed to their group. The teacher became a facilitator helping groups to achieve their goals, as suggested by Jacob (2006) and Macaro (1997).

5.4.1 Enhancement of English language proficiency.

Cooperative and collaborative learning provided many opportunities to develop English language proficiency. The key factor of both cooperative and collaborative learning is the group activity which requires learners to have interaction with each other as well as with others outside their group, and to construct their own knowledge and use the target language in their preferred learning styles (Jacob, 2006).

The students worked collaboratively to help their group members learn and demonstrate their English use meaningfully in their projects. They had to converse and support each other and make efforts to achieve their learning goals (which were the successful completion of their projects and the effective use of the English language). During discussions and making presentations with their friends, they were involved in the process of negotiation of meaning and interaction. They had to make sure that their friends understood their conversation and had to adjust their language use to suit their situation. They were given the opportunity to negotiate their language when they listened to their friends, asked questions, and made clarification. Furthermore, they worked together after school to practise their acquired language skills and coached each other during their preparation for interviews and presentations. They had the opportunity to rehearse their interviews and presentations, preparing possible questions and answers. As a result, their anxiety was reduced and replaced by confidence in their use of English language, as in Zhang's study (2010). The findings in this study indicate that the students further developed their listening and speaking skills. This finding concurs with Zhang's (2010) view that conversational interaction provides "more opportunities for learners to comprehensible input and output and the processes of negotiation" (p.2), and this leads to the development of listening and speaking comprehension.

The notion of a collaborative working environment is found to be preferred by Chinese students studying English language in the study of Su-jing (2006). The findings in this study indicate that the majority of Chinese students, who rarely used English to communicate with others either in or outside the classroom, believed that this type of learning was an effective way to learn English and improve their language skills, especially speaking and listening skills. They found that they improved their communicative competence by working collaboratively with their peers. This outcome clearly reveals the importance of student-student interaction that allows students to practise the language and learn from each other.

According to Wong's (2004) study, Asian international undergraduates needed time to adjust from rote learning to meaningful learning but after having experienced collaborative learning only once, they believed that their learning skills had improved and their confidence had increased. This approach prepares them to construct their own knowledge through peer interaction. Previous research has shown that collaborative learning in a PBL environment motivates students, increases confidence, reduces anxiety in speaking English and enhances speaking proficiency of EFL students (Tsiplakides, 2009) and develops English language speaking ability of ESL learners (Sidman-Taveau, 2005). All of these findings are corroborated by this study.

Students improved their writing and reading skills through cooperative and collaborative learning. Peer feedback from the collaborative learning environment played a crucial role in enhancing students' reading and writing performances. Team members were responsible for researching information for their projects. They read extensively so that they could share information, contribute their expertise, offer constructive ideas, and build up their outcomes (brochures). In the development of their reading comprehension skills, they read and worked together to identify main ideas, summarise, question, clarify, categorise and analyse information (as suggested by Slavin, 1990).

In the development of their writing skills, students worked as a team in preparing their brochures by using writing, process-planning, drafting, and revising. They collaboratively practised their writing and received extensive peer responses, as suggested by Wee and Jacobs, 2006. This outcome indicates that peer involvement and the diversity of talents and abilities are critical in working on complex and real-world challenging tasks. Team

members not only share knowledge but also help in clarifying ideas and negotiating meaning.

Without peer involvement in the reading and writing activities, group work would likely not be as effective as students miss the opportunity to learn from peers and “groups work together better” (Jacob, 2006, p. 38). Reid (1993, cited in Jacobs & McCafferty, 2006) remarks that second language writers “learn at least as well and as much from peers as they do from teachers.” (p. 27). Being able to read and comment on each other’s work can develop reading comprehension of students, and peer involvement in writing helps students improve their writing skills (Murray, 1994).

It should be noted that in this study the high, medium and low achievers received great benefits from collaborative learning. As they had formed teams based on close relationships with each other and common interest, most students were comfortable to use what English language skills they had in front of their team members, despite their initial lack of confidence and the cultural issue of ‘losing face’. Some of the shy and quiet students took longer to feel comfortable using English, forming and offering input, but eventually they were able to overcome their shyness to become useful team members. The effect of collaborative learning greatly influenced their reading and writing development (see Table 4.33 and *Spelling and use of punctuation* in Chapter 4). It should be added that success in completing a collaborative learning task, where the answer is achieved by the team working toward a common goal, usually takes more time than the traditional instruction method in which the outcome is provided by the instructor.

To conclude, the collaborative nature of PBL gave more opportunity for the students to achieve comprehensible input and output through peer-assisted learning in developing their language skills. The students’ work became more accessible and unique as they learned from the successes and mistakes of each other. Group work promoted more involvement in the use of English language and student collaboration led to the further development of English language proficiency.

5.4.2 Enhancement of learning skills and self-confidence.

Working independently for the benefit of the group, the present study shows that the students developed key skills such as teamwork, higher-order thinking, and presentation

skills. These are crucial skills for future learning as well as useful skills which are valued and considered by employers. Similar results were found by Bergh et al. (2006) who indicate that students find it useful to experience group activities as they learn to work as a team as well as independently. They agreed that they learn “how to organise their work” and “also acquire the skills to deal with conflicts between group members” (p. 353). Beckett (2006a) reports that PBL allowed migrant students to acquire skills while engaging in teamwork tasks. These skills included cooperative work skills, critical thinking skills, and oral presentation skills.

It should be noted that in the present study, many students worked well in teams while others struggled to collaborate and achieve the group’s learning goals (see section *Tham Pha Ta Pol non-hunting area group: teamwork problems* in Chapter 4). Even though PBL offers the opportunity for students to practise working cooperatively and productively, it does not mean that every student can effectively work in collaborative groups. This was evident in the current study. Some students initially found difficulty in working cooperatively but by the end of the study were working well within their groups. External support and guidance from the teacher was employed to foster a successfully functioning team environment (as suggested by Fleming, 2000). It is clear that important learning and life skills need to be guided or even taught explicitly and constantly, especially in learning contexts and where students have been exposed only to a life-time of passive rote learning.

In addition to enhancing learning skills, working collaboratively helped the students gain more confidence in their use of English. Cooperative activities helped them reduce their fear of making errors, as working in groups offered the opportunity to support each other in a comfort zone as they manipulated grammar structures and new vocabulary related to tourism. They alternated the roles to compose, read, edit, and comment on each other’s work and the groups’ overall projects. It is shown that the collaborative action shaped the groups’ outcomes and the diversity of students’ language proficiency. It promoted the students’ language skills which boosted self-confidence using English. Increasing confidence greatly assists students in learning regardless of the method of teaching being utilised, particularly in the case of Asian students since being confident “saves face” in front of their peers. Feeling confident frees up the students to take risks, explore and

experiment with language use knowing that making errors is no longer an issue.5.5 The Benefits and Challenges of Implementing PBL from the Teacher's Point of View

From the teacher's point of view, there are benefits associated with PBL implementation including:

- Healthy development of the teacher-student relationship
- Interesting activities
- Career satisfaction

The main challenge for the teacher in this study was the workload stemming from two major causes. They were:

- Passive learners
- Complexity of the process

5.5.1 Healthy development of teacher-student relationship.

In Thailand, most teachers focus strictly on a lesson plan with the sole aim of finishing what was planned in the lesson. Therefore, most classrooms are not fun or in any way relaxed. Even in classes of smaller size, the lesson plan still takes priority over student-teacher relationships. In addition, teachers are highly respected by the students and the relationship between them is always very formal and distant. Consequently, the classroom is usually a very sterile environment.

To create a positive relationship with the students, the teacher listened to them instead of controlling them throughout their learning process (as suggested by Daws, 2005). Transforming the role to mentor and advisor helped to improve the quality of the student-teacher relationship and the classroom atmosphere.

By the end of the project, the teacher felt that the PBL approach had developed a student-teacher relationship that went beyond what would be achieved by conventional teaching. It broke down the barrier between the teacher and students to where she was accepted as "one of the team". This was considered a gratifying relationship to have with the students.

5.5.2 Interesting activities.

As there are only a small number of predictable structures in the PBL learning environment, the lessons were stimulating because of the variety of tasks and the changes

occurring within the projects as they evolved. The teacher found enjoyment in being part of the learning process, which was filled with challenging and exciting activities. In addition, the teacher found herself learning alongside her students as the projects progressed. Even though there were difficulties to overcome on a daily basis, at the end of the day the teacher was satisfied with the job of keeping the students interested, participating in their projects and helping them achieve their goals.

It should be noted that although this was a PBL environment, there was still a need for some traditional lecturing as some students were not ready to move forward, or particular points of the language or grammar needed to be taught. With the remaining students, the teacher was less stressed and not hesitant in applying PBL techniques. The difficulties in adopting PBL in a Thai classroom were reduced as direct instruction could be used at any time.

5.5.3 Career satisfaction.

Despite PBL being time consuming by having to provide feedback, support, and monitoring of project progress, it was a worthwhile venture. The teacher was pleased to be involved and to see the transition to a learner autonomy environment. The students as a whole adapted to taking a greater responsibility for their learning when compared to a traditional teaching and learning environment. They were no longer passively waiting for direction or the correct answer from their teacher. They discovered knowledge, built ideas and developed complex skills which are rarely if ever applied or expected in other English subjects taught in Thailand. Everyone got to the finish line and achieved their goal. They increased their language proficiency, learning skills and self-confidence in using English. Seeing some students built their own knowledge and confidence in using English greatly enhanced the teacher's feelings of satisfaction and professionalism. It was interesting to see, be involved with and experience the students' attempts to connect classroom language learning with learning activities outside the classroom. This outcome confirmed that this learning style made a difference to both the students' learning experience and teacher development.

5.5.4 The challenges of implementing PBL from the teacher's point of view.

Teacher workload was found to be the salient feature which became the most difficult challenge of implementing PBL in this study. The two main causes for this were passive

learners and the complexity of the process. The teacher was overwhelmed by the amount of work and considerable time spent supporting the students.

5.5.5 Passive learners.

The students have spent their school lives listening to and requiring input from their teacher. As a result, many students do not wish to ask questions, challenge ideas, or make their own decisions (a characteristic of Thai culture of modesty and harmony as discussed in section 1.3). Although an in-depth lecture was given pointing out the differences in their roles and responsibilities, for many students it was a real challenge to change their role and outlook on learning, especially those who found comfort in and were accepting of the easy life of passive learning. Being the first time the students had been involved with PBL, they struggled to come to terms with the concept of autonomous learning. This was a major challenge for many and more than half of the students experienced role conflict during the early stages. As a result, an extensive amount of time was spent motivating and supporting the students. The teacher needed to show appreciation for even the smallest effort and constantly nurture the students. Compared to traditional learning activities, the teacher found both helping the students take responsibility for their own learning and the increased workload of providing support both inside and outside the classroom very stressful.

5.5.6 Complexity of the process.

The complexity of the process greatly increased the teacher workload. The students seemed to understand the concept of PBL, however as they became involved with the activities the difficulties started. As long term passive learners, they had no concept of developing ideas, how to achieve their goals, planning activities, the responsibilities of group members, time-management, information collection, discussions of their findings, correlating their results, obtaining and reviewing feedback, finalising their projects, or preparing their presentations. Some even struggled to demonstrate their basic ideas. As a result, an extensive amount of time was needed with each group in assisting and facilitating ideas and concepts. When even the simplest problem occurred (for example, not knowing the location of the tourism office in town) the first thing the students sought was the teacher. This required the teacher to constantly move from group to group providing assistance, support, and on-the-job training for her students. Each group needed

help in different areas, unlike a conventional class where the same information is provided to all students.

There were other activities for the teacher to prepare besides the constant classroom interaction with her students. She had to answer emails, read their diaries and make comments, prepare for class presentations, arrange work-in-progress meetings and discussion sessions and assist with ideas for data collection due to the diversity of the types of information to be collected. Compared with traditional teaching, the teacher spent considerably more time on planning, researching, interacting, and guiding the students. Such findings are consistent with Bergh et al. (2006) who reported that the workload of the teacher was overwhelming. The instructors had to arrange extra time and give close attention to individuals especially when research topics differed among students. Eyring's studies (as cited in Doherty & Eyring, 2006) indicate that compared to the control group teacher, the PBL teacher spent more time on "planning, researching, and assessing activities" (p. 97), and this extra time caused more stress compared to traditional teaching methods.

In this study of implementing PBL in an EFL setting, the teacher's workload was overwhelming compared with that of conventional teaching. It should be noted that the teacher was also a novice to PBL and was struggling to meet the needs of each group and facing time constraints. According to Doherty & Eyring's (2006) suggestion for the ESL adult setting, PBL teachers should be flexible in terms of their plans and materials that can be changed, renewed, or deferred throughout the project. The teacher is not an expert in all aspects of projects but a co-learner that can help guide the students in sourcing their information so they can fulfil their needs (Guo, 2006).

5.6 Conclusion

The study confirmed that characteristics of PBL contributed to further development of Thai university students' English language proficiency, learning skills, and self-confidence in using English.

The nature of PBL activities allowed the students' exposure to authentic English language and increased their motivation for learning. The students developed their speaking and

listening skills by means of interviews with non-Thai tourists, and discussions with the teacher and the native-English speaking observer. Frequent class presentations were one of the main factors that developed their speaking and listening skills. The students also developed their reading skills by reading many authentic texts followed by discussions of their reading in interactive activities with their team members and teacher. The students' writing skills development resulted from the need for authentic writing. They extensively practised their writing tasks and experienced a full range of the writing process. They produced a number of written materials and exchanged opinions with the teacher through purposeful communication and their diaries.

The findings show that the low and medium achievers greatly benefited from learning English with PBL due to the opportunity to acquire the four basic skills of English through authentic activities. The high achieving students did not show any significant improvement in their listening and reading but they further improved their speaking and writing ability.

The authentic tasks contributed to the development of teamwork skills, higher-order thinking skills, and the students' confidence. Being involved in real-life work situations and producing authentic project outcomes, the students learned techniques in working as a team, careful planning, problem-solving, and presentation preparation. As they moved towards more authentic tasks and more exposure to real language, they gained greater confidence in using English during and after employing the PBL approach.

Support and feedback play an important role in PBL. The students were given constructive and timely feedback every time they finished their written work, discussions, and oral presentations. Teacher-student interaction occurred throughout the study. Explicit feedback, self-editing, and modelling were used to enhance the students' English proficiency. Thai culture regarding 'saving and losing face' needed to be carefully understood and managed while supporting the students through discussion.

Cognitive coaching strategies were implemented to enhance learning skills. Every group had different difficulties at different stages while completing their projects. They were coached extensively through reflective thinking and by the end of the study showed improvement in their learnt skills. The low achievers needed extensive scaffolding in the

beginning of the study to boost their self-confidence in using English but as the project progressed, they were able to develop their self-confidence. On the other hand, the high achievers had confidence in using English and did not rely as much on the teacher for support of their language skills. However, they needed guidance relating to social skills.

Learner autonomy allowed the students to take charge of their own learning. Different students had different English levels. In this study, the students were able to select the type, style, and level of English language they needed to use based on their own abilities in order to achieve their goals. Among three English proficiency levels, the low achieving students benefited the least in terms of English structure and written expression. Coming from a traditional educational background affected their new roles as active learners. However, with support from the teacher they could finally construct their own learning program and develop their projects.

The findings of this study indicate that being autonomous learners led to multiple opportunities to develop learning skills. As they were responsible for their own project and their own learning process, the students were aware that without improved learning skills or strategies they would be unable to accomplish their tasks successfully. Therefore, as the project progressed, they learned how to use and improve their learning skills to assist their language performance, as well as their performance in areas such as teamwork, higher-order thinking, and presentation.

Working in a collaborative learning group required the students to interact with their friends to learn and negotiate their English language. The stronger students helped the weaker ones to learn. Being able to read, write, listen, and speak in English, and discuss and comment on their projects within their team offered support to team members and helped develop language competence. Collaborative learning not only enhanced the students' English proficiency but also stimulated them to be effective group members. It helped further to increase their learning, maturity and social skills.

According to the teacher in this study, there were three benefits from implementing PBL. First, the teacher was satisfied with the teacher-student relationship. As PBL was newly introduced, both teacher and students needed to have positive attitudes and a commitment to each other. Compared to traditional teaching, the PBL environment transformed the

teacher from a strict and demanding ruler into a trusted helper whose students were comfortable to ask for support throughout the study. The teacher felt that the students were a lot more relaxed in asking questions, discussing problems or asking for assistance in English knowing that it would not be ridiculed. Positive relations had a great impact on their academic achievement, language performance, and attendance.

Second, the teacher developed the knowledge and skills she needed to assist her students achieve their goals. PBL allowed the teacher to observe how the students learned and what skills or knowledge they lacked. Different groups of students required different assistance; therefore the activities for each group became much more interesting. The change to her teaching practice helped further improve her teaching skills and her own professional knowledge.

Third, the teacher felt rewarded when her students accomplished their goals. PBL provided the teacher an opportunity to be fulfilled in her teaching career. She felt that she was headed in the right direction to see her students learning how to learn and improving their language competency and self-confidence. The aim of this project was not designed around the students passing exams but providing the opportunity for them to build their knowledge and enable lifelong learning in a competitive world.

The increased teacher workload was the main challenge resulting from two major reasons. The first reason was that the students needed considerable time from the teacher for support, mainly as there were no textbooks for reference. When they experienced difficulties they always turned to their teacher to seek assistance.

The other reason was that the complexity of the learning process in the PBL approach resulted in extensive teacher support for the students. In Thailand, learning objectives and activities are normally dictated by the teacher. The students generally respond to and follow the teacher's instruction verbatim. However, the students in this study were required to be active participants in their own learning. They had no understanding or concept of constructing knowledge. Designing their own learning process was an unknown and something beyond their understanding. Therefore, the amount of time spent helping and training students during the implementation of PBL was enormous.

However, as suggested by Lewis and McCook (2002) and Saengboon (2004), it is necessary to adapt the communicative approach (the root of PBL) in foreign language contexts to make it fit the culture and the EFL situations of each country. For example, the teacher using PBL needs to be aware of the time available as they are required to teach explicitly as well as facilitating the PBL process. Some students cannot be left to complete the projects without the assistance of the teacher. From time to time, whenever grammar points, expressions, and concepts need to be explained, the teacher needs to be involved more than what would be required in a Western classroom. To be more effective it may be necessary to use L1 for better understanding within the time available. Often, the Thai students could not make a decision which was in conflict with their group or the teachers suggestion. This situation is not always apparent and requires time and the attention of the teacher to overcome the problem. In conclusion, given the culture and classroom behaviour of Thai students, any Thai teachers/researchers must be aware that PBL will need modification to suit their student's understanding, learning background, educational tradition, and culture. These adjustments will enhance the effectiveness in the application and implementation of PBL in a foreign language classroom and will assist in reducing the time challenges.

Chapter 6 - Conclusion, Implications, Limitations and Directions for Future Research

This study is one of the few empirical studies that provide an in-depth examination of Thai students' English language proficiency, their learning skills and their self-confidence during the application of PBL in an EFL learning context. PBL pedagogy has been combined with second language teaching methodology in both the implementation of the study and the analysis of data. Thus the study makes a unique contribution to the literature on PBL, second language acquisition and the learner experience within a student-centred environment.

6.1 Major Findings of the Study

The results of this study support previous research and provide new insights into second and foreign language learning and other similar educational contexts, particularly in light of the Thai government's Act detailed in Chapter One (see section 1.1.3) requiring learning to be student-centred. This research now offers a way for teachers to move forward and to implement the reform policy of the Thai government. Outcomes of this research study reveal that Thai students can improve their English proficiency if they are given the opportunity to control their own learning and are exposed to authentic activity in a collaborative learning environment together with considerable support from the teacher, peer reviews, encouragement at milestones achieved, and with ongoing meaningful and timely feedback of work-in-progress.

The change to pedagogical practices which suit the directive of Thailand's educational reform policy to focus on lifelong learning, learner-centred approaches and communicative competence was an initial problem for the students. The students were apprehensive in accepting change, had difficulties in taking charge of their own learning, lacked experience in working co-operatively and floundered when trying to plan and implement learning goals.

Normally Thai teachers are the centre of all learning with students automatically taking a passive and receptive role. Thai teachers normally teach grammar and structure of English

language using Thai language as the medium, and rarely provide situations where students are given an opportunity to communicate in English. Even though textbooks are in English, students rarely use English. The aim of Thai students is to finish their homework and any assignments and pass the exam. Therefore, at the start of this study most students were not confident in using English as they had rarely been offered or given the opportunity to communicate in anything other than Thai. Their previous learning experience was centred on “teacher-talk”, which consisted only of the teacher’s thoughts without any input from the students. The new approach offered with PBL was an initial problem for students who found it difficult to direct their own learning and work collaboratively with their team. These difficulties were overcome and students were eased into the transition to PBL by extensive guidance and support from the teacher.

The Thai education policy of a ‘learner-centred’ approach needs to be interpreted carefully as it is not possible for Thai students to change their learning style dramatically within a few weeks after a lifetime of traditional teaching. However, the use of aspects of traditional teaching styles was very necessary in the early stages of this study. For example, the teacher provided direct input for students on how to plan their projects, how to use formal dialogue during interviews and how to make effective presentations. As the students’ projects progressed, the teacher gradually stepped back and gave responsibility to them. The students had their own space for their investigation, problem-solving and decision-making. They made their own choices about language use and took the opportunity to interact with other students and with people outside the university as part of their learning. This approach to learning was found to be very effective in the Thai context where a transition from a teacher-centred to a more learner-centred approach was being implemented.

The students understood from the beginning that their role was to be dramatically changed. Gradually, they not only changed their roles into directors of their own learning but also became active members of a collaborative group. The concept of ‘more student-centred learning’ was employed for the entire project duration. The students took an active role in improving their English language skills, their learning skills and their self-confidence. For example, they employed an initiative role in using English in many learning situations; for instance, they discussed their learning with the teacher, interviewed non-Thai tourists, negotiated with team members, produced their projects and

located information. Skill building was embedded into the learning process as well as confidence and team building processes. This approach could not have been successful if there was a lack of teacher support and scaffolding throughout the study. When compared to the process in each stage of teaching and learning in a traditional class, this study proposed an alternative teaching approach, where students are enabled to develop the skills for lifelong learning and independence that rarely happen in the Thai educational context. PBL, combined with principles of communicative language teaching, could well be a possible solution for Thai teachers who are facing a number of challenges from the Thai educational reform's goals.

6.2 Implications of the Study

The importance of implementing the educational reform's policy of "learner-centred-learning" and the way English was to be taught were the focus of this study. The findings in this study have shown that the integration of PBL into an *English for Tourism* course can enhance Thai students' English proficiency, augment learning skills, and enhance self-confidence. This implementation of PBL provides evidence of possibilities for actually how Thai educational reform could take place. The results of the study shows Thai EFL teachers, who are looking for an alternative teaching method that PBL can develop effective English language skills. The long-standing tradition of teacher-centred teaching needs to be gradually replaced with collaborative learning, communicative language teaching strategies and a hands-on approach. Students are no longer need to remember content just to pass their examination but to be able to communicate effectively. To do this, they will make their own decisions on the subject of their learning and build knowledge in an engaging and challenging way. Information arising from this study will add a new dimension to the current Thai education policy and curriculum and potentially in similar education contexts.

Throughout the implementation of this project, the researcher identified a number of issues that needed to be addressed in order for PBL teaching to be suited to the values of Thai students. The following is offered for discussion and consideration.

6.2.1 Authentic activity.

Past research suggests that authentic activity is one of many factors that assist in enhancing students' English language skills (Fragoulis, 2009; Sarawar, 2002), and learning skills and confidence (Arbelaez & Millan, 2007; Desiatova, 2008; Finch, 2003; Frank, et al., 2003; Suriya, 2000; Termprayoon, 2002). The results of this study lend support to these claims. The students were given the opportunity to experience authentic resources and use English language for meaningful communication. They were required to practise and use their learning skills in real-life work settings. Teachers implementing PBL need to consider ways to involve the students in real-world activities and allow them to demonstrate their skills and confidence during their project journey.

6.2.2 Support and feedback.

According to the findings of this study, support and feedback were crucial in facilitating language learning and enhancing learning skills and self-confidence. The findings here support Blumenfeld et al.'s (1991) contention that support and feedback from the teacher are needed to guide and help students successfully complete challenging projects. Language teachers need to provide useful feedback on both language and skills learning. The teacher needs to carefully plan the timing and frequency of monitoring students' progress during projects. In addition, the teachers should be trained to give appropriate supportive and constructive feedback, which is the key to student success.

6.2.3 Learner autonomy.

This study has shown that student autonomy in language learning enhanced their language skills, learning skills and self-confidence. The concept of learner autonomy forms part of the major changes to all levels of education and subject areas in current Thai educational reforms. Teachers can achieve this using PBL in their English classes. In this study, the students initially had difficulties in taking responsibility for their own learning; however, as the project developed they learned to involve themselves in their learning process and became responsible for their own learning. Language teachers need to provide ongoing guidance and be prepared to spend time on students' problems while the students adapt to their autonomous learning roles.

6.2.4 The collaborative learning environment.

The strategy of working collaboratively with a group of people to achieve common goals is an integral part of PBL and is effective in an EFL context. According to this study, the collaborative learning environment provided many opportunities to develop and advance the students' English language proficiency and key skills such as teamwork, higher-order thinking, and presentation skills throughout the projects. Working with friends is common for students in Thai tertiary EFL contexts. In this study, the students had the opportunity to work collaboratively with the guidance of teacher within a teamwork concept. In addition, the teacher facilitated the students to be more comfortable with each other and led them to reflect on their thoughts through peer feedback. Creating similar strategies of collaborative learning may be useful in future applications of PBL in teaching English language.

6.2.5 The teacher workload.

This study indicates that the implementation of PBL affected the teacher's workload. As discussed in Chapter 2, most Thai teachers teaching English classes face demands of high workloads. To reduce workload problems and to help teachers effectively apply the notion of learner autonomy and communicative language teaching through the use of PBL, the cooperation and support of university executives in relation to the class size, administration tasks and timetable reorganisation are needed. However, the feasibility of obtaining this kind of institutional support especially in reducing class size can be very low for elementary and secondary schools as a result of budget problems, lack of qualified teachers, and lack of government support and policy.

6.3 Limitations of the Study

There are some limitations to this study. First, generalisation of the results is limited because the study was conducted with only one group of students in one university in Thailand. The findings cannot be generalised to overall PBL use in tertiary EFL courses in Thailand. However, the findings are likely to be relevant to those in similar contexts. Further research is needed with students in related educational contexts. That said, caution is needed in drawing conclusions and implications for other students and settings from this research.

Second, a methodological limitation relates to student reflections. The students in this study reported through project diaries, discussions and open-ended questionnaires. They may have responded in a manner that they felt the teacher expected rather than showing what they truly felt or thought. It is hard to eliminate the ‘social desirability’ from the study however, this issue was addressed with the students. They were encouraged to be honest respondents as their views did not influence any parts of their grading. The confidentiality of the participants was assured. Some students expressed negative feelings and gave constructive feedback, indicating that their comments were sincere. Given the circumstances of the study, all efforts were made to ensure that social desirability did not play a significant part in the results.

Third, another methodological limitation was the fact that the researcher was the teacher who may have researcher bias. It is possible that the researcher could select observations or influence how the participants performed to increase the success of the PBL implementation. In addition, this study employed the same version of the TOEFL test both at the beginning and at the end of the project. That means the scores from the posttest overall may have been influenced by memory or by researching or comparing answers with each other after the pretest. However, these limitations are acknowledged. As noted in Chapter 3 (see section 3.2.3 and section 3.2.6.1), to control any bias and establish validity, triangulation of several data sources from both quantitative and qualitative research instruments were employed. There is an argument that the students may have improved because the researcher as the teacher may have influenced the students’ outcome, or that the validity of measuring improvement from the pretest to the posttest may be reduced. However feedback provided by students through their diaries, discussions and open-ended questionnaires showed how PBL helped increase their English language proficiency and enhance their skills and confidence.

However, the findings are likely to be relevant to those in similar contexts. Further research is needed with students in related educational contexts. That said, caution is needed in drawing conclusions and implications for other students and settings from this research.

Finally, the small group of students in this study is the last limitation. As the average class size of Thai students is around 40-50, it would be more difficult to successfully implement PBL in an average class with the same pedagogical practices of this study. Therefore some practices including the level of support, the feedback frequency and the time allocated to discussion would have to be modified to suit the larger class population.

6.4 Directions for Future Research

The implications and limitations of this study lead to a number of possible directions for future research to be conducted. Even though this study has provided a description of the lesson plans, directions for activities, and class management techniques, it remains limited and further study could advance the use of PBL within the Thai education system and similar educational contexts.

Firstly, one group of students majoring in English was used as a sample group in the present study. It would be worthwhile to examine students from English majors and other majors in both similar and different educational settings to validate the findings of this study. Furthermore, due to the limitation of the sample size, it would be valuable for further research to be conducted to address the results of using PBL with larger classes.

Secondly, the current research examined the results of PBL in relation to English proficiency, learning skills, and self-confidence. Future research may investigate the attitudes of teachers and students towards the use of PBL. In addition, it would be interesting to see whether Thai teachers in similar as well as in different educational settings are prepared for the Thai educational policy and feel confident to implement PBL in their classes.

Thirdly, further research may examine the relationship between learners' interaction and the role of metacognition in PBL in order to provide richer information on how learners learn, the benefits of autonomous learning and the challenges of how they construct their knowledge when they design their own learning pathway.

Lastly, an issue that needs to be further researched is authentic project based assessment. It is important to see how student projects, activities, experience, and performance are

brought together to be evaluated and how this type of assessment aligns with school and university policies on grading.

6.5 Conclusion

The issue of improving the English language proficiency of Thai students is increasingly important as the ability to communicate in English continues to play a crucial role in important areas of Thailand's economic and social growth. The results of this study indicate that the application of PBL into English teaching courses could be an alternative means of enhancing competence, learning skills and self-confidence in English usage. This study helps shed light on important insights in language development which can be taken by teachers to serve the Thai government's education policy of student learning. It fills a gap in the application of PBL related to Thai EFL learners by enhancing English language proficiency, learning skills, and self-confidence. It is hoped that this study can further inform future research to establish successful approaches for the teaching and learning of English in Thailand.

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