EFFECTS OF PROJECT-BASED LEARNING ON

SPEAKING ABILITIES OF NON-ENGLISH MAJOR

CHINESE STUDENTS

Di   Yang

A Thesis Submitted in Partial Fulfillment of the Requirements for

the Degree of Master of Arts in English Language Studies

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ผลของการเรียนรู้แบบใช้โครงงานหลายชิ้นเป็นฐานต่อความสามารถทางการพูดของนักศึกษาจีนที่ไม่ใช่เอกภาษาอังกฤษ

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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต
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Suranaree University of Technology has approved this thesis submitted in partial fulfillment of the requirements for a Master's Degree.

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ดี หยาง : ผลของการเรียนรู้แบบใช้โครงงานหลายชิ้นเป็นฐานต่อความสามารถทางการพูดของนักศึกษาจีนที่ไม่ใช่เอกภาษาอังกฤษ (EFFECTS OF PROJECT-BASED LEARNING ON SPEAKING ABILITIES OF NON-ENGLISH MAJOR CHINESE STUDENTS) อาจารย์ที่ปรึกษา : อาจารย์ ดร.ณัฏฐญา เผือกผ่อง, 155 หน้า

นักศึกษาชาวจีนที่ไม่ได้เรียนภาษาอังกฤษเป็นวิชาเอกมักจะมีปัญหาเกี่ยวกับการพูดภาษาอังกฤษ เพราะว่าพวกเขาอยู่ในรูปแบบการสอนที่เน้นครูเป็นศูนย์กลางและไม่มีโอกาสที่จะใช้ภาษาอังกฤษ ในงานวิจัยชิ้นนี้ การเรียนรู้โดยใช้โครงงานซึ่งมีรูปแบบการสอนโดยเน้นผู้เรียนเป็นศูนย์กลางถูกผสมผสานเข้ามาในห้องเรียนภาษาอังกฤษของนักศึกษาจีน งานวิจัยนี้ค้นหาผลกระทบของการใช้การเรียนรู้โดยใช้โครงงานต่อทักษะการพูดของนักศึกษาจีนที่ไม่ได้เรียนภาษาอังกฤษเป็นวิชาเอกและความคิดเห็นของนักศึกษาต่อการใช้การเรียนรู้โดยใช้โครงงานในมหาวิทยาลัยไคลี่ นักศึกษาแปดสิบคนเข้าร่วมในงานวิจัยนี้ ข้อมูลของงานวิจัยถูกเก็บมาจากแบบทดสอบก่อนเรียน หลังเรียน แบบสอบถาม และการสัมภาษณ์ ข้อมูลเชิงปริมาณถูกวิเคราะห์โดยสถิติทดสอบทีเทส และสถิติเชิงพรรณนา ส่วนข้อมูลเชิงคุณภาพถูกวิเคราะห์โดยวิธีการที่ปรับมาจากโอคอนเนอร์และกิบสัน (2003) ผลการทดลองบ่งชี้ว่า การเรียนรู้โดยใช้โครงงานมีผลกระทบเชิงบวกต่อทั้งทักษะการพูดของนักศึกษาและความคิดเห็นของนักศึกษา นอกจากนี้ ผลลัพธ์ที่ไม่คาดคิดในเชิงบวกก็ได้ถูกรายงานออกมา ตัวอย่างเช่น การพัฒนาของทักษะทางด้านเทคโนโลยี โดยสรุปแล้วผลการทดลองของงานวิจัยชิ้นนี้จะเป็นประโยชน์แก่วิทยาลัยและมหาวิทยาลัยที่มีปัญหาในด้านการสอนทักษะการพูดภาษาอังกฤษในประเทศจีน นอกจากนี้ผลการทดลองของงานวิจัยมีข้อมูลที่เป็นประโยชน์ต่อนักวิจัยที่สนใจในเรื่องการใช้การเรียนรู้โดยใช้โครงงานอีกด้วย

สาขาวิชาภาษาต่างประเทศ   ลายมือชื่อนักศึกษา_____

ปีการศึกษา 2559   ลายมือชื่ออาจารย์ที่ปรึกษา_____

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PROJECT-BASED LEARNING/SPEAKING ABILITIES/CHINESE CONTEXT

Non-English major Chinese students have serious problems with speaking English since they are in the teacher-centered class and fail to have opportunities to use English. In the present study, project-based learning (PBL) as the student-centered, instructional approach was integrated into the English classroom in the Chinese context. The study investigated the effect of PBL on non-English major students' speaking ability, and students' opinions on PBL at Kaili University. Eighty students participated in this study. The data of the present study were collected via the speaking pre-posttest, the questionnaire and the semi-structured interview. The quantitative data were analyzed by t-test and descriptive statistics. The qualitative data were analyzed by the analysis method adapted from O'Connor and Gibson (2003). The results revealed that PBL had positive effects on non-English major students' speaking ability and students' opinions. Moreover, other unexpected outcomes were reported positively, for instance, the development of technology skills. In conclusion, the findings of the current study may benefit colleges and universities which have problems in instructing English speaking skill in China. Additionally, the findings of the present study may provide valuable information for the researchers who are interested in incorperating PBL into their teaching.

School of Foreign Languages   Student's Signature_____

Academic Year 2016   Advisor's Signature_____

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LIST OF ABBREVIATIONS

PBL…………………………………...Project-based learning

KU………………………………….…Kaili University

ELT………………………………….....English language teaching

L2…………………………………..…..Second language

SLA……………………………...………Second language acquisition

CET-SET…………………………...………..College English Test Spoken English T
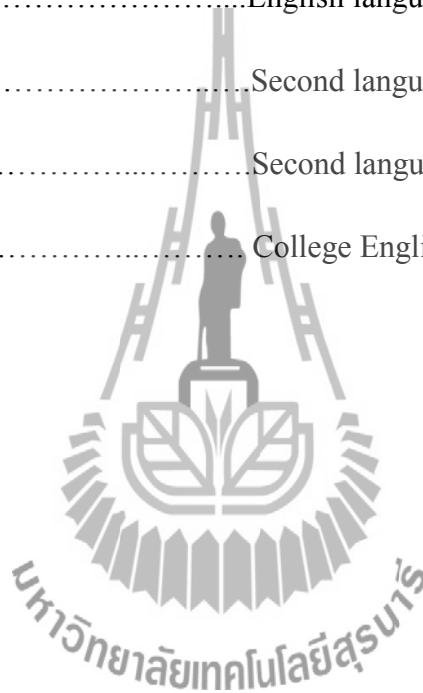
CHAPTER 1

INTRODUCTION

This chapter gives a brief introduction to the present study which aims to investigate the effect of implementing project-based learning (PBL) on the improvement of the speaking abilities of Chinese university students. It starts with the statement of problems, rationale of the study, purposes of the study, research questions, and significance of the study. Lastly, definitions of key terms are given.

1.1 Statement of Problems

With the development of technology, global communication needs to be more effective; thus the importance of English has increased. People around the world use English as the lingua franca to communicate and trade online and offline. At the same time, many countries have taken action to raise the English standard of their people, so does the People's Republic of China. In the past three decades, the People's Republic of China, as a rapidly developing country, has become the most populated nation in the world. It has also been estimated to have the largest number of English learners and users of English in the world (He & Zhang, 2010).

After becoming a member of the World Trade Organization (WTO) and holding the 2008 Olympic Games, there is an increasing demand for China to interact with the

outside world to ensure its high speed economic development. Thus, the demand for practical talents in China is increasing rapidly as well. In the meantime, with millions of undergraduate students entering the labor market every year, companies, organizations and institutions have set up an employment standard for non-English major undergraduates. That is, applicants must at least hold a certificate of the College English Test "Band 4" (CET-4) which is the national English test containing listening comprehension, cloze passages, reading comprehension and writing. Therefore, in order to compete with other applicants, during study at a university, passing the CET-4 is the goal for most non-English major students. Furthermore, the rate of passing the CET 4 is the criteria of evaluating college English teaching for most universities. Accordingly, the students mainly practice their listening, reading and writing skills and the teacher focuses on drilling these three skills rather than the speaking skill. Although the students practice very hard, unfortunately, studies (Huang & Wu, 2004; Hu, 2004; Hou, 2010) reported that even if the students get hired, most non-English major undergraduates who have the CET-4 certificate still have serious problems when they need to speak English to communicate, and this could impede their future careers.

Therefore, universities in China, as the place of cultivating distinctive talented persons, should take responsibility for the situation of the general low speaking ability among university students. Grammar-translation and communicative teaching methods are the main methods of instructing college English in China. Nevertheless, most universities prefer using grammar-translation as the main means in college English

teaching, including Kaili University (KU) which is located in the Qaindongnan Miao and Dong Autonomous Prefecture, a remote place of China. The grammar-translation method is a teacher-centered method that teachers' talk takes up most of the class time and focuses on analyzing grammar and structures, but not real-life communication leading to unsatisfactory results (Li, 2001). Therefore, the students who are involved in this kind of class are not provided opportunities to produce output, and have little ability in speaking English (Ng & Tang, 1997). Furthermore, it was evidenced by Legarreta and Dorothy's study (1977) that in a teacher-centered classroom, teachers accounted for 70% to 89% of the total talk in the classroom; and there was no communicative learning environment for the majority of the pupils, which discourage the students from learning the target language. A similar result was found in Sinclair and Coulthard's (1975) study that teachers' talk occupied almost two thirds of the lesson in the teacher-centered classes (as cited in Shen, 2011, p.2). Thus, more teachers' talk means less students' talk. For EFL, the students, like the students in KU, can hardly find opportunities to practice their speaking outside the classroom, which leads to low speaking proficiency. Therefore, traditional teacher-centered language education cannot help much in boosting the students' speaking skills.

As mentioned above, in order to pass the CET-4, teachers and students focus on listening, reading and writing, but ignore speaking. Moreover, in the college English textbook, taking KU as the example, it can be assumed that most of the contents in the textbook serves for the CET-4. The speaking exercise part merely occupies a very small

proportion in each unit, which means that in a 50-minute class the practice of speaking is almost ignored. Consequently, most of the students are not capable of communicating in English. Moreover, in Swain and Lapkins' (1995) study, they demonstrated that the lack of opportunities to speak is the possible cause for low speaking ability. In that study, in spite of the students being in an English-immersion program, the program was teacher-centered and the students' talk was almost ignored. Therefore, it was revealed that the traditional teacher-centered class cannot contribute much to the students' speaking abilities. As a result of this, Chinese English teaching needs to transfer the teacher-centered class into a student-centered class to provide the students more opportunities to speak.

As emphasized by the Higher Education Department of the Ministry of Education, "College English is not only a language course that provides basic knowledge about English, but also a capacity enhancement course that helps the students to broaden their horizons and learn about different cultures in the world" (p. 17). In other words, College English is more than teaching the language, but focuses on what the students can do with their language. Therefore, teachers and educators in China have realized the necessity of shifting from the teacher-centered to the student-centered approach, which is in line with the notions of project-based learning (PBL). PBL is found as a powerful approach, which requires the students to work cooperatively in solving problems in an authentic environment and communicating for real-life purposes. Furthermore, it is student-centered and aimed at conducting a tangible outcome (Fried-Booth, 2002). In

PBL, the students have to take responsibility for their own learning. Therefore, the students construct their knowledge by their own understanding and that is totally different from the traditional teaching method.

In order to instruct English effectively, Chinese teachers and educators have experimented with various approaches and methods. Content-based, topic-based, and task-based class models are now popular in the Chinese classroom (Zuo, 2008). However, among several approaches, there is no study that incorporates PBL to improve speaking abilities of university students. Therefore, the present study employs PBL to develop the speaking ability of Chinese first-year non-English major students as well as investigate their opinions on the use of PBL in the language classroom.

1.2 Rationale of the study

Since PBL was adapted into other disciplines, it has been considered as a powerful approach in content instruction. Two decades ago, practitioners and educators all around the world in the field of second language and foreign language education started to implement PBL into language classrooms. It seems to produce positive results including studies in the Chinese context (Li, 2010; Sun, 2011); Wu, 2012). Thus, this research project was designed to implement PBL in English learning because features of PBL seem to match the objectives of the present study, which could provide appropriate learning conditions for first-year university students in China, and the reasons are described briefly below.

Firstly, PBL is adapted in the present study because it might help the students to develop their speaking abilities. PBL focuses on language use in an authentic environment which means all communication and problem-solving happening in a real-life situation. Project work would provide the students opportunities to recycle the known knowledge and skills in a relatively authentic context (Haines, 1989). Therefore, the students speak real-life English which can stimulate the students to expand their vocabulary items and recycle their knowledge rather than repeating English from textbooks.

Secondly, PBL can motivate the students' learning and benefit their life-long learning. PBL as a student-centered approach, gives the students authority to take control of their learning, including to decide what topic they want to learn, set up goals, and design their own research. Once the students can take charge of their own learning, they have to decide what information is needed, what method should be abandoned and how to accomplish agreed goals and so forth. Consequently, they turn the role of passive knowledge acceptor to the role of positive knowledge hunter. Moreover, PBL aims to benefit life-long learning rather than teaching the language. Nunan (1989, p.19) proposed that "learners must take responsibility for their own learning, developing autonomy and skills in the learning-how-to-learn". While doing the projects, the students not only practice their language skills, but also develop other skills simultaneously, such as the skill of searching for information, skill of conducting research and skill of analyzing data and so on, which could benefit their further learning and work.

Thirdly, by engaging the students to work cooperatively, PBL helps to build up and increase the students' confidence enhancing their cooperative and communicative abilities. While the students work cooperatively, they share responsibility; meanwhile, they play different roles which can utilize their strength. Therefore, when the students can do what they are good at and work cooperatively, the learning pressure is decreased as well as the pleasure is increased. Additionally, the learning becomes more effective and the students become more confident (Richards & Rodgers, 2001). Moreover, during cooperation, in order to accomplish agreed goals, the students learn how to cooperate and communicate with others effectively, which are crucial elements in their future careers.

1.3 Purposes of the study

With the problems stated in 1.1, the present study aims to investigate the effect of project-based learning (PBL) on speaking skills of first-year students at Kaili University (KU), Guizhou, China. The purposes of this study are listed as follows:

1.3.1 To examine the effect of project-based learning (PBL) on the improvement of KU first-year non-English major students' speaking skills in three aspects (accuracy & range, size & discourse management, and flexibility & appropriacy) and how they improve their speaking abilities.

1.3.2 To investigate the non-English major students' opinions on getting involved with the PBL approach in English learning and problems while engaging in the PBL approach.

1.4 Research questions

Based on the purposes posted previously, the following questions are formulated.

1.4.1 Do PBL lessons help to improve speaking skills of first-year non-English major students at KU in three aspects (accuracy & range, size & discourse management, and flexibility & appropriacy)? If so, how?

1.4.2 What are the opinions of the students on implementing the PBL approach in learning the English language and problems they encounter during the learning process?

1.5 Significance of the study

As mentioned above, KU adapts grammar-translation, a teacher-centered method to instruct College English. However, the teacher-centered method seems not to be appropriate in improving the students' speaking abilities. Since there is a big gap that traditional grammar translation method as the main method in instructing English in college level and even under-college level in China, PBL as a student-centered approach might be appropriate for the language classroom in KU. Consequently, PBL is adapted to the present study, which was an attempt to help both the students and language teachers of KU in improving speaking abilities and speaking instruction. Meanwhile, the results of the present study will benefit the students and language teachers in KU and even other colleges and universities who have problems in

instructing speaking in China so that they can instruct English via incorporating PBL to enhance the students' speaking abilities.

Secondly, in this study, in order to engage the students to produce as much output as possible, three mini projects are designed and the purpose of designing three projects will be discussed in Chapter 3 (see in 3.5.1). Moreover, to the best of my knowledge, there are no studies researching on speaking with multiple projects. Therefore, it could be an example to show other teachers who want to incorporate PBL into their class and help them to envision their own plan.

Thirdly, besides examining the effect of incorporating the PBL approach on the development of student's speaking abilities, this study also investigates the students' opinions on incorporating PBL into the language class, and problems after learning English language through PBL will be revealed. The information will help teachers to improve the instructions for effective learning which can serve the students' needs and foster their motivation, especially for the university level.

Finally, the present study not only benefits researchers and teachers in the field of language, but also researchers and teachers who are interested in PBL in other fields. The design of the present study can be a reference for other designs that incorporate the PBL approach and the valuable data of the present study can provide some suggestions and guidelines for further studies.

1.6 Key Terms

The terms used in the present study are stated below:

1.6.1 A project

A project in the present study is defined as an activity which may be interesting to the students and contribute to the course learning (Fleming, 2000). Since there are three mini projects in the study, a project in this study is either a group work or individual work. The students are assigned into six or seven people a group to complete both the group work and individual work which are related to the lesson of the English course at Kaili University (KU). Moreover, the steps in doing the project are guided by the researcher. While doing the project, the students are involved in several tasks in the entire process. Finally, the tangible outcome of the project is conducted.

1.6.2 Project-based learning (PBL) approach

In the present study, project-based learning (PBL) refers to an instructional approach to teaching the English language through assigning the students to work cooperatively to accomplish two group projects and an individual project in a period of time. In doing the project, the students are involved in producing a tangible end product while the students develop their speaking abilities.

1.7 Summary

In this chapter, a brief introduction of the present study was given. Firstly, the problems of university students' speaking abilities were stated. Then, the objectives of the study, research questions, the significance of the study, and definitions of some terms used in the present study were described. In the next chapter, the relevant literatures of PBL, features of PBL, theoretical framework, benefits and challenges of implementing PBL and recent studies in the Chinese context will be presented.
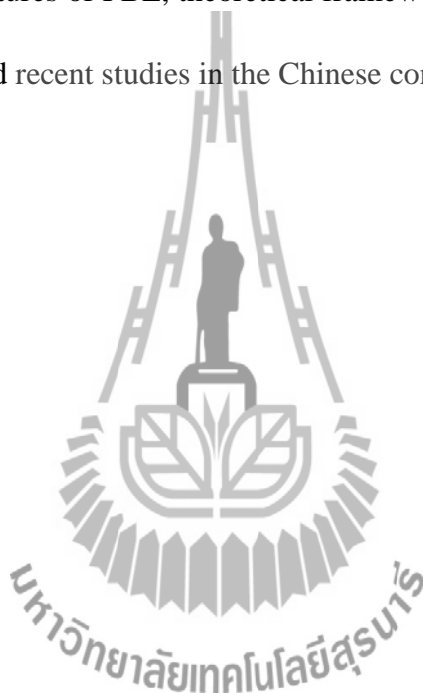
CHAPTER 2

LITERATURE REVIEW

This chapter offers a review of related literature to the present study. It starts with the definitions of PBL. Then different aspects of PBL in second language and foreign language education are discussed, including its features, the roles of teachers and the students, steps of developing projects, benefits, and challenges of PBL. Lastly, some previous studies in the Chinese context are presented.

2.1 Definitions of PBL

Project-based learning (PBL) was first proposed by David Snedden who taught science in American vocational agriculture classes. Afterwards, it was developed and popularized by William Heard Kilpatrick, an American pedagogue and a pupil, colleague and successor of John Dewey (Beckett, 1999). Initially, PBL was utilized in other disciplines rather than second language and foreign language classes.

However, about two decades ago, project-based learning (PBL) as a way to reflect the principle of student-centered, attracted experts of language education and was introduced into the field of second language education (ESL) (Hedge, 1993). Afterwards, project-based instruction has been a popular activity for teaching language in various levels and contexts (Beckett, 1999; Levis & Levis, 2003). Nevertheless, in

terms of PBL, there is no single definition. Fried-Booth (2002) stated that project work is student-centered and aims at conducting an end-product. Afterwards, he explained the process of producing an end-product provides the students opportunities to develop their confidence and independence. Additionally, the students work together or individually in a real-world environment and cope with defined tasks and unexpected events. Moreover, Moylan (2008) asserted "Project-Based Learning is a constructivist learning pedagogy, which places the emphasis on the students to learn by doing through engagement in hands-on projects, done both individually and within teams" (p.287). Moss & Van Duzer (1998) explained "Project-based learning as an instructional approach contextualizes learning by presenting learners with problems to solve or products to develop" (p.45). Weinstein (2006) stated that "Project-based learning is an approach in which learners investigate a question, solve a problem, plan an event, or develop a product" (p. 161). Beckett (2002) pointed out that a project as a long-term activity involves either individual tasks or cooperative tasks, such as developing research, collecting data, analyzing data and presenting the end-product by oral presentation or written paper. Furthermore, Haines (1989) stated that "projects are multi-skill activities focusing on topics or themes rather than on specific language target" (p.1). Subsequently, Haines (1989) explained that project work provides the students opportunities to recycle   known knowledge and skills in a relatively authentic context, and concentrates their efforts on the agreed goals.

Although there is no single definition of the term PBL, many educators and scholars seem to believe that PBL is an instructional approach that lasts over an extended period, and the process is learner autonomy that the students are allowed to select their topic, plan their research and locate their source materials. Furthermore, in the process of doing the project, the students work cooperatively or individually to solve authentic problems by utilizing their intelligences to contribute to their group work.

The majority of authors in second language and foreign language education considered PBL as a powerful and motivating teaching method to develop the students' second and foreign language skills (Beckett, 1999; Levis & Levis, 2003; Beckett & Slater, 2005; Shokri, 2010). Moreover, proponents of PBL indicated that while the students investigate and seek resolution of problems, they are eager for knowledge of key principles and concepts which would promote their further learning (Blumenfeld et al, 1991). Furthermore, some authors in second language and foreign language education stated that project work results in enjoyment and the sense of self-esteem (Levine, 2004; Deci & Moller, 2005). In Deci and Moller's (2005) study, most students seemed to develop intrinsic motivation and participate in learning activities for "the spontaneous feelings of interest and enjoyment" (p.596). Wu (2006) claimed that PBL is a suitable way to promote language and content learning in English as a foreign language (EFL). In addition, Hilton-Jones (1988) emphasized that PBL allows the student to work at their level and pace, thus, it is an appropriate approach for language classes with mixed abilities.

According to the above evidences, we can see that numerous benefits and advantages can be gained by incorporating PBL. Therefore, this study aims to investigate the effect of incorporating PBL into the language classroom to see the improvement of non-English major university students' speaking abilities. In PBL, in order to fit several teaching situations in distinctive disciplines, different projects are constructed. Projects can generally range from the semi-structured project (the teacher and the students plan the project) to unstructured project (the students plan the project by themselves). Although projects are different, they share similar characteristics that will be discussed in the next section.

2.2 Principal characteristics of PBL

A number of language educators who have studied and implemented the PBL approach concluded several characteristics of PBL. According to Ward (1988), Hedge (1993), Stroller (2002), Solomon (2003), Helle, Tynjala and Olkinuora (2006) and Stroller (2006), the common key characteristics of PBL can be generally summarized as follows: a) authentic learning, b) cooperative learning, c) learner autonomy, and d) multiple intelligences. The fundamental characteristic of PBL is that the learning happens in an authentic environment. Therefore, authentic learning as the basis for developing other characteristics is necessary to discuss firstly.

2.2.1 Authentic learning

PBL focuses on the real world and its issues. Therefore, authentic activities is one main feature of PBL that provides the students with opportunities to connect to a real world situation while completing the project (Markham et al., 2003). Authentic learning as a learning approach has been rising in significance and popularity in the last decade (Herringtion & Herringtion, 2007). It involves real-life problems and projects which are related and meaningful to the students and the curriculum. Moreover, it allows the students to explore, discuss and construct meaningful concepts in a real-life context.

Herringtion & Oliver (2000) suggested that the best gain of usable knowledge emerges in the learning environment which provides authentic contexts, authentic activities and authentic assessments that can reflect the knowledge on real-world use. Moreover, Jonassen (1991) defined authentic activities as tasks that are curriculum-based; have world relevance and utility; provide appropriate complexity and allow the students to select a suitable difficulty level and involvement. Furthermore, Rule (2006) pointed that focusing on authentic tasks can help the students transfer their school learning to life and work settings. In other words, the students can integrate the needed knowledge, skills, and attitudes and coordinate individual skills that they learn from school to complete authentic tasks. Thus, it is better to learn the details of how authentic activities embed PBL to the real world, which can assist the teacher to design activities in the present study. According to Herrington (2003) the characteristics of authentic activities are:

• *Authentic activities should have real-world relevance*: activities should match the real world as much as possible. For instance, the students do an interview which should interact with the real world.

• *Authentic activities are ill-defined and the students are required to define needed tasks and sub-tasks to accomplish activities*: problems existing in activities are ill-defined. Thus, in order to complete activities, the students have to define tasks and sub-tasks that they may encounter. For example, the students do not know how to do the interview and what interviewees they need, these are problems that the students must figure out.

• *Authentic activities* include *complex tasks which need to be investigated by the students in a continuous period of time*: the students are required to complete activities in weeks or months by searching on varied resources. In PBL, the students are involved in several tasks. They start from designing the research and end with presenting the result.

• *Authentic activities provide the students opportunities to examine the problem from distinctive perspectives rather than a single perspective*: in order to avoid the students to do the simple analysis, tasks afford the student the opportunity to utilize diverse resources to examine the problem. In PBL, the students can research the question via online resources and other different resources.

• *Authentic activities provide the opportunity to collaborate*: the collaboration is integral to the task, both within the real world and the course.

• *Authentic activities provide the opportunity to reflect*: activities need to enable learners to make choices and reflect on their learning both individually and socially.

• *Authentic activities encourage the integration of different subjects, and lead to a multiple domain outcome*: activities can be integrated across subjects and enable the students to play diverse roles and build a robust expertise instead of the knowledge of a limited well-defined domain. In doing the project, the students are encouraged to use different knowledge and play different roles to do what they are good at.

• *Authentic activities are seamlessly integrated with assessment*: assessment of activities is integrated with the major task in a manner that reflects real-world assessment, instead of a separate assessment which is disconnected with the natural task. In PBL, rubrics are utilized to assess and reflect the students' learning.

• *Authentic activities create meaningful products in their own right rather than as preparation for something else*: activities culminate in creating a whole product rather than doing an exercise or preparing sub-steps for something else. In PBL, the students will produce mini-research rather than doing exercises.

• *Authentic activities allow contradictive solutions and diverse outcome*s: activities allow multiple solutions to one task. Additionally, not only one correct answer is permitted.

According to the above descriptions, it is obvious that authentic activities provide the students the opportunity to connect with the real world. Additionally, while

completing the project, challenging problems or topics could encourage the students to investigate and communicate outside of the classroom. In this study, the students have to deal with real-life problems in doing the project, for instance, do the interview and decide to collect the data. In conclusion, in PBL, the students have a chance to listen to and read varied valuable resources, and interact with people outside of the classroom.

2.2.2 Cooperative learning

PBL encourages the students to work cooperatively either in a pair or in a small group to get ideas, find solutions, construct knowledge and produce the product. Cooperative learning is defined as a learning approach which helps learners interact together to accomplish shared goals and develop an end product (Panitz, 1997). Moreover, Roger and Johnson (1994) claimed that the aim of cooperative learning in groups is to make each member become a stronger individual. Furthermore, Slavin (1982) stated that the essential feature of cooperative learning is that the success of one student is to help other group members to be successful as well.

Cooperative learning as the instructional approach, which can provide some benefits that individual learning cannot complete well, is selected by numerous educators. As summarized by Slavin (1990) and Roger and Johnson (1988), there are many benefits of cooperative learning. Firstly, cooperative learning can increase the students' achievement. No matter what the social achievement or the academic achievement, cooperative learning can maximize the students' learning. Since the students interact with other group members, they will learn more from one another.

Secondly, the students get a more positive attitude towards school, subject areas, teachers and professors. If they work cooperatively, they may feel that the group supports them and shares their learning pressure. Thirdly, the students are more positive to each other, whilst they learn and work cooperatively than when they learn and work competitively or individually. In a competitive environment, the students cannot experience a positive relationship with classmates and they get more pressure in the individual learning. Thus, we can find that cooperative learning can provide a more positive and effective learning environment for the students.

Kaufman et al (2000) stated that cooperative learning as the instructional paradigm assigns the students to work cooperatively on structured tasks. In order to create and ensure the most advantageous learning environment, the tasks should be under five conditions (Gillies, 2003; Roger, 1994). First, there must be positive independence. The students perceive that they are together. Each member's effort is expected and indispensable for the group's success. Furthermore, each member's contribution is unique which is related to their resources, roles and responsibilities. Second, there must be face-to-face promotive interaction. In the process of cooperative learning, a positive relationship is not enough to conduct productive outcomes. Therefore, the students need to provide effective assistance to each other by sharing resources, discussing ideas and giving feedback to reach goals. Third, there must be individual accountability. The students have to share responsibility on given tasks and need to be conscious that they cannot share the group's achievement without doing

anything. Fourth, there must be interpersonal and small-group skills. The students must be taught social skills which can build the trust and facilitate effective communication; additionally, cooperative learning can enhance the accommodation and conflict-solving skills for high quality cooperation. Finally, there must be group processing. The students describe how well they are working and what contributions they are doing for shared goals. Moreover, the students decide in the process what action should be continued and what should be changed. The purpose of group processing is to improve and ensure the effectiveness of the students in contributing to the group work, then to achieve shared goals.

Cooperative learning has been used successfully in EFL classes to improve the students' learning outcomes and skills. Deng's study (2007) indicated that cooperative learning helped EFL university students develop their oral communication skills; significantly improved junior high school students' oral communicative competence and enhanced the motivation of learning English (Azizinezhad et al, 2013); and improved Kermanshah Islamic Azad University the students' general English achievement (Motaei, 2014). We can see that cooperative learning promotes quality learning.

In conclusion, cooperative learning can be seen as the learning process which can maximize the advantages of peer collaboration (Dörnyei, 1997). In the cooperative learning environment, the students can gain benefits from each other and the collected resources. Hence, the students will achieve more and contribute more for the shared

goals. Therefore, in this study, the students are provided with opportunities to work cooperatively to reach the shared goals and complete projects. As mentioned above, cooperative learning requires the students to take responsibility for their study and group work. Thus, when the students can take charge of their learning, their study could be more effective and they will be more confident.

2.2.3 Learner autonomy

PBL requires the students to be independent and to take responsibility for their learning, including designing the research, selecting resources, collecting data and reporting data. Littlewood (1996) claimed that it is important to help learners to become independent from their teachers and in the use of language. The students should be authoritative in directing their own learning when teachers respond to the students' needs and create a context which allows learning engagement (Widdowson, 2003). Moreover, the indication is in line with the idea of Nunan (1989). That is "learners must take responsibility for their own learning, developing autonomy and skills in the learning-how-to-learn" (p.19). Therefore, it is generally agreed that learners must become autonomous (Ho & Crookall, 1995).

Joshi (2011) defined that autonomy can be explicated as one's ability to make decisions for oneself. Furthermore, Frieire (2000) stated that autonomy is the ability and freedom of the learner to construct and reconstruct taught knowledge. In other words, it is the capacity that learners can create learning situations or recreate the existing knowledge with new information. In the foreign language education context,

autonomy is defined as the ability that the students can take responsibility for their learning (Dickinson, 1987; Little, 1994), and do not need teachers' intervention or instruction of outside formal curriculum (Dickinson, 1987). Besides, Macaro (1997) explained that autonomy is an ability to know how to make decisions; how to take charge of one's language learning and to realize the worth of taking responsibility for one's learning. Furthermore, this responsibility is not only to determine the learning purposes, content and method, but also to monitor the learning progress and to evaluate outcomes (Byram, 2004). However, in PBL, the teacher gives support and help instead of intervening in the student's learning that will be discussed in 2.3.

Additionally, Littlewood (1996), Breen (1997) and Najeeb (2013) defined the autonomous learner as the student who has an independent ability to seek opportunities to learn outside of the classroom and govern their actions without teacher's intervention (as cited in Shams, 2013, p. 1589). In conclusion, the general explanation of learner autonomy is that the students seek opportunities for outside the classroom learning and know how to make decisions to control their learning, including setting objectives, following content, tracking progress and evaluating outcomes.

There are numerous advantages that can be derived from learner autonomy (Little, 1995). Firstly, "the autonomous learner has the means to transcend the barriers between learning and living that have been a major preoccupation of educational psychology, educational theory and curriculum development" (Little, 1995, p.16). As the previous explanation, autonomous learners seek opportunities for learning outside the classroom.

Therefore, knowledge can be achieved not merely in the classroom, but also outside the classroom through searching different resources in different domains. Secondly, Little (1995) indicated that learner autonomy can yield a positive relationship between the present study and future studies. In other words, autonomous learners have positive attitudes in setting up learning goals. Once they achieve their goals, they are more willing to maintain their positive attitudes in future learning. As the Council of Europe (1980) claimed, autonomy can empower the learner to undertake lifelong learning (as cited in Macaro, 1997, p. 186). Hence, in the present study, when doing projects, the students will fully control their own learning and the teacher will not intervene in the students' learning, but provide instruction and help.

2.2.4 Multiple Intelligences

Gattegno (1997) stated that since PBL focuses on the students' interests, needs and talents, the students are allowed to select their topics which are determined by their interests; decide their research approaches; decide the presentation of their end product (as cited in Simpson, 2011, p.56). Additionally, PBL engages the students in investigating challenging tasks (Blumenfeld, et al. 1991), which can fully develop the students' abilities and skills by utilizing their intelligences in in-depth learning of the challenging tasks.

Gradner (1985), as the principal proponent of multiple intelligence, deemed that people have types of intelligences, which is different from the traditional conception of intelligence, IQ (intelligence Quotient) (Brown & Liepolt, 2004). Moreover, people are

different in strength and intelligence combinations (Richards & Rodgers, 2014). Gradner (?) further proposed eight "native intelligences". They are: (a) linguistic, (b) logical/mathematical, (c) spatial, (d) musical, (e) bodily/kinesthetic, (f) interpersonal, and (g) naturalist (Brown & Liepolt, 2004). The theory of multiple intelligences helps the students understand the way which they can learn best and gain more achievements. When the students can do what they are good at – that can motivate their learning. For instance, the student who is good at technology can help the group to prepare the PowerPoint presentations and background music. That will encourage and motivate the student's learning with positive attitude. Moreover, it can help teachers teach successfully.

Brown & Liepolt (2004) stated advantages of multiple intelligences in learning and teaching. First, utilizing the theory of multiple intelligences can maximize the respect of the students' different intelligences, thus it can create a more enjoyable learning environment. Second, the students are offered opportunities for authentic learning which are based on the students' needs and interests and that can enhance the students' motivation. Third, since the students have different strengths in different intelligences, they can share their strengths with other the students. Fourth, when teachers "teach for understanding" and the students "learn by doing", the students can accumulate some positive learning experience and solutions of life problems by doing.

PBL creates a learning environment which focuses on the students' interests, and needs, and enables the students to explore their interests to boost their learning potential.

As different students have different intelligences, the teacher can design a variety of activities which are based on the students' interests. Unlike the traditional structured classroom, in PBL, the students are able to apply their intelligences in their learning process. In other words, in the learning process of PBL, the students are given freedom to employ their intelligence to develop the potential of their abilities and skills. Thus, as the evidence presented above points out, multiple intelligences incorporated into classroom teaching and learning contribute to the classroom, which can motivate the students' learning and build up their confidence.

As the previous review, the principal characteristics of PBL are, authentic learning, cooperative learning, learner autonomy and multiple intelligences. Authentic learning refers that the learning that occurs in a real-life situation and the students can practice their authentic language. Cooperative learning means that the students construct their own knowledge through working in groups. Learner autonomy indicates that the students take control of their own learning and that the students can be motivated. Multiple intelligences imply that in the learning process the students play different roles to do what they are good at and that would motivate learning. According to the description of these characteristics, it can be assumed that there are a number of advantages that can contribute to the students' learning in PBL and the lifelong learning. Therefore, it is worthwhile to investigate PBL in language learning and see the development of the first-year non-English major students' speaking abilities in the current study.

2.3 Roles of teachers and the students

PBL is different from the traditional teaching method in many aspects. For instance, roles of the teachers and the students in PBL are different from those in the traditional method and will be discussed in the following part.

From the above descriptions, we can realize that PBL is a kind of learning approach that provides the students with opportunities to communicate and interact with their peers and people in an authentic environment rather than the teacher. Moreover, the function of the teacher is to assist the students in their learning rather than intervening in their learning. Thus, the traditional teaching method is teacher-centered, while PBL is student-centered.

In PBL, the teacher is defined as a facilitator and an advisor. In addition, the teacher can be a participant and coordinator when necessary (Fried-Booth, 2002). In the present study, the teacher will release control and not intervene in the students' learning. At the beginning of initiating the project work, as a facilitator, the teacher generates activities and provides the students with opportunities to utilize and strengthen their skills, such as critical thinking and problem-solving skills (Fried-booth, 2002). Afterwards, the teacher begins determining project topics by conducting a class which requires criteria to help the students to understand the expectations from them, and identify topic areas and the skills to be developed (Wu & Meng, 2010). Making a clear and good start will assist the students in doing the project with less anxiety and confusion. During the process of creating projects, the students would encounter

difficulties and struggles of creating artefacts. Thus, the teacher should break down tasks to scaffold instructions, and instruct strategies of solving problems by modeling, prompting, coaching and gradually releasing responsibility to the students (Blumenfeld et al., 1991). Sheppard and Stoller (1995) claimed that when teachers release the control and the students consider the teacher as a facilitator and an advisor, the project work will proceed effectively (Wu & Meng, 2010). In order to make the learning more effective, in addition to support, model and coach the students' strategies, the teacher also needs to monitor the students' progress by giving feedback and assessing the overall learning performance. Since roles of teachers in PBL are different from those in the traditional teaching method, roles of the students in PBL are also different from those in the traditional teaching method.

In PBL, the students' roles have a greater importance as well since they determine the outcome of their learning to some degree. Wurdinger and Rudolph (2009) mentioned that learning gradually becomes exciting and the students are encouraged when they set up plans to create projects and test them through application in the real world, and they can take charge of their own projects. In the current study, the students will take full responsibility for their learning by planning their own research, collecting the data and analyzing the data and so forth.

Therefore, roles of the students are described as "the performer of project tasks", "an organizer of an educational activity", "the developer of an educational activity", " the self-learner", "the team collaborator", "the knowledge manager" (Murchu, 2005,

p. 4; Malkova & Kiselyova, 2014, p. 255). With Regard to the performer and the self-learner, while creating the project, the students need to participate in activities and direct themselves to break down the tasks by utilizing learning knowledge and self-skills. Moreover, as an organizer and the team collaborator, the students have to make plans and design projects. Furthermore, the students need to make decisions from the very beginning (Moss & Van, 1998). Additionally, when the students seek solutions for principal problems, they need to propose and refine questions, discuss ideas, collect and analyze data, and communicate their ideas and findings with others (Blumenfeld et al., 1991). Thus, that means the students need an amount of collaboration from the very beginning until the end. In addition, during projects, a number of ideas need to be considered and procedures need to be followed. Being the developer and the knowledge manager means the students should stay organized, track their progress and focus on the problems, instead of getting confused (Blumenfeld et al., 1991). In addition, the students research on key problems, report findings and share personal feelings to perfect the project (Murchu, 2005).

From the above descriptions and explanations, in PBL, since roles of both the teacher and the students are changed, teachers release their control; the students can take full responsibility for their learning process and are empowered in PBL. Student learning becomes more effective and exciting. In a word, learner autonomy could contribute to a more effective learning experience for the students. Therefore, those ideas will be delivered to the students in the study to understand and see the reflect of PBL.

2.4 Theoretical framework

2.4.1 Constructivist learning theory

In the review of previous literature, PBL advocates "learning by doing" , which engages the students to construct their own knowledge through working with their peers, planning research, searching information, collecting data and analyzing data. Meanwhile, constructivism deemed that knowledge is constructed by leaners making sense of their experience on their existing knowledge (Simpson, 2011). It can be seen that PBL develops under the theory of constructivism.

Constructivism can be tracked to philosopher and education reformer, John Dewey, who believed in hands-on learning rather than authoritarian teaching. He demonstrated that knowledge is from experiences of life activities and reflected on those experiences (Field, 2006). It refers that the students construct their knowledge from their problem-solving and life experiences. Afterwards, this concept has been become a key concept of constructivism. Additionally, John Dewey also emphasized that engaging and enlarging learning experiences is a significant component of education practice (Clark, 1991).

In the current study, when the students do their projects, they are offered opportunities to experience new things to construct and obtain knowledge by taking charge of their learning, working with other students and solving real-life problems by themselves. Pritchard (2013) stated that the students learn best when they can construct their own understanding. Therefore, the central concept of constructivism is the notion

that the students construct their new knowledge by experiencing new things which combines with their existing knowledge. Meanwhile, the notion here involves two situations that are proposed by Jean Piaget who is one of the most influential proponents of constructivism. These two situations are *assimilation* and *accommodation*, and Piaget considered these as the basic processes for constructing knowledge. *Assimilation* refers to the process in which learners receive new knowledge which is incorporated with existing knowledge, and consequently, increase the knowledge bank. *Accommodation* is considered as the process in which learners receive new information which contradicts the existing schema. Therefore, the existing schema needs to be altered to manage the new information. The latter situation leads to a deeper learning in which learners' existing schema is needed to be expanded, recognized, or perhaps the existing knowledge would be overturned (Sidman-Taveau & Milner-Bolotin, 200; Pritchard, 2013). Furthermore, Piaget claimed that errors and uncertain things which occur in the learning process will stimulate further learning, which is a significant part in the learning process (Sidman-Taveau & Milner-Bolotin, 2001).

Compared with the constructivist learning theory, it is found that characteristics of the theory support the design of PBL. Gülbahar and Tinmaz (2006) stated that "project-based learning is one of the methods that is grounded in constructivism by supporting student engagement in problem-solving situations" (p.309). In PBL, the students are assigned to work collaboratively to solve problems which are challenging but authentic (Solomon, 2003). Thus, Jonassen (1995) explained that meaning is made by

collaboration, thus collaboration is the principal element of constructivist instruction. Moreover, PBL advocates "learning by doing" which is in line with the key concept of constructivism that knowledge is constructed, while the students involved in new experiences, for instance, in designing the project, the students have to decide what kind of research method is needed to be used. If they engage in doing a survey, questions like how to do it and what should be included will be raised. Therefore, the students must learn and research on it, and then they will construct knowledge by their own understanding and they will contribute their knowledge and resources to their project. Roger & Johnson (1994) stated that the contribution of each student in PBL is unique in that the students are encouraged to explore different resources and assist each other effectively. Furthermore, they need to share their resources. This implies that the students achieve new experiences and construct new knowledge while they explore different resources, assist other students and share information.

An important issue of the constructivist learning theory is evaluating the students' learning. Different from the traditional methods, constructivist learning not only focuses on the final outcome, but also the performance in the learning process, which is in line with PBL. Thus, when we grade the students' learning, the evaluation of learning performance should not be separated. Likewise, in the learning process of PBL, the interaction among the students, problem-solving strategies adapted and project presented should be assessed. Thomas and Cross (1993) claimed that emphasizing the learning process should utilize formative assessment rather than summative assessment,

which can offer the students concise and effective feedback to review their work and develop their future work, which will be discussed in 2.6. As previously explained, the constructivist learning theory is an appropriate theory to support PBL (Simpson, 2011; Sidman-Taveau & Milner-Bolotin, 2001; Welsh, 2006; Muniandy, 2000; Gülbahar & Tinmaz, 2006; Makgato, 2012).

It is clear that the constructivist learning theory could yield a lot of advantages and it is in line with the PBL classroom. It emphasizes student-centered and student-authority. Moreover, it is able to change passive students to be more active, which should be appropriate for the Chinese classroom. However, whether PBL and constructivism can improve Chinese university student's speaking abilities is needed to be investigated.

2.4.2 Output hypothesis

PBL offers the students opportunities to investigate challenging tasks, thus the students have opportunities to communicate with other people in an authentic environment. However, in the process of effective communication, an amount of second language (L2) linguistic knowledge is needed. When communication difficulties occur, the learning is engaged, which makes the students' spoken output more precise. Meanwhile, the output hypothesis that was proposed by Merrill Swain assumed that learning takes place when learners notice the gap in their linguistic L2 knowledge (Izumi, 2003). It can be seen that the theory of output hypothesis supports PBL.

This theory is the reaction to Krashen's input hypothesis that states that

"acquisition" takes place when learners get comprehensive input which is a little bit beyond the level they already are (Ortega, 2014). Furthermore, Krashen pointed out that output is the only sign of second language acquisition (SLA), but does not contribute significantly to the SLA.

Nevertheless, to respond to this statement, Swain proposed the output hypothesis in 1985 (Izumi, 2003). Moreover, she claimed that comprehensive input is not the only resource of SLA and argued for the active role of output in the overall process of SLA. She stated that the significance of output for her could be that the output boosts processing learning more deeply (Swain, 2000). Additionally, Izumi (1999) emphasized that if learners can realize communication difficulties, they will be pushed to conduct their output more precisely, coherently and accurately. Based on many years of an Canadian immersion programme which is a method of instructing L2 by teaching subjects in L2, Swain (1984) figured out that learners in immersion programmes had great success in language development, but they still had problems on grammar while they were speaking the target language. Therefore, Swain pointed out that lacking of output opportunities is the reason for this problem. She further explained that causes are learners were not given enough opportunities to produce output and learners did not get pressure to produce output.

To the best of my knowledge, Chinese university students have the same problem in producing L2 output. They have been learning English until they go to universities, which is at least eight years of English learning. However, they still cannot produce

spoken output precisely, coherently and fluently (Hu et al, 2012). It can be found that most of Chinese university students perform very well in paper tests. However, when they come to deal with oral performance, they are not confident and have problems in speaking. That results from the way the English language learning is conducted. Chinese students are forced to focus on the structures of English rather than the practical use. Thus, when they use the target language, they have confusion about what should be used and how to use it. Moreover, it can also be seen that Chinese university students have received comprehensive input from their teachers, but they have no chance to practice, test and revise their language knowledge. Meanwhile, most researchers agree that output is necessary to increase fluency. Therefore, in order to know how to use and produce the target language more precisely, learners must practice to produce L2 utterances (Mitchell et al, 2013).

Swain (1984) further extended three functions of output. First, the hypothesis-testing function is when learners produce output that is a means of testing their hypothesis for the target language. Second, the metalinguistic function is that "as learners reflect upon their own target language use, their output serves as a metalinguistic function, enabling them to control and internalize linguistic knowledge" (as quoted in Izumi, 1999, p.423.). Third, the noticing function is when learners conduct output, they may notice the gap in their linguistic knowledge. In other words, they will find the problem between what they want to say and what they can say. Thus, this notice would be the trigger of new learning (Izumi, 1999).

Additionally, these functions have been tested by several studies (Nobuyosh & Ellis, 1993; Donato, 1994; Takashima, 1994; Swain & Lapkin, 1998; Ellis & He, 1999). Therefore, the output hypothesis is an appropriate theory to support the present study, while the students produce their speaking output in the communicative purpose, their speaking abilities are improved through realizing the gap of linguistic knowledge and learning the language use from the interlocutor.

In this section, two theories that support the present study are discussed. They are constructivist learning theory and output hypothesis. The key concept of these two theories and how the two theories support the learning process are discussed. In terms of the constructivist learning theory, it provides an environment that the students construct their own knowledge by their understanding in the process of practice and cooperative work in PBL. Regarding the output hypothesis, it provides a theory to how the students improve and correct their speaking in communication. Both of these two theories help the students to improve their speaking abilities and assist the researcher to reveal the nature of some results.

The present study aims to improve non-English major students' speaking abilities through incorporating PBL. Therefore, in order to stimulate the students to produce speaking output as much as possible, the steps of developing the project is very important. At each step of PBL, learners are required to produce amount of output, for instance, the students select the topic and present their project, which may improve the speaking proficiency of Chinese university students in terms of accuracy, fluency and

appropriacy. Therefore, in this study, the students will be provided opportunities to produce output through PBL and the result will be examined to see whether they have improved or not. In order to create opportunities as much as possible for learners to conduct their output, steps of creating a project are crucial. Thus in the next section, steps of developing a project are necessary to be introduced.

2.5 Steps in developing PBL projects

Developing a PBL project needs several steps that can help the students understand the nature of the learning process in PBL and what they are expected to do. Meanwhile, these steps assist the teacher and the students to organize activities. In studies, researchers develop different designs of steps. Two examples will be presented following, the first one which is developed by Malaysia's Educational Technology Division Ministry (2006). However this example is considered too general for both the teacher and the student, especially for the students who have no prior experience. This example may not provide the students with a detailed and step-by-step guideline. It seems that it is merely a guideline for the teacher. Therefore, it is considered not appropriate for the present study because in the study, the design steps will be presented to both the teacher and the students.

Step 1: Start with the essential question.

Step 2: Design a plan for the project.

Step3: Create a schedule.

Step 4: Monitor the students and project progress.

Step 5: Assess the outcome.

Step 6: Evaluate the experience.

The second example is proposed by Fleming (2000). This example is considered not appropriate for the current study as well because most steps seem to be a guideline for the teacher to prepare the work before the students begin learning, such as step 1, 2, 5, which do not need to be presented to the students.

Step 1: Choose a focus for the project.

Step 2: Identify essential knowledge and skill areas to be learned through project activities.

Step 3: Introduce the project and involve the students in shaping it.

Step 4: Select a balance of teacher-led and student-centered activities.

Step 5: Establish project time lines and milestones.

Step 6: Monitor student progress using planning, reporting, and feedback tools.

Step 7: Evaluate project impact and learning results.

Step 8: Reflect on gathered data and plan next steps.

Although several procedures of developing a project have been proposed, the 10 - step of developing a project developed and revised by Stoller (1997) is considered and selected as the most appropriate sample for the present study because these steps are very clear, detailed and concise. Additionally, it provides a well-organized guideline for both the teacher and the students. Furthermore, as Stoller emphasized, "The revised

model gives easy-to-manage structure to project work and guides teachers and the students in developing meaningful projects that facilitate content learning and provide opportunities for explicit language instruction at critical moments in the project" (Stoller, 1997, p.6). The steps proposed by Stoller are explained as follows:

1. ***The students and teacher agree on a theme for the project.***

The students are allowed to share perspectives and commitment for shaping the project and selecting the theme. Even though the teacher has decided to continue some structured projects, the project theme is encouraged to be fine-tuned by the students.

2. ***The students and teacher determine the final outcome.***

The first step is to set up the starting point, and then this step is to define the final outcome, such as doing a survey, making brochures and producing a video. Moreover, the students and teacher think about objectives and the most appropriate way to conduct the project.

3. ***The students and teacher structure the project.***

After setting up the "head" and the "feet", the "body" is needed to be designed by the students. The following questions should be considered before they start to do it: What information should be included to complete the project?, How can the information be collected?, How to categorize and analyze the information?, and "What is the timeline from the start to the end?.

4. Teacher prepares the students for the language demands of information gathering.

At this stage, the teacher needs to prepare language demands, thus the students can gather information. For instance, the students will interview other people to collect information, thus the teacher needs to instruct the students about question formation and conversational gambits.

5. The students collect information.

After the students practice the language, skills and strategies, they need to collect information.

6. Teacher prepares the students for the language demands of categorizing and analyzing data.

At the previous stage, the students have collected information. At this step, the students will encounter challenges of categorizing and analyzing the data. Therefore, the teacher needs to prepare sessions in which the students can practice categorizing, evaluating, analyzing and interpreting materials.

7. The students organize and analyze information.

The former stage is a simulated practice, and this stage is the practical operation. The students will organize and analyze data with the assistance of a variety of organizational techniques.

8. Teacher prepares the students activities for the final presentation.

After the students successfully analyze data before presenting the final

project, the teacher needs to prepare some activities for practicing skills of the presentation.

9. The students present final product

At this stage, the students will present their final project on which they have done with a lot of effort.

10. The students evaluate the project

Although viewing the final project presentation is the final step, evaluating projects is necessary for reflecting what the students have learned. Moreover, it can make a conclusion of the students' learning in this period and also benefits the teacher learning into the students' insights and projects.

It is clear that each step plays a crucial role in completing a successful project. Therefore, the students' performance and progress of each step as the contribution of completing the project are necessary to be assessed for their reflection on their work.

In the present study, three mini projects will be employed, which are different in character. The procedures of each project do not fully follow Stoller's 10-step program. Namely, they are a little fine-tuned basically based on Stoller's (1997) 10-step procedure.

2.6 Assessment of PBL

In integrating PBL into the class, assessing the final outcome is not the only focus. With one of PBL's principles "learning by doing", the learning process is becoming

another important point and the students' performance should be assessed as well. Therefore, the traditional paper-pencil assessment which provides the students a standardized test, like multiple choice and true-false tests, seems not to be appropriate to measure the students' performance in the learning process of PBL (Grant, 2002). Additionally, it is generally believed and has been shown that the modes of assessment affect the students' learning process (Gibbs, 1999; Scouller 1998). Therefore, in order to evaluate a student's performance effectively, the teacher needs to combine a variety formative and summative assessments (Slater et al., 2006).

Formative assessment refers to the assessment process which gathers information and feedback for improving the students' learning activities and teacher's teaching (Crooks, 2001; York, 2004). For example, after the presentation, the teacher and students give feedback and suggestions. However, summative assessment focuses on a certain point to measure what the students know and what they do not know, periodically (Garrison & Ehringhaus, 2007). For instance, a test can be used to evaluate the students' gained knowledge in a period.

As mentioned above, assessments of PBL are not unique. Therefore, besides the teacher assessment, the students can be assessed by their peers and by the students themselves (Arlington Education and Employment Program, 1997). In PBL, from the beginning of the project, it is suggested that the teacher should provide the measurable criteria to the students, since the students need to know and understand the criteria (Arlington Education and Employment Program, 1997). Furthermore, the teacher needs

to identify the levels of performance and describe the meaning of different levels. Additionally, the criteria are not definitely decided by the teacher. The students in intermediate and advanced levels are allowed to be involved in identifying objectives and evaluation criteria as well. During the process of learning, teachers can observe what skills and knowledge the students use and what they can do with their language.

Peer assessments refer to a process that the students evaluate their peer's work or performance with providing either feedback or grades (or both) which are based on the criteria that the students have been involved in determining (Falchikov& Blythman, 2001). In PBL, peer assessment can be considered as a part of group work. A Peer's evaluation can be seen as resources for understanding and improving a student's work and performance (Garrison & Ehringhaus, 2007). For instance, the students can watch an oral practice, afterwards offer words of encouragement, help and suggestions for other the students' improvement. Thus, Hanrahan & Isaacs (2001) emphasized that peer assessment will assist the students to contribute constructively in cooperative learning.

Self-assessment involves learners in evaluating and reflecting on the quality of their work and performance according to the determined criteria (Andrade & Du, 2007). According to the Arlington Education and Employment Program (1997), it is claimed that learners should be provided with opportunities to tell what skills and knowledge they have obtained and how they feel; to report work and progress; and to identify the weakness and strength. Hence, learners will be motivated, active and responsible for their learning, if they set up their own learning goals and assessment. Additionally, self-

assessment will help learners to set up goals for future learning and they can learn from themselves (Hanrahan & Isaacs, 2001). According to the Arlington Education and Employment Program (1997) and Spiller (2009), it is emphasized that self-assessment is an ability that contributes to life-long learning. In the present study, both formative and summative assessments are employed. In order to evaluate the students' performance, teacher assessment, peer assessment and self-assessment that is regarded as the formative assessment will be utilized. The teacher will grade the work. Moreover, their peers and the teacher will provide feedback to the students and the students will report their work. To assess the students' speaking abilities, a summative assessment, the national speaking test named College English Test Spoken English Test (CET-SET) is selected to be used and will be introduced in Chapter 3.

There are numerous tools used to assess the students' learning, product and performance. Rubrics is one of the scoring tools that have been accepted by most educators and researchers. It is defined as a scoring tool for qualitative assessment of the students' authentic or complicated work, which includes criteria for rating the students' performance and standards for attaining those criteria（Jonsson & Svingby, 2007） Concluding from Jonsson (2007) and Wolf (2007), several advantages can be provided to both teachers and the students. First, rubrics make learning goals more explicit. If the students know the learning goals, it is better for them to know what they should do. Second, teachers clarify their expectations carefully in the rubric form that will guide teachers to choose instructional approaches that always surround the center

and target of learning. Third, the teacher utilizes a rubric, a common standard in reviewing different pieces of work; the judgments would be more fair and consistent for the students. Finally, with a rubric in hand, the students are provided a concise and clear judging standard in evaluating their peer's and their own work.

Good rubrics should be well-designed, clear, detailed and precise, which can benefit both the teachers and the students. If the rubrics are poorly designed, it will limit the learning. Wolf & Stevens (2007) explained that a well-designed rubric gives the assessment process high validity and reliability. Relatively, a poor rubric would decrease the learning process. It would mislead the students' understanding and restrict the students' creativity. Meanwhile, there is a limitation of designing rubrics that a teacher will find that the time of designing, writing and testing the rubric is time-consuming. Therefore, the teacher cannot write rubrics for each task, but for important and complex tasks only. In this study, in order to assess the students' performance in the three projects with good rubrics, three rubrics developed by Hall (2000), the Buck Institute for Education (BIE) (2013) and the Texas Education Agency (2006) are adopted for the teacher to use as the guidelines to grade the students' performance. These rubrics are clear, concise and consistent with the objectives of each project. More detail about choosing these rubrics will be given in Chapter 3.

In conclusion, PBL focuses on not only the end product, but also the learning process. In order to effectively evaluate the performance, the simple and traditional paper tests seem not appropriate. Therefore, in assessing a student's performance, it

should combine the summative and formative assessments, which could be more fair

and consistent. In the next section, some research projects with positive outcomes will

be presented.

2.7 Benefits of implementing PBL in educational context

Benefits of PBL have been tested in various disciplines, specifically in science,

history and geography. It was reported that it can enhance learners' motivation,

confidence, increase the authentic learning experience and gain cognitive growth.

Furthermore, benefits on second or foreign language education have been reported in a

number of studies (Hutchinson, 2001; Stoller, 2006; Foss, 2007; Tsiplakides &

Fragoulis, 2009; Li, 2010; Bas, 2011; Nikitina's, 2011; Su, 2011;). The main benefits

will be presented as follows:

a) **Enhancing motivation, self-confidence, self-esteem and positive attitude.**

Some researchers have demonstrated that the students are the most motivated

when they can take control and design their own learning. Moreover, Eills (1997)

indicated that the effort that the students make in second language learning is influenced

by their motivation. Compared with traditional education, PBL as an instructional

approach stresses student-centered and student-authority. In other words, the students

have to take responsibility for their learning, for instance, they have to decide which

method they will use to collect the data, do the interview or design the questionnaire.

Thus they turn the role of passive learners in traditional education into the role of

initiative learners in PBL. Moreover, they appear to be more confident and have higher self-esteem in their learning.

In Li's (2010) study, the students from the Geography and Tourism Department enrolled in a project-based English course, called "Urban space in Ulumuqi". In this course, the students were provided with opportunities to practice their speaking. The result showed that the students were motivated, positive and active in taking tasks in the authentic environment while they were asked to develop the worksheet and conduct surveys at the public park, and they realized that the challenges they met right now would be similar and helpful for their future work. Besides, the study revealed that there was a significant improvement of cooperative abilities among the students.

A similar result was reported in Baş's (2011) study. In the study, the effects of PBL on student's academic achievement and attitude were investigated. The result showed that the students in the experimental group had higher motivation than those in the control group. Additionally, the students in the experimental group were more capable of taking responsibility for their own learning. Other findings showed that after the five-week implementation the students were more successful in self-esteem, self-confidence and their attitude in English learning.

b) **Improving language skills and gaining cognitive growth**

In the learning process of PBL, the students are provided with opportunities to practice their language skills. Practitioners have reported that working on projects improve reading, writing, speaking, listening, vocabulary and grammar skills (Stoller,

2006). Therefore, in engaging in activities the students practice integrated skills, since they read authentic materials to write and listen to authentic conversations to speak. Meanwhile, in the communicative process, the students construct and reconstruct knowledge that is based on their prior knowledge and related environment. Piaget (1971) asserted that constructing and reconstructing knowledge are based on exiting knowledge and environment, which leads to cognitive growth (as cited in Su, 2011, p.247).

In Tsiplakides and Fragoulis's study (2009), they studied the students in Greek primary school who participated in a "local history" project, which aimed to improve student's reading, writing, listening and speaking skills through making the students acknowledge local history. As the result showed, the majority of the students gained cognitive growth and emotional increase, and they were more willing to participate in learning activities and eager to experience the new language as well. Meanwhile, it was found that their four skills were improved, especially, the speaking and listening skills. Furthermore, communicative competence of most the students was found to have been developed. Also in Su's (2011) study, university students in Taiwan took part in the cultural portfolio project. The result revealed that the students gained cognitive growth in doing the project. Whilst the students compared their own culture and the target language culture, they adapted multiple resources and combined the new information with their prior knowledge in analyzing the differences and similarities between these two cultures.

c) Enhancing authenticity of language and experience.

PBL engages activities in an authentic environment, allows the students to communicate in the target language and encourages the students to solve problems in a real-world context, thus the students can experience appropriate language in a meaningful life situation.

In Nikitina's (2011) project, Russian language learners were involved in producing their own video and a short movie. The content of the video was relevant to the learners' real life experiences (eg. My university life), and therefore, the students had to film on campus or some familiar locations by using the target language. The result revealed that the authenticity of the learning context and situation enhanced the authenticity of language that the students produced as well as the authentic learning experience. In the study of Foss (2007), the researchers investigated the effectiveness of PBL on a short-term intensive English program for Japanese university students. The final result revealed that the students appreciated PBL since it provided real-life interest and connected the real-world situations. Furthermore, the author concluded that "project-based learning prepares the students well for real world events" (p.16).

A number of positive results of PBL have been reported in the above research projects. It can be assumed that PBL could be effective in instructing non-English major students' speaking abilities. Therefore, this present research project intends to implement PBL in the language classroom in China to investigate the effects on the improvement of the students' speaking abilities. Although there are many advantages,

some challenges still exist in implementing PBL. Hence, in the next section, the challenges of PBL will be discussed.

2.8 Challenges of implementing PBL

Although a lot of research projects have reported positive outcomes of PBL, some challenges need to be discussed too. Firstly, the students in China who are used to teacher-centered instruction may take PBL as a great challenge because PBL emphasizes student-centered learning (Gu, 2002). Secondly, PBL is time-consuming. Normally, it takes a longer time to prepare, conduct and present the project than activities in the traditional classroom (Hutchison, 2001). Thirdly, the students could give up speaking the target language whilst the teacher is absent (Hutchison, 2001). Finally, deciding the focus and format for the project may be a challenge for the students (Fleming, 2000).

From the teachers' perspective, when teachers implement PBL, there are some concerns as well, and those concerns are concluded by Marx (1997) (as cited in Thomas, 2000) and Fleming (2000). First, normally projects take a longer time than predicted. Second, it is important for teachers to balance the need to allow the students to work on their own and the need to keep following the order, thus classroom management is necessary. Third, it is a conflict that teachers consider to control the flow of information because meanwhile they believe that the students construct their own knowledge by their understanding. Fourth, PBL requires learner-centered education, which causes

teachers to have difficulties to scaffold the students' activities. This results in giving the students too much independence and less modeling. Fifth, it is difficult for teachers to learn different skills to guide the students. For instance, for the teacher who is not familiar with technology, it is hard to incorporate technologies into the classroom. Finally, it is a challenge for teachers to design assessments to evaluate the students' understanding.

Although implementing PBL would encounter the challenges mentioned above, the results of a lot of studies reveal tremendous advantages of implementing PBL. Therefore, in order to overcome these challenges, careful and detailed design is required, which will be further explained in Chapter Three. In conclusion, this section discussed the benefits and challenges of implementing PBL. With so many challenges proposed, a number of advantages were reported in the above studies. Therefore, it should be worth implementing PBL into the present study to see whether it can enhance the students' speaking abilities or not. In the next section, studies in the Chinese context and the necessity of incorporating PBL into the Chinese language classroom will be discussed.

2.9 Previous studies of PBL in the Chinese context

In the last two decades, PBL has been a powerful and accepted teaching approach worldwide. In this decade, language educators have applied this approach into EFL and ESL classrooms as well. Consequently, continuous positive outcomes have been

reported. As a rapidly developing country, China has increased contact with other countries. Meanwhile, with cooperation and communication increasing, English as the international language is used in different fields and careers. Therefore, it requires a big amount of non-English major students who are professionals in their fields and have certain English ability. However, most of non-English major graduates have lower speaking abilities as discussed in 1.1. Therefore China has gradually realized that the traditional teaching approach cannot fit the new requirements of English teaching, and language educators in China have been trying to integrate PBL into the EFL classroom. However there is no study about implementing PBL to improve non-English major students' speaking abilities which is the main purpose of the present study. The following studies are some attempts to implement PBL into the Chinese EFL classroom in other aspects.

Li (2010) conducted survey research about integrating PBL into an English classroom for non-English major classes (Geography and Tourism) called "Urban Space in Urumqi". This study attempted to investigate benefits that the students can gain from this course and the contribution of this course for bridging the textbook and demand of the students' academic subjects. Moreover, it investigated the negative effect of the project on the students' performance of CET-4 (college English test band 4), a national English test with high validity and reliability which contains listening, speaking, reading and writing. Moreover, this study planned for a ten-week semi-structured project and participants were required to conduct a survey which was related

to their interests, fields and the theme of the course. Afterwards, two instruments, a short questionnaire with three open-ended questions and the CET-4 test were used to collect data. The data from the questionnaire is utilized to reveal the students' opinions on PBL. Moreover, the scores of CET-4 are used to see the students' performance after PBL intervene. In terms of the data analysis, Statistical Package for the Social Science (SPSS) 21.0 is used to analyze the scores. Finally, the results revealed that integrating PBL in English classroom improved the students' innovative, communicative and cooperative abilities. Meanwhile, the project improved student performance in CET-4 as well which satisfied both the students and teachers.

Sun (2011) developed a project to investigate whether PBL can improve the students' language proficiency and the effect of PBL on the students' motivation, cooperative ability and other abilities. Eighty first-year students participated in the study. During the implementation, according to the students' interests and the theme of each unit, they selected their topics and conducted their own projects. In this study, CET-4 and a questionnaire were employed to collect data. The data from of CET-4 is used to answer whether PBL can improve the students' language proficiency. Furthermore, the data of the questionnaire is adopted to reply whether PBL can motivate the students' learning and whether PBL can enhance the students' cooperative abilities and other abilities. Moreover, SPSS is used to analysis the data. The findings indicated that PBL could enhance the students' motivation since the students were provided with a relaxed, harmonious, authentic and open environment and they were given authority

to take control of their own learning. Moreover, PBL could improve the students' overall language proficiency since language project learning is a series of comprehensive practical activities that involve utilizing reading, listening, writing and speaking skills. Thus, in the process of producing the project, the students can practice the four skills. Furthermore, PBL boosted the students' cooperative ability, while doing the project, the students shared ideas and information, and they learned from each other as well as improved their cooperative abilities. Besides, oral presentation skills and technology skills were reported to being enhanced.

Wu (2012) investigated whether PBL can promote English majors' learner agency (LA) in the Chinese EFL learning context. LA means that "learner as active agents are able to restructure their language learning beliefs, choose appropriate language learning strategies, exercise their learner autonomy, regulate their language learning motivation and use their critical thinking skills" (Wu, 2012, p.6). Since the agency cannot be directly observed, Wu explored agency through examining the effect of PBL on learners' beliefs about language learning, choice, strategies of language use, learner autonomy, learning motivation and critical thinking skills. A group project and independent project were designed to evaluate leaners' cooperative learning ability and independent learning skills, respectively. A pretest-posttest like the California Critical Thinking skills Test (CCTT or CCTST), three questionnaires, a semi-structure interview, learning journals and field notes were adapted to collect data. The result from Wilcoxon signed-rank tests which is a non-parametric statistical hypothesis test showed that the group

project work changed the learners' beliefs about language learning. Moreover, in group project work, leaners frequently used metacognitive strategies, compensation strategies and social strategies in engaging in activities of the project. Furthermore, project work not only altered the learners' autonomous perceptions but also enhanced their autonomous learning abilities to some degree. Group project work also increased learners' motivation of language learning. It led to learners' frequent use of critical thinking, and contributed to the improvement of critical thinking skills.

According to data from CNKI (China National Knowledge Internet), which collects journals, conference articles, doctoral dissertations and master dissertations from all over China, there are 482 articles entitled PBL from the years 2001 to 2015. However, most of these articles integrated PBL into various fields other than second language education, such as, engineering, medical education, technology and so forth. Merely a few articles investigated the effect of PBL on second language education in the university level. Moreover, most of these articles focused on the effect of PBL on overall language skills as explained in the above three studies. The study of investigating the effect on a certain language skill such as reading, speaking, listening or writing is limited. Therefore, the present study aims to investigate the effect of PBL on the development of Chinese first-year non-English major students' speaking abilities as well as the students' opinions on PBL.

2.10 Summary

In this chapter, the overall picture of the PBL approach's literature review was presented. The definition and development of PBL were presented firstly. Then, characteristics that are different from the characteristics of the traditional method, theoretical framework that support the present study, processing steps for how to develop projects in the present study, assessments that are used to assess student's learning, benefits and challenges that exist in PBL were discussed. Lastly, previous studies that incorporated PBL in the Chinese context were presented. In the next chapter, the research methodologies will be presented.

CHAPTER 3

REASEARCH METHODOLOGY

This chapter discusses the methodology for the present study. It starts with the context of the research, participant, then research design, variables, instruments and procedure are presented. Finally, the data collection and data analysis are given.

3.1 Research context and participants

The present study will be conducted in the College English course at Kaili University (KU), the only university in Qiandongnan Miao and Dong autonomous prefecture. KU is considered as a comprehensive university, which is under the supervision of the Qiandongnan government. KU has seventeen schools, including the School of Mathematics and Science, School of Foreign Languages, School of Art and another 14 schools (Kaili University, 2012).

Besides English majors, other non-English majors are instructed with college English in the first year and the second year. The duration of the course is sixteen weeks a semester and the students need to go to English class for 3.5 hours per week. Additionally, the *College English Text* 1 to 4 were selected as the material of the college English courses. Each book contains eight units with eight different topics which may interest the students and relate to real-life situations, such as traveling, campus life and

love. Furthermore, these real-life related topics provide the students with opportunities to integrate PBL into real-world situations.

In this research, a total of 80 first-year students in the same major from two English classes are selected to participate in the study. A convenience sampling method is utilized to select the experimental group, 40 students and the control group, 40 students. The reason for selecting the first-year students is that they do not have any experience of learning English through PBL in the university level.

3.2 Research Design

The present study refers to quasi-experimental research and employs a triangulated methodology to investigate the effect of implementing PBL in English class on improvement of non-English major university students' speaking abilities and opinions of the students on PBL.

Cohen, Manion, and Morrison (2000) indicated that a quasi-experiment is "an experiment in which units are not assigned to conditions random " (p. 213). Moreover, the design of the present study adopts the most commonly used design of the quasi-experiment as formed below:

O1, O3= Pretest

Experimental	O1	X	O2	X= Treatment
Control	O3		O4	O2, O4= Posttest
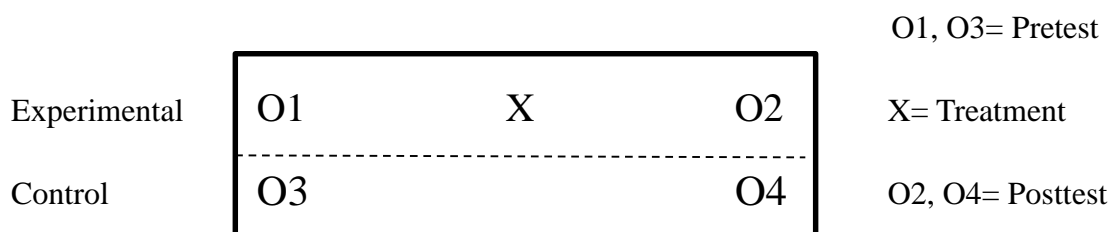
Figure 3.1 A quasi experimental research design

(Cohen, Manion & Morrison, 2000 **)**

In the experiment, implementing PBL instruction is considered as a treatment. Its effect on speaking abilities of university students and the students' opinions were investigated. Moreover, quantitative methods (a speaking pretest, a speaking posttest and a questionnaire) and a qualitative method (semi-structured interview) are used to collect data.

By using both quantitative and qualitative data, there could be a rich explanation of the result from more than one standpoint (Cohen, 2000). The statistical data of quantitative interpretation could enhance the explanation of the qualitative one and vice versa. Moreover, utilization of the quantitative and qualitative methods aims to increase the validity of the present study.

3.3 Variables

There are two variables in the present study: (1) an independent variable, the PBL instruction that will be involved in the whole process; and (2) dependent variables, the development of student's speaking abilities that will be assessed before and after the

PBL instruction, and the students' opinions on the PBL approach that will be investigated after the speaking post-test.

3.4 Research Instruments

In order to achieve the objectives of the present study, four instruments are adapted: (1) PBL instruction; (2) speaking pre-test and speaking post-test; (3) a questionnaire; and (4) a semi-structured interview.

3.4.1 Project-based learning (PBL) instruction

In the present study, PBL instruction that is designed based on principles of the PBL approach is employed as a treatment to the experimental group. Moreover, the design of PBL instruction adopts and adapts the 10-step PBL procedure (discussed in 2.4) proposed by Stoller (1997) as the guideline because it provides a detailed and concise step-by-step process and explanation to the teacher and the students in doing the project.

Additionally, in this study, in order to provide the students with more opportunities in producing speaking output, three mini projects are designed for the learning process. The reason of designing three is that according to the duration of the semester three projects is an ideal number to engage the students to practice their speaking abilities which can provide relatively equal opportunities to practice each aspect of speaking abilities and other skills. Furthermore, the amount of work in each project may not be too much for the students, and the students would not feel that it is time-consuming.

However, not every project in this study follows the Stoller's 10-step procedure (1997) precisely, thus there is a fine-tuning process in two projects. The three projects used in the experiment are the drama project, the investigation project and the storytelling project. The following section will explain the aims and the procedure of each project.

3.4.1.1 Drama project

This project is designed to provide the students with the opportunity to accommodate cooperative work, and mainly practice their pronunciation and language size. It lasts 4 weeks.

Step 1: The students and teacher agree on a theme for the project

The teacher introduces the PBL approach to the students. After they get some knowledge about PBL, the students are formed into groups of five or six people. Then, they decide the group theme which is the topic in the textbook that they are interested in, and the theme will be used in the three projects. After that, the first project, drama project, is introduced to the students.

Step 2: The students and teacher structure the project.

The teacher and the students plan the schedule and structure issues of the drama, for instance what information should be presented through the drama. Then, roles and responsibilities will be assigned to every group member.

Step 3: The students collect information

The students search for information, the drama script through various resources, then discuss with group members and finally decide the final drama script.

Step4: The students present the outline of their drama, and then the teacher and other groups give suggestions.

After the students decide their drama script, they simply present the outline and their ideas, and then the teacher and other group of the students give suggestions.

Step 5: The students practice and rehearsal their drama

In this step, the students learn to work corporately and practice their language of speaking through rehearsing the project.

Step 6: The students present their drama

After two to three weeks practice, the students present their drama in front of the teacher and the class.

Step 7: The students and the teacher evaluate the work.

The final step of this project is that the teacher evaluates their work according to the drama rubrics (Appendix A) developed by Hall (2000) and their peers provide suggestions to the work. The reason of selecting the drama rubric is that the rubric contains the aspect related to the language aspect as well as the drama aspect.

3.4.1.2 Investigation project

The second project aims to practice the students' discourse management, language use and cooperative work. The students investigate a topic which relates to the group theme. For instance, if the theme is about a holiday, and the students investigate the topic "what do university the students do during the holiday?" The steps of developing this project will strictly follow Stoller's 10-steps (discussed in 2.4). In

terms of the final step, the teacher and the students rate the end product, the presentation, according to the rubrics (Appendix B) developed by the Buck Institute for Education (BIE) (2013). BIE as an institute focused on PBL instruction. Thus, the rubric is designed for the intermediate level with high reliability, which is concise and detailed.

3.4.1.3 Storytelling project

This project is an individual project, and the aim of the project is to provide every student with a relatively equal opportunity to produce speaking output because in the first two projects it is not guaranteed for the students to have an equal opportunity to speak. In the project, each student will present his or her story that relates to the group theme and share with group members in the evening self-learning class at the same period of the investigation project. Moreover, the students will share their story with their group members rather than the whole class in the evening self-learning class. Addtioanlly, the storytelling project lasts for four weeks. Each group takes one evening (from Monday to Friday) in each week and asks two students to share their stories (see Figure 3.2). The steps of developing the storytelling project are presented as follows.

Step 1: The teacher introduces the project to the students.

In the first step, the teacher introduces the project to the students, including the duration and criteria.

Step2: The students prepare their story and collect information.

In this step, the students prepare their story, and the story could be their personal experience or other people's story which impresses them.

Step3: The students share the outline of the story with their group

members.

After collecting information, the students present to their group members the outline of the story to avoid similar stories.

Step 4: The teacher prepares the students for language demands of telling

a story.

In this step, the teacher instructs the students the language of telling a story, for example, transitional words (however, therefore and otherwise).

Step5: The students prepare for the story telling.

After the language instruction, the students practice telling the story with tools that make the story easily understood and more active, for example, a PowerPoint presentation with pictures and videos.

Step 6: The students present their stories.

In this step, the students present their stories with a PowerPoint presentation or other tools.

Step 7: The teacher and the students evaluate the final product.

In the final step, the teacher and the students rate the storytelling according to the rubric (Appendix C) developed by the Texas Education Agency (2006) which is a branch of the state government of Texas in the United States responsible for public education. Meanwhile, students make comments and share their feelings after listening to the story.

3.4.2 Tests

The speaking pre-test and post-test are utilized in the present study to measure the change of the students' speaking abilities before and after implementing PBL lessons. The national speaking test, CET Spoken English Test (CET-SET) in 2005 and 2007 (Appendix D) developed by the national committee of CET and implemented since 1999 are adopted as the speaking pre-test and post-test. Moreover, the test is developed according to the curriculum of college English. The topic of the pre- and post-test are considered having maximum relation with the students' life and study. Therefore, there would be no bias on the students' abilities and opinions.

CET-SET evaluates the students speaking abilities in six aspects (accuracy, range, size, discourse management, flexibility and appropriacy), and the scores are rated according to the CET-SET scoring rubrics (Appendix E). The total score indicates the level of the students' speaking abilities, which ranges from band D (i.e. student is not capable of communication) to band A (i.e. the student can communicate fluently without any difficulty).

During the tests, participants will be divided into groups of three or four to accomplish three tasks in 20 minutes. The first part is reading and lasts 5 minutes. The students have to read a passage. The second is discussion and lasts for 10 minutes. The students have to give their ideas and opinions about the topic in part two. The third part is questions and answers and lasts for 5 minutes. The students have to answer the questions from the examiners.

In order to ensure the reliability of the test scores, two examiners will rate a student's speaking abilities. One of the examiners is the researcher of the present study and the other examiner is an experienced teacher who has been teaching College English for over ten years and participated in the work of grading CET-4 (College English Test brand 4) and CET-6 (College English Test brand 6) for many years. To ensure the inner-reliability, two raters will discuss rating issues and practice to rate some other the students who do not participate in the study before grading the students' performance

3.4.3 Questionnaire

The questionnaire as shown (Appendix E) is a post-experimental questionnaire and it aims to investigate the students' opinions on the PBL approach. The questionnaire includes 21 items of questions. Moreover, the students will give their opinions in a five-point scale (Likert Scale), for instance, 5 is strongly agree and 1 is strongly disagree. Regarding the questionnaire design, the researcher reviewed the literature to learn how to write the questionnaire and adapted some items form Sojisirikul's (2009) study since these items are related to the present study. All the items in the questionnaire were examined related to the study by experts who are the experienced teachers in university, and the statements were revised according to experts' suggestions.

3.4.4 Semi-structured interview

In the present study, a semi-structured interview is conducted to collect additional data from participants, aiming to investigate the students' opinions on PBL approach and problems they encounter while doing projects. According to Numan (1992),

interviews could be categorized into structured interview, semi-structure interview and unstructured interview. The semi-structured interview refers to a simple conversation between the interviewer and interviewees with guiding questions that the interviewer wants to find out. There are many advantages of using semi-structured interview. On the one hand, the semi-structured is flexible so that the interviewer has power to take charge of the process of interview. On the other hand, it can be used to develop a deeper and more detailed understanding of research questions (Fylan, 2005). Therefore, the semi-structured interview is used in the study. The questions of the semi-structured interview in the present study are adopted from Newprasit (2011) because it meets the objectives of the study. Since Newprasit's study aims to investigate the effect of instructing PBL on non-English major the students' overall language proficiency and the students' opinions, it is similar with the present study.

The interview is conducted after the speaking post-test and questionnaire. Half of the participants in the experimental group are selected randomly to take part in the interview. A list of nine questions, as presented in Appendix F, is predetermined to help the interviewer to guide the interview and each group of the students takes ten to fifteen minutes for interview. The interview will be conducted in Chinese, so that participants can express their opinions easier. Moreover, the process of the interview will be recorded and the key information will be transcribed into English.

3.5 Procedure

This section aims to explain the process of carrying out the whole study. For the experimental group, PBL is the treatment. However, for the control group, the students are instructed by the traditional method. Before and after the implementation of PBL, both the experimental group and the control group participate in the speaking pre-test and post-test, thus their abilities are evaluated and compared. It is important to note that in terms of the storytelling project, the story of each student will be presented the evening self-study class. In order to balance the language input and output, the control group is required to join the English corner to practice their spoken English in every Thursday evening, which is organized by two American teachers and the students can talk to the teachers and other students. Finally, Figures 3.2 and 3.3 show the general process of the experimental group and the control group, and the detailed procedure of the experimental group is presented in Appendix G

Week 1

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┌─────────────────────────────────┐
│         Pre-speaking test        │
└─────────────────────────────────┘
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Week 1-5

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┌─────────────────────────────────┐
│    Project one: Drama project    │
│      (See Steps in 3.3.1.1)      │
└─────────────────────────────────┘
                 ↓
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Week 6-12

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┌──────────────────────────────────┐      ┌──────────────────────┐
│ Project two: Investigation project│  ➕  │ Project three: Story  │
│      (See Steps in 3.3.1.2)       │      │    telling project    │
│                                   │      │  (See Steps in 3.3.1.3)│
└──────────────────────────────────┘      └──────────────────────┘
                 ↓
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Week 13

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┌─────────────────────────────────┐
│        Post-speaking test        │
│                &                 │
│          Questionnaire           │
└─────────────────────────────────┘
                 ↓
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Week 14

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┌─────────────────────────────────┐
│     Semi-structured interview     │
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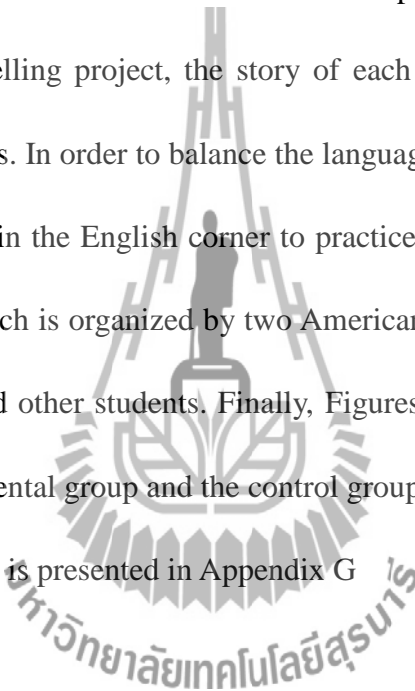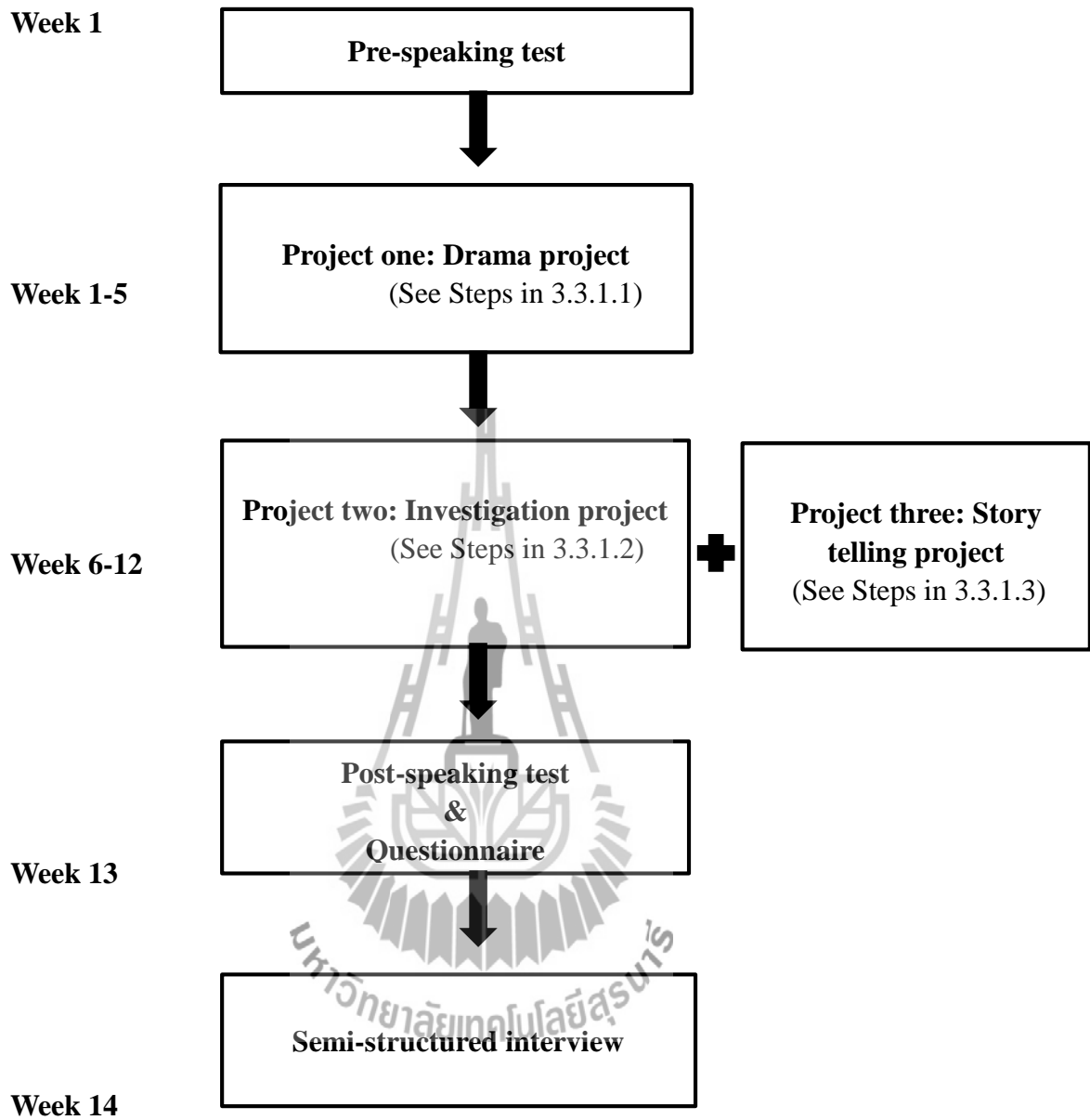
Figure 3.2 Procedure of the experimental group

Week 1	Pre-speaking test

| Week 2-12 | The traditional instruction | ➕ | English corner activities |

| Week 13 | Post-speaking test |
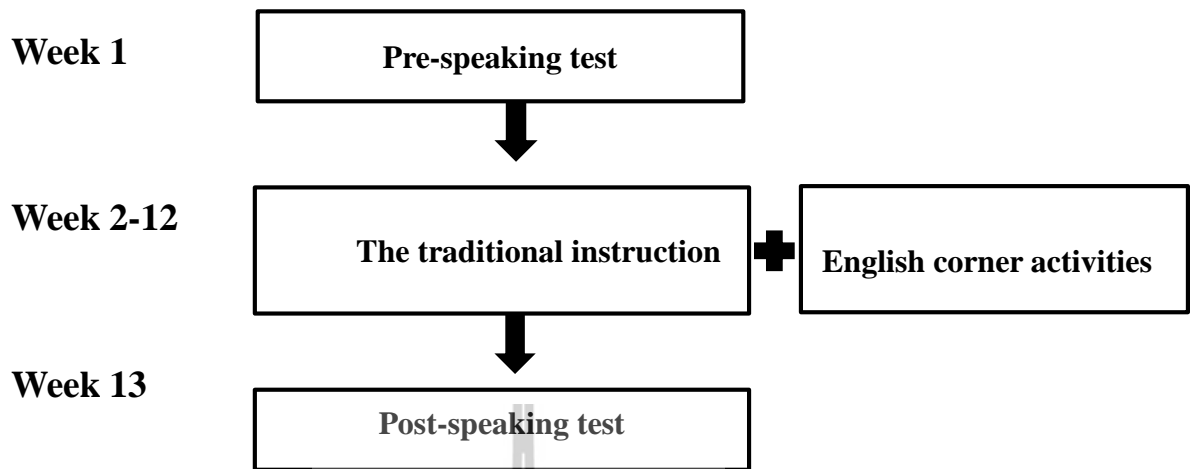
Figure 3.3 Procedure of the control group

3.6 Data analysis

After the data are collected via quantitative and qualitative methods, the data would be analyzed to reveal the result of the study. The details of data analysis are given below.

3.6.1 Quantitative Data Analysis

The quantitative data includes the students' scores from the speaking pre-test, speaking post-test and questionnaire.

3.6.1.1 Test Scores

In order to analyze the students' speaking abilities, the scores of speaking pre-test and speaking post-test will be analyzed to find out the mean scores and standard deviation in descriptive statistics. Afterwards, a paired sample t-test will be employed to analyze whether there is any improvement after PBL approach is implemented.

3.6.1.2 Questionnaire

A five-point scale (Likert scales) will be utilized to collect the data of the students' opinions on PBL. The mean score in descriptive statistics was applied to analyze the collected data.

3.6.2 Qualitative Data

3.6.2.1 Semi-structured Interview

The data collected by the interview will be analyzed qualitatively. The method of analyzing qualitative data is adapted from the analysis steps proposed by O'Connor, & Gibson (2003). The procedure of analyzing the data will be processed as follows. Initially, the researcher goes through and organizes the interview guiding questions, which aims to identify and differentiate the topics and the themes to find an easy way to look at the data. After organizing the data, the researcher finds out specific words and similar ideas, and then categorizes them into same topics and themes. Afterwards, the researcher summarizes the similar themes and topics because different categories may have the overlap and each respond category has one or more associated themes that can provide a deeper understanding of the data. Finally, the researcher summarizes the themes and findings.

3.7 Summary

This chapter described the research methodology of the present study, and explained who will participate in the study, what instruments will be used in the study and how the study will process. In the presents study, 80 first year non-English major the students form two intact classes will participate in the study. They will be assigned into an experimental and a control group randomly. The experimental group will be intervened via PBL treatment. Moreover, the PBL instruction, speaking pre-test and post-test, a questionnaire and a semi-structured interview will be used to collect the data. Regarding analyze data, it will adapt both quantitative and qualitative methods. Furthermore, the result from the data analysis will respond to the research questions.
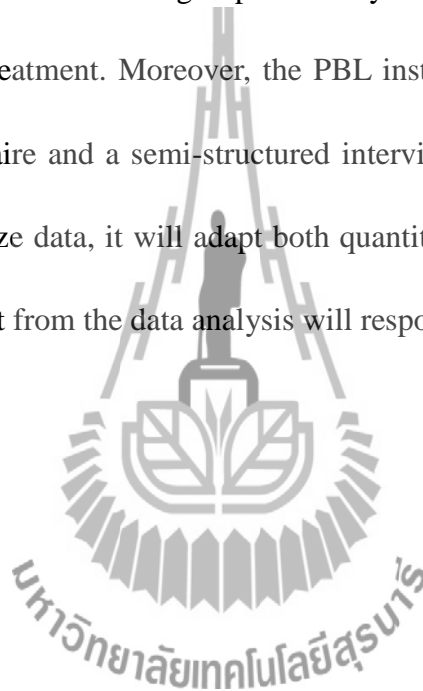
CHAPTER 4

RESEARCH RESULTS

This study intended to investigate the effect of project-based learning (PBL) on the speaking abilities of first-year non-English major students at KU, and their opinions about the PBL approach in English learning and encountered problems while engaging in the PBL approach. The purpose of this chapter is to report the findings of the present study. Therefore, in order to collect the quantitative and qualitative data to respond to the two research questions of the study, three instruments were applied. The result of the study will be reported by the order of questions.

4.1 Answers to research question 1

Do PBL lessons help improving speaking skills of first-year non-English major the students at KU in three aspects (accuracy & range, size & discourse management, and flexibility & appropriacy)? If so, how?

The first question is to examine whether implementing PBL can improve non-English major students' speaking abilities. In order to answer this question, the quantitative data obtained from the speaking pre-test and post-test, and qualitative data obtained from the semi-structured interview were analyzed by the researcher. The results will be discussed as follows.

4.1.1 Results of speaking tests

4.1.1.1 Result of speaking tests in general

In the speaking pre-test the topic "English learning" and in the speaking post-test the topic "city life" were applied to measure the students' speaking abilities before and after incorporating PBL in the English course. Moreover, the speaking pre-test was used as the criteria to judge whether any different level of speaking abilities existed between the control group (CG) and experimental group (EG) before applying PBL in the main study. Table 4.1 presents the result.

Table 4.1 The paired-samples t-test of speaking pre-test

		Paired Differences		t	df	Sig. (2-tailed)
		Mean	Std. Deviation			
Pre-test	CG - EG	.2250	2.1302	.668	39	.508

As the result shown in Table 4.1, the p-value is 0.508, which is more than 0.05. Therefore, there is no significant difference between the control group and the experimental group. It means that the students in the control group and the experimental group have the similar ability in English speaking, and the bias in the study can be avoided.

Table. 4.2 The paired-samples t-test of speaking post-test

		Paired Differences		t	df	Sig. (2-tailed)
		Mean	Std. Deviation			
Post test	CG - EG	-.9625	2.3272	-2.616	39	.013

The finding in Table 4.2 shows that the p-value is 0.013, which is less than 0.05. It indicates that there is a statistically significant difference between the control group and the experimental group in the speaking post-test. It infers that there is a difference between the scores of the two groups. Moreover, in order to explore more details, the researcher used a simple t-test to see whether both groups made significantly improvement and used descriptive statistic to compare the mean scores of both groups in the speaking pre-test and post-test and the students' level of ability change of these two groups, which aims to see whether and how much the students in the control and experimental group had improved after the 12-week experiment.

Table 4.3 The paired-samples t-test of speaking tests of two groups

	N	Correlation	Sig.
Pair 1 PreCG & PostCG	40	.912	.000
Pair 2 PreEG & PostEG	40	.598	.000

As Table 4.3 shows, the p-value of both groups are 0.000 which is less than 0.05. It means that both of the control group and the experimental group made a great progress in speaking after the 12-week English learning, but it needs to investigate whether the two groups made the improvement in the same degree. Therefore, comparing the mean scores of the speaking pre-test and post-test between these two groups is necessary.

Table. 4.4 Descriptive statistics of the speaking tests

		N	Minimum	Maximum	Mean	Std. Deviation
CG	Pretest	40	6.0	12.0	7.675	1.6233
	Posttest	40	6.0	12.0	8.263	1.5317
EG	Pretest	40	6.0	10.0	7.450	1.1756
	Posttest	40	6.0	12.0	9.225	1.4934
Valid N (listwise)		40				

In Table 4.4, the result reveals that both groups have improved after 12 weeks of English learning. However, comparing the mean scores of the speaking pre-test and post-test, the control group and experimental group have made progress in the different degree. In terms of the control group, the mean score in the pre-test is 7.675, and in the post-test is 8.263, totally increasing 0.588. However, in the experimental group, the mean score of pre-test is 7.45 and the post-test is 9.125, increasing 1.675. The increasing score is much more than the control group. Therefore, it tells us that the experimental group made a more obvious improvement than the control group did.

With regard to exploring the level of change of the students' speaking ability, the researcher recoded the scores into different level according to the speaking test scoring criteria (see Appendix E) and used descriptive statistics to calculate the frequency of each level to see what the improvement was. It has to mention that the levels of both groups ranged from level D to level B, which can be found in Table 4.5 and 4.6.

Table 4.5 Descriptive statistics of the level of control group in speaking tests

		Frequency (Percent)	
		Pretest	**Posttest**
	B	2(5%)	3(7.5%)
	C	16(40%)	21(52.5%)
Control Group	C+	2(5%)	3(7.5%)
	D	20(50%)	13(32.5%)
	Total	40(100%)	40(100%)

*D : under 7.9, the student is not capable to communicate.

*C, C+ : 8 – 9.4; 9.5 – 10.9, the student can communicate, but has a lot of difficulties. However, doesn't affect understanding.

*B: 11 – 12.4, the student can communicate, but has some difficulties. However, doesn't affect understanding.

In terms of the control group, Table 4.4 shows that in the pretest, before the 12-week English learning 50 percent of the students (20) were in level D and it means that the 20 students could not communicate while another 50 percent of the students (20) were in level C, C+ and B, which indicates that the rest of 20 students could communicate. However, in the 50 percent of the students (20) who can communicate, 45 out of the 50 percent of the students (18) who were in level C and C+ had a lot of difficulties. It means that only 5 out of the 50 percent of the students (2) who were in level B had a few difficulties and it implies that most of the students had the serious problem with speaking before the 12 weeks of English learning. In the post-test, the results demonstrate that the students made some progress. The students who could not communicate in level D reduced from 50 percent (20) to 32.5 percent (13). The students who could communicate in level C, C+ and B increased from 50 percent (20) to 67.5 percent of the students (27), but 60 percent of the students (24) still had a lot of

difficulties. The students who have few difficulties only increased from 5 percent (2) to

7.5 percent (3) and the situation that most of the students communicate with serious

problems still could not be changed after 12 weeks. Therefore, the result indicates that

the traditional teaching method can improve the students' speaking abilities, but not too

much. This may be because it is the teacher-centered approach. In the teacher-centered

classroom, teacher's talk occupies most of the time and the students have little

opportunity to communicate with the teacher and other classmates. Therefore, this is

the possible explanation of the situation that after a 12-week English learning period a

large number of the students in the control group could not communicate and most of

them still had problems in communication.

Table 4.6 Descriptive statistics of the level of experimental group in speaking tests

		Frequency (Percent)	
		Pretest	**Posttest**
	B	0(0%)	7(17.5%)
	C	16(40%)	19(47.5%)
Experimental Group	C+	1(2.5%)	9(22.5%)
	D	23(57.5%)	5(12.5%)
	Total	40(100%)	40(1%)

***D**: under 7.9, the student is not capable to communicate.
***C, C+**: 8 – 9.4; 9.5 – 10.9, the student can communicate, but has a lot of difficulties.
However, doesn't affect understanding.
***B** : 11 – 12.4, the student can communicate, but has some difficulties. However,
doesn't affect understanding.

As the result shown in Table 4.6, in the pre-test, more than half of the students,

57.5 percent (23) of the students were in level D. It demonstrates that these 23 the

students could not communicate. Only 42.5 percent of the students (17) could

communicate but all of them had a lot of difficulties. It has to refer that there was no student in level B, which means before joining in the PBL class, all the students had very serious problems in speaking. However, in the post-test, the proportions of the students in level D who could not communicate reduce from 57.5 percent (23) to 12.5 percent (5). Moreover, the students in level C, C+ and B who could communicate increase from 42.5 percent (17) to 87.5 percent (35), which was much more than the control group. It has to highlight that there was no student in level B before the PBL class, while after the PBL class there were 7 the students in level B. The proportion of level B the students who could communicate with a few of difficulties increases from 0 percent (0) to 17.5 percent (7). The improvement was much greater than the control group. In a word, the situation that most of the students could not communicate before the PBL instruction had improved after, and meanwhile, most of the students made a great improvement in their speaking ability via PBL instruction.

4.1.1.2 Result of speaking tests in three individual aspects

The above results have shown that the students in the experimental group have improved significantly via PBL instruction. Then, according to the research question, three aspects needed to be examined whether they had improved or not in speaking ability. The three aspects are Accuracy & Range (A & R), Size & Discourse Management (S & DM), Flexibility & Appropriacy (F & A).

Table 4.7 The paired-samples t-test of three individual aspects in speaking tests.

	Pretest-Posttest	t	df	Sig. (2-tailed)
Pair 1	A & R- A & R	-5.375	39	.000
Pair 2	S & DM -S & DM	-7.093	39	.000
Pair 3	F & A - F & A	-7.164	39	.000

In Table 4.7, the scores of each aspect in pre-test and post-test were compared. As the result presented, the p-value of all these three aspect is less than 0.05, which means in these three aspects there is a significant difference between the score of the pretest and the posttest. It demonstrates that the students in experimental group had improved significantly in all these three aspects.

In sum, the quantitative data obtained from the speaking tests indicate that the experimental group did improve in all three aspects, namely accuracy & range, size & discourse management, flexibility & appropriacy. Moreover, in the experimental group more than half of the students who could not communicate in English before incorporating PBL had improved significantly. After 12 weeks, with implementing PBL into the English class, most of the students could communicate in English. It can be said that incorporating PBL into the English class can improve the first-year non-English major students' speaking abilities. Additionally, in order to know how the students made progress in their speaking abilities, the qualitative data will be explained in the next section.

4.1.2 The qualitative data

In order to answer the second part of Question 1, to explore how the PBL lessons can help the students' progress in their speaking abilities, the researcher analyzed qualitative data obtained from the semi-structured interview by the means of content analysis. The answers of the students were categorized into the following sub-theme: Self-learning, Learning for different print material, Use of technology and Group learning.

The interview was conducted after the PBL implementation. Before going in depth to see how the students worked, the researcher firstly identified whether the students agree that PBL can improve their speaking abilities. According to the quantitative data, from twenty participants who were interviewed, 19 participants agreed that their speaking ability was improved through PBL lessons while only one participant considered that their speaking ability was not improved. This participant stated: "*I don't think that my speaking is improved. I was too lazy, and therefore other team members accomplished most of the work.*" However, contrasting with only one negative feedback, the other 19 participants agreed that their speaking abilities had been improved. Some statements were presented.

Student 3: "*My English ability is low. I read sentences word by word before. Now I can read the completed sentence. For each project I tried to practice reading and reciting. For speaking, I think it should take more time. This time was little short. I hope we can have more opportunities like this.*"

Student 5: "*My speaking was improved. Sometime in the evening class, our group practiced speaking and discussed the word used in speaking*."

Student 7: *"PBL improves my speaking. I was not confident in speaking, but now I can say some simple sentences."*

Student 17: "*My speaking is more coherent. When I prepared the information of the project, I wanted to present it fluently. I wrote my ideas on the paper, and practiced. After several practice times my speaking is more fluent than before*."

According to the above extracts of the qualitative data, it can be seen that most of the participants provided positive feedback on the aspect that their speaking abilities were improved through PBL lessons, which is consistent with the result of the quantitative data obtained from the speaking tests. It can be claimed that incorporating PBL into the English class can improve the first-year non-English major student's speaking ability at KU.

As for answering "how PBL can improve the students' speaking ability?", the qualitative data revealed that although most of the students agreed that PBL improves their speaking ability, the mean scores of speaking abilities were different. The means and methods could be organized and categorized into four main types: 1) self-practicing 2) learning from other resources 3) use of technology 4) group learning. More details of each category are presented below.

1) Self-practicing

Some students reported that they often practice reading the information of their project and other materials in order to practice their speaking before presenting the project. Therefore, the comments of the students using self-practicing are shown as follows.

Student 1: *"In PBL，every project we had to discuss and speak a lot and I needed to say something. Thus I practiced several times when I try to speak, I had thought about the grammar and the word. If I didn't know the word, I looked up in the dictionary and I read after it."*

Student 3*: " ...For each project I tried to practice reading and reciting the prepared material, and I love to read the drama transcript. I found that reading some drama transcripts and stories is more interesting than some boring articles. Sometimes I read some short stores in the English newspaper too..."*

Student 8: *" ...In this class, everyone was pushed to say something to ensure we can get a good score, thus we had to read the material several times to guarantee that we can present it, and I hoped that my speaking was not too bad. When I could communicate with the teacher I felt happy..."*

Student 20: *"…In PBL, I not only read the material at dormitory every morning and evening, but also followed some videos to learn how to pronounce the words. It does help..."*

According to the above extracts, it can be concluded that the students were pushed to speak and talk at first, but gradually they tried to practice themselves and learned to speak and pronounce initiatively. Meanwhile, the students changed the passive learning attitude to the positive attitude. In other words, the PBL lessons provided the students with a lot of opportunities to talk, to give a speech and to structure self-learning.

2) Learning from different print materials

A number of the students reported that they used different print materials to improve their English and speaking, such as learning from the textbook, movie transcript, vocabulary book and newspaper. The relevant comments of this approach are stated as follows.

Student 2: "…*I think the content of the textbook was enough for me and it was helpful for our CET-4. Therefore, I read the articles and learned the grammar in the textbook…*"

Student 4: "…*I thought that my speaking was poor because my vocabulary was limited. Therefore, I bought a vocabulary book, and everyday I recited some new words...*"

Student 7: "…*I found some movie transcript, and l learned the conversation among the characters. It was very useful and interesting. I learned the native language. My favorite one was "Lion King….*"

Student 9: "…*We had to try to present and tell our idea. When presenting our project and story, I encountered the grammar that I didn't know, I tried to check it on the grammar book and did the exercise after the grammar book so I can remember it well…*"

With regard to the above extracts, it can be seen that when the students found the insufficiency of their knowledge they tried to find the means to improve their knowledge. In the learning process, when the students encountered the tasks which required some knowledge, the students tried to gain the knowledge to pass the task. The result is consistent with the statement that PBL can improve the further learning.

3) Use of technology

Another effective way of improving the students' speaking as the participants reported was to use the technology approach to learn English, such as using the Internet to search information, watching movies, utilizing the E-dictionary, and learning online. The extracts of how to use this approach are presented below.

Student 6: "…*If I did't know the word in the daily conversation or in the project, I checked it with the dictionary in my smart phone and I used the translator to translate the sentence that I want to say. …."*

Student 10: "… *I took the teacher's suggestion to watch the movie on Youku[1] and read the transcript. My pronunciation was more standard, and I had learned a lot of daily phrases…"*

Student 15: "… *I went to an online school called Jianghu online school. They provided different languages courses for free. I joined a group of learning English speaking…"*

Student 18: *"… In PBL, we had many chances to speak, and I paid a lot of*

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[1] Youku: is a video website like Youtube.

attention on grammar, because the tense is very important in English. Hence when I

had some problems with grammar, I normally checked with Baidu[2]."

In sum, many the students learned through the technology approach, because abundant information could be searched in a very short time. Moreover, many kinds of online learning, learning applications and resources were provided for free, which could make the students' learning more convenient and effective. Meanwhile, the students gained the skills of handling technology, such as searching information, asking questions online and using applications. As the result presented, it indicates that PBL not only improved the students' further learning, but also other different skills.

4) Group learning

Apart from the above methods, a few the students mentioned that their speaking was improved through learning in a group. In the group learning, members provided help to one another so the learning pressure was reduced. The comments from participants can be concluded as follows.

Student 12: "…*Because our team leader was quite strict, she asked us to try to discuss in English in the evening class. Therefore, my speaking was improved a little…"*

Student 19: …*I spoke very simple word before, for example, good. In our group, I learned from some members whose speaking is good. They helped me correct the pronunciation and grammar. Now, I try to speak a complete sentence, like, your shirt is good…*

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[2] Baidu: is a search engine like Google.

With regards to the above statements, it indicated that learning in the group could improve the students' speaking ability, because the students provided help and support to one another. They shared learning methods and resources. Meanwhile, PBL provided the students more opportunities to communicate and to get along with different people, which could equip them with the ability to work with different people in the future.

In conclusion, question 1 deals with the quantitative data from speaking tests and the qualitative data from semi-structure interviews. The results revealed that PBL had positive effects on speaking abilities. However, the students improved their speaking abilities via various means. Moreover, in order to explore the students' perspectives of PBL, the students' opinions were analyzed and will be discussed in the next section.

4.2 Answers to research question 2

What are opinions of the students on implementing PBL approach in learning English language and problems they encounter during the learning process?

To answer this question, the quantitative data obtained from questionnaire and the qualitative data gained from semi-structured interview were analyzed for the response.

4.2.1 The results of the questionnaire

The five-point rating scale questionnaire was administrated to 40 participants to provide their opinions on PBL, and the Likert-scaled response were given values as 5 = strongly agree, 4 = agree, 3 = not sure, 2 = disagree, and 1 = strongly disagree. Moreover, the questionnaire was divided into three main parts: the first part (items 1-

6), items of speaking abilities; the second part (items 7-11), issues of PBL; the third

part (items 12 -21), other outcomes of PBL. The collected data from the questionnaire

was calculated for the arithmetic mean. Additionally, the criteria for interpreting each

statement are illustrated in Table 4.8 as follows:

Table 4.8 The interpretation of each criteria of questionnaire

1 - 1.49	strong disagree
1.50 - 2.49	disagree
2.50 - 3.49	not sure
3.50 – 4.49	agree
4.50 – 5.0	strongly agree

Table 4.9 The results of questionnaire

Statement	N	Mean	Std. Deviation
1. I can speak more fluently after PBL lessons.	40	3.65	0.5335
2. My pronunciation is better after PBL lessons.	40	3.625	0.6675
3. My grammar in speaking is better after PBL lessons.	40	3.75	0.6699
4. I use words more appropriately in speaking after PBL lessons.	40	3.6	0.6718
5. I can speak longer sentences after PBL lessons.	40	3.725	0.64
6. My speaking is more coherent after PBL lessons.	40	3.85	0.6222
7. Doing projects was challenging.	40	4.275	0.64
8. I encountered a lot of problems while doing projects.	40	4.475	0.5986
9. I like project-based learning	40	3.575	0.813
10. The amount of work in doing projects can be handled.	40	3.475	0.8161

Table 4.9 The results of questionnaire (Cont.)

Statement	N	Mean	Std. Deviation
11. I gained a lot of new knowledge while doing projects.	40	3.975	0.7334
12. I am more willing to speak English after this class.	40	4.05	0.6775
13. I want more opportunities to practice my speaking	40	3.75	0.7425
14. I am more confident to speak in front of the class.	40	3.525	0.5541
15. I spent more time for learning English after the class	40	3.925	0.7299
16. I can solve most of the problems in learning by myself.	40	3.35	0.6222
17. I can plan my study better after this class.	40	3.6	0.7442
18. I can work well with others.	40	3.625	0.7403
19. I am more open to others' opinions after this class.	40	4	0.3922
20. Learning through PBL develops my discipline e.g. punctuality, responsibility, etc	40	4.025	0.4797
21. Besides speaking skills, my other skills (information searching skill, data collecting skill and technology skill) are improved.	40	3.975	0.4797

The result of the questionnaire as presented in Table 4.9, in terms of the first part, speaking abilities, the mean scores are more than 3.49. It could be interpreted that the students agreed that their speaking abilities were improved in general, which is consistent with the results of the speaking tests. With regard to the second part, issues of PBL, the results revealed that the students thought that PBL was challenging and they encountered many problems in PBL. Nevertheless, they like PBL, maybe because

they gained a lot of new knowledge through PBL and they hoped that more opportunities like in PBL could be provided for them to speak English. Additionally, the result of item 7 showed that the students might have some arguments about the amount of work of PBL. Moreover, the mean score of item 8 is 4.475 implying that the students agreed that they had encounter a lot of problems while doing projects, which might be the response to item 7. The problems the students encountered will be discussed in a later section. With respect to the third part, other outcomes of PBL, the results demonstrated that the participants generally agreed that their confidence was increased, the ability of self-learning and cooperative work was improved, but the result showed that the students considered that they cannot solve most problems in learning and may need the teacher's help. Finally, the finding revealed that the students agreed that PBL developed the their technology skills and social skills.

In sum, from the results of the questionnaire, most students had a positive attitude towards PBL lessons. However, in order to conclude more accurate and balanced views of the participants, the results of the semi-structured interview is reported in the next section.

4.2.2 The results of the semi-structured interview

4.2.2.1 The students' opinions on PBL

The researcher interviewed 20 students who were randomly selected. Then the researcher compiled and categorized the data. The findings that revealed the students' opinions are classified into the learning environment (New and attractive

learning model, Non-threatening class, Enjoyable learning atmosphere), the activities in PBL (Inspiring more ideas, Keeping learning new skills and knowing new information, Practicing the courage) and the outcomes of the PBL lessons (Enhancing confidence, Increasing the sense of responsibility, Improving other language skills, Developing the technology skills, Developing the technology skills).

a) The Learning environment

First of all, the students expressed their positive attitude towards incorporating the PBL into the English class because they were provided with a new and attractive learning model and a non-threatened classroom with a harmony atmosphere. The responses of the informants are illustrated below.

● **New and attractive learning model**

The participants figured out that PBL was new for them and different from the traditional classroom but it motivated them in their learning. Their statements about this are:

Student 1: *"...The model was new and attractive for me and totally different from the class I had before. PBL could motivate my learning. We had learned not only English, but also the skills of doing PowerPoint. It improved my speaking ability and I am more confident now…"*

Student 9: "…*Comparing with the traditional teaching method, PBL was new and attractive. I prefered learning through PBL...*"

Student 13: "*...It was different from the traditional method because in traditional*

method, the teacher focused on the grammar. However, PBL gave the students opportunities with speaking. It didn't like the boring class. I like it. I learned automatically in PBL lessons…"

- **Non-threatening class**

Apart from the new and attractive learning model, some participants mentioned that they were involved in a non-threatening class while they were doing the tasks.

Student 3: *"…I felt that I was not so stressful because I didn't do everything by myself. I obtained more knowledge. Our group solved problems together and shared learning pressure..."*

Student 6: *"...I like group learning, because I felt less nervous when our group work together. I could say more in the group learning than in the individual talk…"*

- **Enjoyable learning atmosphere**

Finally, a few the students indicated that PBL provided them with an enjoyable learning atmosphere, which inspired the learning.

Student 7: *"…We worked together. When my pronunciation was not correct, other members could correct me. I like the way that we help each other. The happy and positive learning atmosphere inspired me…"*

Student 17: *"…..I didn't know much about my classmates. However, in PBL class, we worked together and I saw their strengths. Most of us were very patient. Therefore, the learning in our group was nice and we got closer to each other…"*

b) The activities in PBL

In the present study, in order to stimulate outcome of speaking as much as possible, the researcher designed three mini projects. The students provided their positive opinions towards these activities because the learning process inspired the students' ideas, practiced their courage and kept them learning new skills and knowing new information.

● **Inspiring more ideas**

A number of participants expressed the idea that working and discussing with classmates could boost their ideas and their comments are shown below.

Student 11: *"...in the group working, our group had brainstormed together. Every member gave ideas, thus we could get to know more thoughts and extended our own idea....."*

Student 15: *"… our group worked and discussed together. It was very helpful to get the best idea because we learn from each other...."*

● **Keeping learning new skills and knowing new information**

As two the students reported, in the learning process, they got in touch with new things, such as PowerPoint; therefore, it forced them to learn new skills. Moreover, they had received new information in their learning. Their comments are:

Student 6*: "...I had to do something new for me, for instance PowerPoint. Therefore, we had to learn many new skills to complete our work. Additionally, I have learnt some information that is beyond my former understanding and it surprised me after we analyzing the data…"*

Student 13: *".... We had faced a lot of challenges all the way. Therefore, every time when we encountered a task, in order to solve the problems we had to learn new knowledge and new methods. It was helpful for our learning…."*

- **Practicing the courage**

The idea that the three projects practiced the students' courage was proposed by some the students. Since the students had to deal with the issue of communicating with strangers and preforming in front of the class, they encouraged themselves to do it. The comments are presented below.

Student 9: *"...Performing could practice our courage, and I gained a lot of knowledge of grammar and some expressions in the drama transcript…."*

Student 5: *"…it practiced my reaction ability and courage. We interviewed a lot of strangers. It is very interesting. Although I think it was the most difficult one among the three projects, but it was very meaningful for me…."*

Apart from the above comments of the projects, some the students expressed that the teacher and peers' feedback had the positive effect on their learning and the comments are as follows.

Student 1: *"…I like the evaluation step, the teacher and classmates' comment after we presented PowerPoint. We got some suggestions from the teacher and classmates, which was different from our own understanding and could improve our future work".*

Student 5: *"... From the teacher and classmates' comments, we could see what were not good in our project and what were good in other groups' project, and then we can learn from one another…"*

c) The positive outcomes of the PBL lessons

From the above presented results of speaking tests, PBL revealed the positive effect on speaking abilities. Meanwhile, besides speaking abilities, other positive outcomes were provided by the students in the semi-structured interview and they were enhancing confidence, increasing the sense of responsibility, improving other language skill, developing the technology skills, and developing social skills. The responses are presented below.

- **Enhancing confidence**

A number of the students considered that PBL enhanced their confidence. They were more willing to express their ideas in the class and the comments are as follows:

Student 16: "…. *I am more confident in speaking English now. I was not confident before because I thought that someone would laugh at me. In PBL, everyone tried to express his or her feeling, even some the students whose English was not good..."*

Student 5: "…*I felt more confident when I spoke on the stage because if I didn't know, my teammates would help..."*

- **Increasing the sense of responsibility**

The sense of increasing responsibility was reported by some the students. The statements are demonstrated as follows:

Student 2: *"…I am more responsible because we worked cooperatively rather than individually, and our work was related to the score of the whole team…"*

Student 12: *"…I am more responsible. I had never done the work of a group leader before. In this class, I was the team leader and I tried to organize our work well in order to cooperate everyone's schedule in our team…"*

- **Improving other language skills**

Besides improving the students' speaking abilities, it was reported that PBL improved their listening and writing skills.

Student 19: *"…The reading skill was improved since we had to read a lot of information for preparing material for the project. It was surprised me because I focused on speaking. So it would be helpful in CET-4…"*

Student 20: *"…My writing skill was improved. After wrote the PowerPoint and my story, I spent more time on writing. My writing skill was improved…"*

- **Developing the technology skills**

A lot of the students reported that their technology skills were improved as well, such as PowerPoint skills and searching for information skills.

Student 10: *"…Skills of producing PowerPoint were developed. I knew nothing about making PowerPoint before this class. However, in our group, everyone had to make a part of PowerPoint for presentation. Therefore, I had to learn to complete my part…"*

Student 14: *"...I had no experience on making PowerPoint before. In order to make the PowerPoint, I learned from the teacher, classmates and the videos. Now I could do it all by myself..."*

- **Developing social skills**

Another benefit reported by the students is that their social skills were developed. The students knew better how to work and communicate with others, the comment are below.

Student 11: *"...PBL provided lots of opportunities for student's communication. It improved the students' social communication abilities. I know how to work with others and I am more open for other different opinions..."*

Student 18: *"...The ability of cooperatively working was improved. After working with others, now I am more inclusive and open for different views..."*

The comments that have been presented above show the students' positive attitude toward PBL. However, in the 20 informants, two students expressed their negative opinions for PBL. The following comments were given by these two students.

Student 4: *"...We had a lot of daily homework. With PBL, I didn't have much free time. I don't prefer this method..."*

Student 8: *"...I don't like PBL because it took too much of time. We had too much major work already. I prefer working by myself and I can do what I want..."*

In sum, it can be concluded that most of the participants had a positive attitude towards PBL and only two students expressed their negative feeling for PBL because

PBL was a new and attractive model to the students. Meanwhile, in the learning process, the students practiced their courage, kept learning new skills and information, and their ideas were inspired. Additionally, after accomplishing the learning, the students found out that some unexpected skills were developed, such as technology skills, social skill, and reading skill. In general, most of the students were satisfied with learning through PBL. Therefore, it can be seen that PBL created a positive effect on not only the students' speaking abilities, but also the sense of responsibility, technology skills and other language skills. However, in the process of completing the three projects, the students encountered several problems. Thus, the problems will be revealed in the next section.

4.2.2.2 Problems encountered and solutions

PBL provided the students with numerous benefits, but challenges still existed. After the interview, the problems that the students encountered could be divided into three main categories: 1) designing the research, 2) translating information, and 3) lacking skills of using PowerPoint. The details of each category are presented as follows:

- **Designing the research**

Some the students reported that they had problems in designing the research because they did not have any experience before.

Student 14: *"… Designing the research was difficult because we had no experience before. Therefore, we searched information online and ask the teacher…"*

Student 18: *"…Designing research quite bothered us. We always didn't know what we should do next. Therefore, we always consulted the teacher…"*

According to this problem, the students' solution was to consult with the teacher or search for information online, which they considered as the experienced person or reliable database.

- **Translating information**

Translating information was considered a problem in PBL for a number of the students because in PBL the students searched for information in Chinese most of the time. Afterwards, they needed to translate it into English.

Student 10: *"…when I translated the information into English, some information we didn't know how to express it. Normally, we used the online translator and consulted the teacher…"*

Student 15: *"…When we made the PowerPoint, we needed to translate the information. However, we still had a lot of problem in translation. Therefore, we asked the English major the students for help…"*

In terms of this problem, most students chose to use the online translator or consult with the teacher. It is interesting to note that as some students responded, they went to ask for help from the English major students, which could be a possible way to improve the students' social ability.

- **Lacking skills of making PowerPoint**

Another challenge reported by the students was the lack of skills in making PowerPoint presentations, most of them did not have experience in using PowerPoint. Even a few of the students did not have computer skills.

Student 12: *"…In our group, everyone had to present his or her part of information in PowerPoint. It was a big challenge for me because I did not even have any experience of computer. Therefore, I asked my roommate to teach me…"*.

Student 17: *"…I didn't have experience of making PowerPoint before because in high school we didn't need to do it. Therefore, I learned from videos and asked my classmates…"*.

With respect to the above problem, the solution of most students was to learn from other classmates and a few students learned through videos.

In summary, to answer question 2 the quantitative data and qualitative data obtained through the questionnaire and the semi-structured interview were analyzed. The results indicated that most of the students expressed their positive attitude towards PBL lessons. Only two students had negative feelings for PBL lessons. Therefore, it could be concluded that PBL had positive effects on the students' abilities and opinions. However, some challenges existed. The possible solution of coping with these challenges will be discussed in the part of implication.

4.3 Summary of the chapter

This chapter focused on the findings of the present research. Both the quantitative data obtained from the speaking tests and the questionnaire and the qualitative data obtained from the semi-structured interview were collected to analyze and answer the research questions. The results of the analysis revealed that 1) PBL had a positive effect

on the students' speaking abilities in all three aspects: accuracy & range, size & discourse management, flexibility & appropriacy. 2) The students expressed their positive opinions towards the PBL lessons. In a word, PBL can improve first year non-English students' speaking ability and create a positive effect on the students' opinions.
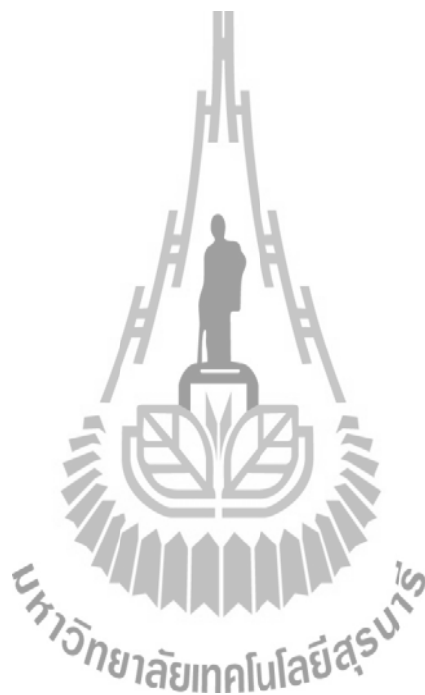
CHAPTER 5

DISCUSSION, CONCLUSION, AND IMPLICATION

In the preceding chapter, the results of the present study have been presented. The findings revealed that PBL had a positive effect on the improvement of non-English major students' speaking ability. Moreover, the students had positive opinions towards the PBL lessons. This chapter aims to present a further discussion of the current study; to report the pedagogical implication and limitations in the present study and to provide recommendations for future research.

Based on the research questions in Chapter One, the following issues will be further discussed: the effects of PBL on non-English major students' speaking abilities and the factors that influence the students' positive opinion of PBL lessons.

5.1 The positive effect of PBL on the students' speaking abilities

Responding to research question one, the results in Chapter 4 showed that before the PBL intervention there was no significant difference (p-value is 0.508, > 0.05) in the speaking abilities between the control and the experimental groups, and the students in the experimental group who could not communicate in English was 57.5 percent. After the PBL lessons, the speaking abilities of the experimental group were significantly improved and were different from the control group (p-value is 0.013, <

0.05). Additionally, in the experimental group, the percentage of the students who could not communicate in English dropped from 57.5 to 12.5 percent, and the students who could communicate with only a few problems increased from 0 to 17.5 percent, as illustrated in Tables 4.1, 4.2 and 4.4. The explanations of the results may derive from the advantages of PBL.

Firstly, PBL made the link between the theory and the practice. In the study, at the beginning, each group had chosen the project theme based on the topic of each unit in the textbook and it was related to their daily life as well. Therefore, while the students acquired knowledge from the textbook, the students were equipped with the basic concepts and grammar knowledge. While the students developed their projects, they applied the learned theories into practice. For instance, one unit about environmental pollution was introduced. The group that chose this theme decided to investigate the university about the students' opinions on the campus pollution. Therefore, they used the vocabulary items, grammar points, phrases and knowledge that they learned in the class in their interview, which is the possible reason of explaining the improvement of the accuracy and range of words utilization in the students' speaking abilities. The results corresponded to the study of Zhang (2015). The study aimed to investigate the effects of PBL on non-English major students' listening and speaking ability. The students chose their interested topic according to the topics in the textbook and developed their own project. Then, the findings indicated that the students' language skills were enhanced since they were involved in a series of comprehensive authentic

activities by using their listening and speaking skills to complete the project. Markhan (2003) also claimed that PBL provided the students with opportunities to connect to real world situations while completing the project. PBL integrates the real-life tasks and the projects which are related and meaningful to the students and the curriculum. Meanwhile, as Herringtion & Oliver (2000) suggested, the best gain of usable knowledge emerges in the learning environment which provides authentic contexts, authentic activities, and authentic assessments that can reflect the knowledge on real-world use. It can be said that the authentic learning environment is a significant element of improving the students' speaking abilities.

Secondly, PBL made the students autonomous. In the present study, the students took responsibility for their own learning and applied their autonomy via several means. The students frequently reported using technology means and tools to learn English, which could make their learning more convenient and effective. For instance, the students utilized the dictionary on their mobile phones to check and learn unknown words. Moreover, they used mobile applications to expand their knowledge of vocabulary. Additionally, the Internet was frequently used in their learning in the present study as well. The students searched grammar knowledge and information, went to the online school and watched movies to improve their speaking skill and to expand their knowledge. Besides, a few students read newspapers and articles in the textbook to practice their speaking abilities. The result is consistent with McLaughlin and Harrington (1989), which demonstrated that second language learning is a cognitive

process which involves knowledge about the language and procedures for using that knowledge to guide performance. What has been discussed forward may be the possible explanation of the development of the size and discourse management in students' speaking abilities. The result is consistent with Gu's (2002) study that also showed 20 Chinese and 28 American students learned on a web-based project in order to practice their writing ability. It was reported that the students' writing ability and communicative ability were improved since they were encouraged to take responsibility for their learning and their partner. Joshi (2011) also implied that PBL required the students to be autonomous. Learner autonomy makes learning effective and improves further learning. Moreover, in the current study, it was the means that the students prepared themselves for the basic concepts and skills before they delivered their speaking. It could be said that learner autonomy plays a crucial role in the process of improving the students' speaking abilities.

Thirdly, PBL created cooperative learning opportunities. In this study, as revealed in the interviews, the students reflected that they had group discussions all the time and the group members helped one another in correcting pronunciation and grammar problems. Moreover, while they encountered some problems, for instance, the problems of producing a PowerPoint presentation, they always asked for help from their friends rather than the teacher. Additionally, as the students mentioned, they had a lot of opportunities to discuss and gave a talk in the group, even in front of the class. The above discussion may be the explanation of the enhancement of flexibility and

appropriacy in a student's speaking ability. The result of the current study is in line with Meng's (2010) study. Meng's study aimed to investigate the effect of cooperative learning on freshman students' reading ability. A positive correlation was found between cooperative learning and academic achievement. As Roger and Johnson (1994) claimed, the aim of cooperative learning in groups is to make each member become a stronger individual. Working cooperatively made a more harmonious learning atmosphere and the students could apply their gained knowledge and skills into practice. Parrenas and Parrenas (1993) also suggested that cooperative learning promotes higher student achievement. Wei (1997b) pointed out that cooperative learning is considered as a suitable instructional format for the enhancement of learners' communicative competence. From the above discussion, cooperative learning made a great contribution to the improvement of the students' speaking ability.

To summarize, based on the above findings, it can be claimed that PBL can enhance non-English major students' speaking ability. PBL provided the students with an authentic learning environment; required the students to be autonomous to foster the meaningful learning and prepared the students with the basic knowledge and skills before they speak. Afterward, the students were engaged in the group learning to apply their gained theory and knowledge into practice. In the study, it was found that PBL not only improves speaking ability, but also reading and writing skills as the students revealed in the interviews.

5.2 Factors influencing the students' positive opinions of PBL

According to the interview data, only two students provided negative opinions about PBL. However, 18 out of 20 informants expressed their positive opinions towards PBL implementation. Factors that influenced the students' positive opinions are discussed and summarized below.

5.2.1 Enjoyable and low pressure learning environment

In PBL lessons, group members helped one another and shared responsibility in an enjoyable learning atmosphere, which made their learning becoming more effective and productive. Through working cooperatively, the atmosphere of a traditional competitive classroom disappeared. Therefore, the students were more willing to provide help to their classmates. For instance, student 7 said *"We worked together. When my pronunciation was not correct, other members could correct me. I like the way that we help each other. The happy and positive learning atmosphere inspired me"*. Components of PBL ensured that project work results in enjoyment and a sense of self-esteem (Levine, 2004; Deci & Moller, 2005).

Besides the enjoyable learning atmosphere, sharing the responsibility and learning pressure among group members was another reason for the students' positive feedback. In PBL, several students worked on a project, and the workload was less for each student. Therefore, the students might feel that they were not alone and feel less pressure to ask for help. For example, student 3 said: *"I felt that I was not so stressful because I didn't do everything by myself. I obtained more knowledge. Our group solved*

problems together and shared learning pressure". As summarized from Slavin (1990) and Roger and Johnson (1988), one benefit of cooperative learning is that the students are more positive towards one another because they do not need to compete. Moreover, according to the characteristics of PBL, the PBL lessons were designed to share the workload and responsibility; thus, the learning atmosphere was more enjoyable and the learning was more effective.

5.2.2 Active learning process

In PBL lessons, the students had an active learning process, which inspired their ideas, practiced their courage and encouraged them to learn new skills and assimilate new information.

In the current study, the students learned cooperatively. They were more positive to one another because they did not compete. Therefore, they were more willing to share their ideas and thoughts. Meanwhile, they received more information as well, which would give them more inspiration than when they had to be alone. For instance student 11 said: *"....in the group working, our group had brainstorm together. Every member gave ideas; thus, we could get to know more thoughts and extended our own idea….."*. As Osborn (1957) claimed that the number of ideas came up in brainstorming of the cooperative learning group work was two times as much as in individual brainstorming. Additionally, the students reported that the learning process fostered their courage because the student got used to the group discussion, communicated with others, performed and gave presentations in front of the class. Therefore, they were gradually

more confident to speak. For example student 5 commented: *"…it practiced my reaction ability and courage. We interviewed a lot of strangers. It was very interesting. Although I think it was the most difficult project among the three projects, but it was very meaningful for me…"*

Another factor influencing the students' positive attitude was that the students kept learning new skills and assimilating new information. In the current study, the students encountered a number of tasks, which needed them to learn a new skill or acquire new knowledge to accomplish a goal, for example, writing interview questions. Therefore, they learned how to write interview questions through the Internet or the book. As student 6 replied: *"…we had to do something new, for instance, PowerPoint. Therefore, we had to learn many new skills to complete our work. Additionally, I have learned some information that is beyond my former understanding and surprised me after we analyzed the data…"*

5.2.3 Unexpected positive outcomes

After the process of PBL, a number of the students found that some other unexpected skills were developed, such as reading, technology, and social skills, which surprised the students and they strongly believed it benefited their future learning and careers. Student 10 said *"Skills of producing power point were developed. I knew nothing about making PowerPoint before this class. However, in our group, everyone had to make a part of the PowerPoint for presentation. Therefore, I had learned the new skill. That's good"*. Student 19 responded *"Reading skill was improved since we*

had to read a lot of information for preparing material for the project. It surprised me because I focused on speaking. So it would be helpful in CET-4". Stoller (2002) claimed that projects lead to the authentic integration of skills. Although the current study focused on the development of speaking ability, the students needed to prepare material via reading information or watching videos before they speak. Therefore, their other skills were enhanced simultaneously but they might not notice.

Additionally, the students found that their social skills were improved as well because they were more open to different views and knew how to work with others in a productive way. Student 11 replied *"PBL provided lots of opportunities for student's communication. It improved the students' social communication abilities. I know how to work with others and I am more open to other different opinions. I think it is good for my future career".* As Caroseli (1998) stated, applying cooperative learning properly can socialize the students and better prepare them for their future careers . PBL equipped the students with social ability and student may feel that this skill would help them live and work better in the real society

In sum, the PBL lessons provided the students with an enjoyable and low-pressure learning environment. Moreover, it inspired student's ideas, practiced their courage and allowed them to develop new useful skills for their learning and future career. Although PBL had a positive effect on students' opinions, some problems were found. The main problems and possible solutions will be discussed as the pedagogical implication in the next section.

5.3 Pedagogical Implications

The present study investigated the effect of PBL on non-English major Chinese students' speaking ability and opinions towards PBL. According to the results and discussion of the current study, the principal implications can be summarized as follows:

Firstly, in order solve the problems that students met in the study and ensure the effectiveness of the learning process, essential skills, such as designing research and PowerPoint presentation making skills are necessary to be instructed before starting PBL. According to the responses of the interviews, designing research and making PowerPoint presentations are the main challenges frequently reported by the students because the students do not have prior experience. In this situation, the teacher, as the helper and consultant, should provide the essential help for the students to reduce the learning pressure and the time spent on other skills, and focus on speaking. These instructions can reduce the students' negative feelings about PBL and can ensure the quality of the students' presentations to some degree as well. Hence, the instruction of relevant skills is necessary for the students since these are the needed skills. The timely instruction would affect the students' positive learning and opinions towards PBL.

Secondly, the student-centered classroom is beneficial for the students' speaking ability and learner autonomy. The normal English class in China is teacher-centered and the students do not have many opportunities to give their opinions which leads to the low ability in speaking. Therefore, a student-centered classroom as in PBL is feasible to address this problem because it provides the students with more opportunities to

practice their speaking. Moreover, PBL as a powerful instructional approach can enhance the students' speaking ability through providing the students with a non-threatening environment and a lot of opportunities to speak and plan their own study. Meanwhile, it can help to improve other language skills, positive self-realization technology skills and social ability through working in an authentic environment and structuring their own learning. Therefore, PBL should be implemented in the classroom in the Chinese context.

Thirdly, the teacher should plan the time well and be flexible in dealing with the problems that the students may encounter in the learning process. PBL is not like the lecture-based instruction that has the complete and fixed content. In PBL, a concise timetable can help the students identify what they would do next and plan their own learning. Moreover, the students have to be involved in real-life situations, hence they may encounter a variety of tasks. Thus, the teacher needs to try to clarify the tasks that the students may encounter, to deal with the previously unconsidered problems and to instruct the relevant knowledge that students need to complete the tasks. For instance, before the students go to interviews, the teacher should instruct the skills of interviewing.

5.4 Limitations and recommendations for the future research

In the present study, there are still some limitations that could be improved in future studies. Firstly, the sample of the participants might not be sufficient because

there were only two classes in one university. The small scale population might not be a good representation of a large population because the simple small scale population cannot avoid the district difference. Secondly, the duration of the present study might not be long enough. If it was longer, the students might have shown a more significant improvement. Thirdly, according to the limited research questions, the present study did not investigate the teacher's opinions. This could be an affective factor in the study because more aspects could be investigated, more findings discovered and the results would be more concise.

There are some recommendations provided to improve the future study, (1) more participants from different places should be engaged in a future study in order to see any district differences among the participants. Therefore, the study should examine whether the result in different districts is similar; (2) PBL should be implemented in other skills, such as reading, writing, listening , and so on, to see whether PBL has any effect on other skills; (3) a longitudinal study is strongly recommended in a future study to gain more significant improvement of the students' speaking abilities as the speaking skill needs more time to develop than other skills.

REFERENCES

Adi, S. S. (2012). Communicative language teaching: Is it appropriate for Indonesian context? *Instructional Technology*, 51, 81-87.

Andrade, H., & Du, Y. (2007). Student responses to criteria-referenced selfassessment. *Assessment & evaluation in higher education, 32*(2), 159-181.

Arlington Education and Employment Program. (REEP) (1997). *Project-based learning and assessment: A resource manual for teachers*. Arlington,VA: Auth

Asassfeh, S. M., Khwaileh, F. M., Al-Shaboul, Y. M., & Alshboul, S. S. (2012). Communicative language teaching in an EFL context: Learners' attitudes and perceived implementation. *Journal of Language Teaching and Research*, *3*(3), 525-535.

Azizinezhad, M., Hashemi, M., & Darvishi, S. (2013). Application of Cooperative Learning in EFL Classes to Enhance The students'Language Learning. *Procedia-Social and Behavioral Sciences, 93*, 138-141.

Baş, G. (2011). Investigating the effects of project-based learning on the students' academic achievement and attitudes towards English lesson. *The Online Journal of New Horizons in Education*, *4*(1), 59-87.

Beckett, G. H. (1999). *Project-based instruction in a Canadian secondary school's ESL classes: Goals and evaluations*. University of British Columbia, British Columbia, Canada.

Beckett, G. H. (2006). Project-based second and foreign language education: theory, research, and practice. In G. H. Beckett & P. C. Miller (Eds.), *Project-based second and foreign language education: Past, present, and future* (pp.3-16). Connecticut, USA: Information Age Publishing Inc.

Beckett, G. H., & Slater, T. (2005). The project framework: A tool for language, content, and skills integration. *ELT Journal*, *59*(2), 108-116.

Boyd, M. (2000). How teachers can build on student-Proposed Intertextual Links to Facilitate Student talk in the ESL. In J.K. Hall & L.S. Verplaetse (Eds.), *Second and foreign language learning through classroom interaction* (pp.163-182). Mahwah, NJ: Lawrence Erlbaum Associates.

Blumenfeld, P. C. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational psychologist, 26*(3-4), 369-398.

Brown, J., & Liepolt, W. (2004). What are some benefits of using the multiple intelligences approach in my school? Retrieved from

http://www.thirteen.org/edonline/concept2class/mi/index_sub5.html

Buck Institute for Education. (2013). *Presentation Rubric for PBL (for grades 9-12).* Retrieved from

:http://bie.org/object/document/9_12_presentation_rubric_non_ccss

Byram, M. (2004). *Routledge encyclopedia of language teaching and learning.* Psychology Press.

Caroselli, M. (1998). *Great session openers, closers, and energizers.*: New York: McGraw-Hill.

Clark, D. (1991). *John Dewey*. Retrieved from

http://www.nwlink.com/~donclark/hrd/history/dewey.html

Crooks, T. (2001). *The validity of formative assessments.* Paper presented at the British Educational Research Association Annual Conference, Leeds, University of Leeds UK, September.

Cohen, L., Manion, L., & Morrison, K. (2000). *Research methods in education (5th ed.)*. London and New York: Falmer.

Deci, E., L., & Moller, A., C. (2005). The concept of competence: A starting place for understanding intrinsic motivation and self-determined extrinsic motivation. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of Competence and Motivation* (pp. 579-597). New York: Guildford Press.

Denzin, N. K. (2006). *Sociological methods: A sourcebook* (5th Ed.). New Jersey: Aldine Transaction.

Deng, X. M. (2007). Promotion of interaction in cooperative learning task. *Sino-US English Teaching*, *4*(7), 8-13.

Dickinson, L. (1987). *Self-instruction in language learning* (Vol. 3). Cambridge: Cambridge University Press.

Dörnyei, Z. (1997). Psychological processes in cooperative language learning: Groupdynamics and motivation. *Modern Language Journal*, 22(1), 482-493.

Dyson, B., & Grineski, S. (2001). Using cooperative learning structures in physical education. *Journal of Physical Education, Recreation, and Dance*, 72(2), 28- 31.

Educational Technology Division Ministry. (2006). *Project-based learning handbook "Educating the Millennial Learner"*. Ministry of Education. Kuala Lumpur; Malaysia

Ellis, R. (1997). *Second language acquisition.* Oxford: Oxford University Press.

Ellis, R., & He, X. (1999). The roles of modified input and output in the incidental acquisition of word meanings. *Studies in second language acquisition*, *21*(2), 285-301.

Falchikov, N., & Blythman, M. (2001). *Learning together: Peer tutoring in higher education.* Psychology Press.

Field, R. (1991). John Dewey. Retrieved from http://www.iep.utm.edu/dewey/

Fleming, D. S. (2000). *A Teacher's Guide to Project-Based Learning.* Scarecrow Education, Attn: Sales Department.

Foss, P., Carney, N., McDonald, K., & Rooks, M. (2007). Project-based learning activities for short-term intensive English programs. *Asian EFL Journal*, *23*(2), 1-19.

Fried-Booth, D. L. (2002). *Project work.* Oxford: Oxford University Press.

Fylan, F. (2005). Semi structured interviewing. In Miles, J., & Gilbert, P (Eds.), *A handbook of research methods for clinical and health psychology* (pp. 65-78). Oxford University Press.

Hu, G. P., Zhao, X., Chen, Y. Q., & Lie, L. Y. (2012). How to improve the speaking proficiency of Chinese University the students. *Economic Research Guide, 160*(14), 262-265.

Gardner, H. (1985). *Frames of Mind: The theory of multiple intelligences*. New York: Basic Books.

Garrison, C., & Ehringhaus, M. (2007). *Formative and summative assessments in the classroom*. Retrieved from http://ccti.colfinder.org/sites/default/files/

Gattegno, G. (1997). *A guide to project based learning*. Australia: Australian National Training Authority.

Gibbs, G. (1999). Using assessment strategically to change the way the students learn. In S. Brown &A. Glasner (Eds.), *Assessment matters in higher education: Choosing and using diverse approaches* (pp. 41-53). Buckingham: Open University Press.

Gillies, R. M. (2003). Structuring co-operative learning experiences in primary school. In Gillies, R. M., & Ashman, A. F (Eds.). *Co-operative learning. The social and intellectual outcomes of learning in groups* (pp.36-53). Routledge Falmer.

Grant, M. M. (2002). Getting a grip on project-based learning: Theory, cases and recommendations. *Meridian: A Middle School Computer Technologies Journal*, *5*(1), 83.

Gülbahar, Y., & Tinmaz, H. (2006). Implementing project-based learning and e-portfolio assessment in an undergraduate course. *Journal of Research on Technology in Education*, *38*(3), 309-327.

Gu, P. (2002). Web-based project learning and EFL learners: A Chinese example. *Teaching English with Technology, 2*(4), 4-41.

Haines, S. (1989). *Projects for the EFL classroom: resource material for teachers*. New Zealand: Nelson.

Hall, P. (2000). *Timeless voices, timeless themes: The American experience (Grade 11)*. Glenview, IL: Author.

Hanrahan, S. J., & Isaacs, G. (2001). Assessing Self-and Peer-assessment: the students' views. *Higher education research and development*, *20*(1), 53-70. Retrieved from: http://search.proquest.com/docview/

Hargrave, O. S. (2003). *We are all learning here: Project-based learning in the Classroom (Unpublished master thesis)*. Pacific Lutheran University, Parkland, United states.

Hedge, T. (1993). Key concepts in EFL: Project work. *ELT Journal*, *47*(3), 275-277.

Helle, L., Tynjälä, P., & Olkinuora, E. (2006). Project-based learning in post-secondary education–theory, practice and rubber sling shots. *Higher Education*, *51*(2), 287-314.

Helm, J. H., & Katz, L. G. (2011). *Young investigators: The project approach in the early years*. New York: Teachers College Press.

Herrington, J., & Oliver, R. (2000). An instructional design framework for authentic learning environments. *Educational technology research and development*, *48*(3), 23-48.

Herrington, A. J. & Herrington, J. A. (2007). What is an authentic learning environment? In L. A. Tomei (Ed.), *Online and distance learning: Concepts, methodologies, tools, and applications* (pp. 68-77). Hershey, PA: Information Science Reference.

Herrington, J., Oliver, R., & Reeves, T. C. (2003). Patterns of engagement in authentic online learning environments. *Australasian Journal of Educational Technology*, *19*(1). 59-71

Higher Education Department of the Ministry of Education. (2007). *College English curriculum requirements*. Beijing: Tsinghua University Press.

Hilton-Jones, U. (1988). Project-Based Learning for Foreign The students in an English-Speaking Environment. *The 22nd International Conference of IATEFL/TSSOL*, 11-14.

Ho, J., & Crookall, D. (1995). Breaking with Chinese cultural traditions: Learner autonomy in English language teaching. *System, 23*(2), 235-243.

Huang, B., & Wu, Y. (2004). Problems exist in Chinese university the students' speaking and solutions. *Journal of Shenyang Medical College*, *4*(6), 251-252.

Hou, X, N. (2010). Problems of speaking proficiency among university the students in China. *The Border Economy and Culture*, *84*(12), 160-162.

Hu, G. (2002). Potential cultural resistance to pedagogical imports: The case of communicative language teaching in China. *Language Culture and Curriculum*, *15*(2), 93-105.

Hutchinson, T. (2001). *Introduction to project work*. Oxford: Oxford University Press.

Izumi, S., Bigelow, M., Fujiwara, M., & Fearnow, S. (1999). Testing the output hypothesis. Effects of output on noticing and second language acquisition. *SSLA*, *21*, 421-452.

Izumi, S. (2003). Comprehension and production processes in second language learning: In search of the psycholinguistic rationale of the output hypothesis. *Applied Linguistics*, *24*(2), 168-196.

Jonassen, D. (1991). Evaluating constructivistic learning. *Educational Technology*, *31*(9), 28-33.

Jonassen, D., Davidson, & M., Collins. (1995). Constructivism and computer-mediated communication in distance education.*American journal of distance education*, *9*(2), 7-26.

Jonsson, A., & Svingby, G. (2007). The use of scoring rubrics: Reliability, validity, and educational consequence. *Education Research Review*, *2*, 130-144.

Joshi, K. R. (2011). Learner perceptions and teacher beliefs about learner autonomy in language learning. *Journal of NELTA*, *16*(1-2), 12-29.

Kaili University. (2012). *Kaili university introducation.* Retrieved from: http://www.kluniv.cn/

Kaufman, D. B., Felder, R. M., & Fuller, H. (2000). Accounting for individual effort in cooperative learning teams. *Journal of Engineering Education*, *89*(2), 133-140.

Legarreta, D. (1977). Language choice in bilingual classrooms. *TESOL Quarterly*, *11*(1), 9-16.

Levis, J. M. & Levis, G. M. (2003). Project-based approach to teaching research writing to nonnative writers. *IEEE Transactions on Professional Communication, 46*(3), 210–221.

Levine, G., S. (2004). Global simulation: a student-centered, task-based format for intermediate foreign language courses. *Foreign Language Annals*, *37*, 26-36.

Li, K. (2010). Project-based College English: An Approach to Teaching Non-English Majors. *Chinese Journal of Applied Linguistics: Foreign Language Teaching & Research Press*, *33*(4).

Li, X. (1984). In defense of the communicative approach. *ELT Journal*, *38*, 2–13.

Li, Y. (2001). Communicative language teaching in China: Progress and resistance. *TESOL Quarterly*, *35*(1), 194-198.

Little, D. (1994). Learner autonomy: A theoretical construct and its practical application. *Die Neueren Sprachen, 93*(5), 430-442.

Little, D. (1995). Learning as dialogue: The dependence of learner autonomy on teacher autonomy. *System*, *23*(2), 175-181.

Littlewood, W. (1996). "Autonomy": An anatomy and a framework. *System*, *24*(4), 427-435.

Macaro, E. (1997). *Target language, collaborative learning and autonomy (Vol. 5)*. Multilingual matters.

Malkova, I. Y., & Kiselyova, P. V. (2014). Development of Personal Competences in Project-based Learning in the EFL Classroom. *Procedia-Social and Behavioral Sciences*, *154*, 254-258.

Makgato, M. (2012). Identifying constructivist methodologies and pedagogic content knowledge in the teaching and learning of technology. *Procedia-Social and Behavioral Sciences*, *47*, 1398-1402.

Markham, T., Larmer, J., & Ravitz, J. (2003). *Project based learning handbook*. Buck Institute for Education.

McLaughlin, B., & Harrington, M. (1989). Second language acquisition. *Annual Review of Applied Linguistics, 19, 122-134*.

Meng, J. (2010). Jigsaw Cooperative Learning in English Reading. *Journal of Language Teaching and Research, 1*(4), 501-504.

Mitchell, R., Myles, F., & Marsden, E. (2013). *Second language learning theories*. Routledge.

Moss, D., & Van Duzer, C. (1998). *Project-based learning and assessment: A resource manual for teachers*. Arlingtin, VA: The Arlington Education and Employment Program.

Murchu, D. O. (2005). New teacher and student roles in the technology-supported, language classroom. *International Journal of Instructional Technology and Distance Learning*, *2*(2), 3-9.

Muniandy, B. (2000). *An investigation of the use of constructivism and technology in project-based learning* (Phd's thesis, University of Oregon, Malaysia). Retrieved fromhttp://search.proquest.com/docview/304613547/B7DEC65D0C044D14PQ/1? accountid=28756

Motaei, B. (2014). On the Effect of Cooperative Learning on General English achievement of Kermanshah Islamic Azad University The students. *Procedia-Social and Behavioral Sciences, 98*, 1249-1254.

Moursund, D. G. (2001). Problem-based learning and project-based learning. Retrieved from http://www.uoregon.edu/~moursund/Math/pbl.htm

Moss, D., & Van Duzer, C. (1998). *Project-based learning for adult English language learners*. Washington, DC: National Center for ESL Literacy Education. Retrieved December 22, 2006, from http://www.cal.org/caela/esl_resources/ digests/ProjBase.html

Najeeb, S. S. (2013). Learner autonomy in language learning. *Procedia-Social and Behavioral Sciences, 70*, 1238-1242.

Newprasit, N. (2011). *Effects of project-based approach on English language skills improvement* (Unpublished master thesis). Suranaree University of Technology, Nakhon Ratchasima, Thailand.

Ng, C., & Tang, E. (1997). Teachers' needs in the process of EFL reform in China: A report from Shanghai. *Perspectives: Working Papers, 9*(1), 63-85.

Nikitina, L. (2011). Creating an authentic learning environment in the foreign language classroom. *International Journal of Instruction*, *4*(1).

Nobuyoshi, J., & Ellis, R. (1993). Focused communication tasks and second language acquisition. *ELT Journal*, *47*(3), 203-210.

Nunan, D. (1989). *Designing tasks for the communicative classroom*. Cambridge: Cambridge University Press.

Nunan, D. (1991). *Language teaching methodology: A textbook for teachers*. Prentice Hall.

Nunan, D. (1992). *Research methods in language learning*. Cambridge: Cambridge University Press.

O'Connor, H., & Gibson, N. (2003). A step-by-step guide to qualitative data analysis. *Pimatisiwin: A Journal of Indigenous and Aboriginal Community Health*, *1*(1), 63-90.

Ortega, L. (2014). *Understanding second language acquisition*. London: Routledge.

Osborne, A. F. (1957). *Applied imagination*. New York: Scribner.

Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion the students working together. *Modern language journal*, 320-337.

Palmer, B. C., Harshbarger, S. J., & Koch, C. A. (2001). Storytelling as a constructivist model for developing language and literacy. *Journal of Poetry Therapy*, *14*(4), 199-212.

Parrenas, C. S., & Parrenas, F. Y. (1993). Cooperative learning, multicultural functioning, and student achievement. In L. M. Malave (Ed.), *Proceedings of the National Association for Bilingual Education Conferences* (pp. 181-189). Washington, DC.

Panitz, T. (1997).Collaborative versus cooperative learning: A comparison of the two oncepts which will help us understand the underlying nature of interactive learni ng. Retrieved from http://home.capecod.net/~tpanitz/tedsarticles/coopdefinition. htm.

Piaget, J. (1971). *Biology and knowledge*. Chicago: University of Chicago Press.

Pritchard, A. (2013). *Ways of learning: Learning theories and learning styles in the classroom*. London: Routledge.

Richard, T. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching* (2nd Ed.). Cambridge: Cambridge University Press.

Richards, J. C. (2006). *Communicative language teaching today*. Cambridge: Cambridge University Press.

Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching*. Cambridge: Cambridge University Press.

Roger, T., & Johnson, D. W. (1994). An overview of cooperative learning. J. Thousand, A. Villa and A. Nevin (Eds.), *Creativity and Collaborative Learning* (pp. 1-21). Brookes Press, Baltimore.

Roger, T., & Johnson, D. W. (1988). Cooperative Learning: two heads learn better than one. *Context, 32*(18), 34.

Rule, A. C. (2006). The components of authentic learning. *Journal of Authentic Learning, 3*(1), 1-10.

Savignon, S. J. (2007). Beyond communicative language teaching: What's ahead? *Journal of Pragmatics*, *39*(1), 207-220.

Scouller, K. (1998). The influence of assessment method on the students' learning approaches: Multiple choice question examination versus assignment essay. *Higher Education, 35*(4), 453-472.

Shen, P. (2011). *Teacher questioning behavior and the students' critical thinking in the college EFL reading classroom: a case study* (Unpublished master's thesis). Suranaree University of technology, Nakhon Ratchasima, Thailand.

Shams, I. E. (2013). Hybrid learning and Iranian EFL learners' autonomy in vocabulary learning. *Procedia-Social and Behavioral Sciences*, *93*, 1587-1592. Sheppard, K. & Stoller, F. (1995). Guidelines for the integration of student projects into ESP classrooms. *English Teaching Forum, 33*(2), 10-15.

Shokri, N. M. (2010). Team project facilitates language learning. *Procedia-Social and Behavioral Sciences, 7*, 555-564.

Sidman-Taveau, R., & Milner-Bolotin, M. (2001). Constructivist Inspiration: A Project-Based Model for L2 Learning in Virtual Worlds. *Texas Papers in Foreign Language Education*, *6*(1), 63-82.

Slater, T., Beckett, H. B., & Aufderhaar, C. (2006). Assessment projects as second language and content learning. In G. H. Beckett & P. C. Miller (Eds.), *Project-based second and foreign language education: Past, present, and future* (pp.241-260). Connecticut, USA: Information Age Publishing Inc.

Simpson, J. (2011). *Integrating project-based learning in an English language tourism classroom in a Thai University* (Doctoral thesis, Australian Catholic University, North Sydney, Australia). Retrieved on November 30th, 2012, from http://dlibrary.acu.edu.au

Slavin, R. E. (1982). *Cooperative learning: Student teams. What research says to the teacher*. National Education Association Professional Library, PO Box 509, West Haven, CT 06516.

Slavin, R. E. (1990). Cooperative learning: Theory, research, and practice (Vol. 14). Boston: Allyn and Bacon.

Sojisirikul, P. (2009). *Problem-based and task-based learning approaches for English writing courses*. (Doctoral thesis, Suranaree University of Technology, Nakhon Ratchasima, Thailand.). Retrieved from http:// library.sut.ac.th

Solomon, G. (2003). Project-based learning: A primer. *Technology and learning*, 23(6), 20.

Spiller, D. (2009). Assessment matters: Self-assessment and peer assessment. Retrived from http://www. pdfspiller. com/... Tanggal, 21.

Stoller, F. L. (1997). Project Work: A Means to Promote Language Content. *Forum, 35*(4), 4.

Stoller, F. (2002). Project work: a means to promote language and content. In J. Richards & W. Renandya (Eds.), *Methodology in Language Teaching: An Anthology of Current Practice* (pp.107-120). Cambridge University Press.

Stoller, F. (2006). Establishing a theoretical foundation for project based learning in second and foreign language context. In G. Beckett, & P. Miller (Eds.), *Project-based second and foreign language education: Past, present, and future* (pp.19-40). Information Age Publishing Inc.

Sun, S. (2011). *Research on project-based learning in college English practical teaching* (Unpublished master thesis). Jilin University, Jilin, China.

Swain, M. (1984). *A review of immersion education in Canada: Research and evaluation studies. Studies on immersion education: A collection for United States educators* (pp. 87-112). Sacramento, CA: California State Department of Education.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed), *Sociocultural theory and second language learning* (pp.97-114). Oxford University Press.

Swain, M., & Lapkin, S. (1995). Problems in output and the cognitive processes they generate: A step towards second language learning. *Applied linguistics*, *16*(3), 371-391.

Takashima, H. (1994). How helpful is output enhancement in promoting accuracy in communicative activities? *Second Language Research Forum, Montreal*.

Texas Education Agency (2006). *Rubrics for storytelling.*

   Retrieved from: http://cte.sfasu.edu/wp-content/uploads/2012/01/Storytelling.doc

Thomas, A. A., & Cross, K. P. (1993). C*lassroom assessment techniques: A hand book*

   for college teachers. (2nd Ed.)*.* California: Jossy-Bass Inc.

Thomas, W. J. (2000). A review of research on project-based learning. Retrieved on

   December 1st, 2012, from http://www.bie.org

Tsiplakides, I., & Fragoulis, I. (2009). Project-based learning in the teaching of English

   as a foreign language in Greek primary schools: From theory to practice. *English*

   Language Teaching, *2*(3), p113.

Ward, G. (1988). I've Got a Project on... New South Wales, Australia: Primary English

   Teaching Association.

Wei, C. (1997b). Union is strength: Applications of cooperative learning to college

   EFL class in Taiwan. Taipei, Taiwan: Crane.

Weinstein, G. (2006). "Learners' lives as curriculum": An integrative project-based

   model for language learning. In G. H. Beckett & P. C. Miller (Eds.), *Project-based*

   second and foreign language education: Past, present, and future (pp.159-165).

   Connecticut, USA: Information Age Publishing Inc.

Welsh, J. A. (2006). An Exploration of project-based learning in two California charter

   schools (Unpublished master's thesis). University of Southern California,

   California, US.

Widdowson, H. (2003). *Defining issues in English language teaching.* Oxford University Press.

Wolf, K., & Stevens, E. (2007). The role of rubrics in advancing and assessing student learning. *The Journal of Effective Teaching, 7*(1), 3-14.

Wurdinger, S., & Rudolph, J. (2009). A different type of success: Teaching important life skills through project based learning. *Improving Schools, 12*(2), 115-129.

Wu, G. Y. (2006). Project-Based English as a Foreign Language Education in China. In G. H. Beckett and C. M. Paul (Eds.). *Project-Based Second and Foreign Language Education: Past, Present, and Future* (pp. 143-155). Information Age Publishing.

Wu, G. Y. (2011). *An exploratory study of English majors' learner agency in project-based Chinese EFL learning context* (Doctoral dissertation, Nankai University, Tianjin, China.). Retrieved from http://www.cnki.net/

Wu, S. J., & Meng, L. H. (2010). The Integration of Inter-Culture Education into Intensive Reading Teaching for English Majors through Project-Based Learning. *Online Submission, 8*(9), 26-37.

Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice. *Higher education, 45*(4), 477-501.

Young, D. J. (1991). Creating a low-anxiety classroom environment: What does language anxiety research suggest? *The Modern Language Journal, 75*(4), 426-439.
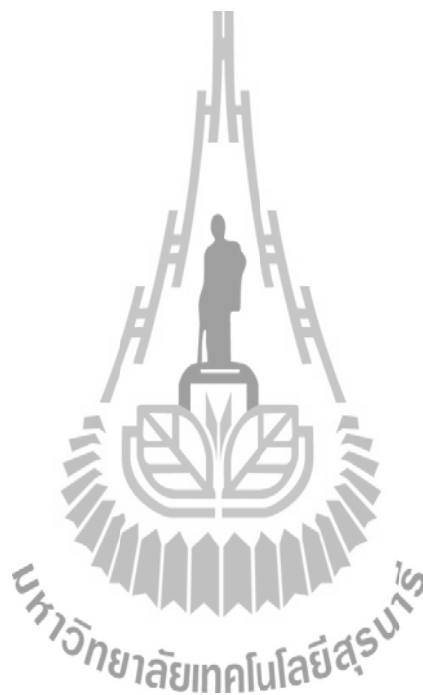
Zhang, Y. (2015). *Project-Based Learning in Chinese College English Listening and*

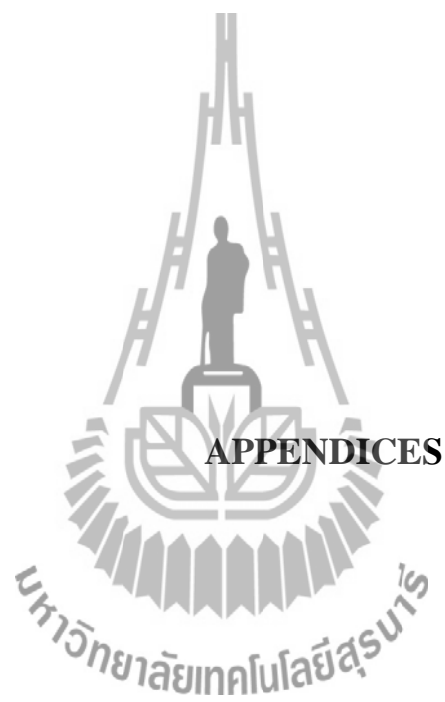*Speaking Course: From Theory to Practice*. Canadian Social Science,

Zuo, L, J. (2008). A Recent History of Teaching EFL in China. Retrived from

http://www.tesol.org/read-and-publish/journals/other-serial-publications/compleat

-links/compleat-links-volume-5-issue-2-(june-2008)/a-recent-history-of-teaching

-efl-in-china

APPENDICES

APPENDIX A

Rubric of Drama Project

	4	3	2	1
Organization and Overall Impact	The play has a clear beginning, middle, and end, and is logically divided into acts and, if needed, scenes. The order of the action is clearly chronological, or shifts in time are clear and easy to follow. Shifts in place are signaled by new acts, new scenes, or appropriate stage directions. The drama clearly and effectively expresses a message, conveys a theme, or delivers an emotional impact.	The play has a beginning, middle, and end, and is divided into acts, but the order of the action may not be completely chronological or easy to follow. Similarly, shifts in place may not be signaled by new acts, new scenes, or appropriate stage directions. To some degree, the drama expresses a message, conveys a theme, or delivers an emotional impact.	The play may begin or end in a confusing way, or lack development in the middle. Division into acts or scenes may be illogical or missing. The order of the action or changes in setting may be confusing. The intended message, theme, or emotional impact may be unclear orcontradictory.	The play begins or ends in a confusing way, or it lacks development in the middle. It is not divided into acts or scenes. Scenes change without warning. There is no discernible intended message, theme, or emotional impact.
Elements of Drama	There is a strong central conflict. Dialogue is used effectively to develop the characters and the conflict. Clear stage directions provide useful information for the reader and for anyone who stages the play.	In most places, dialogue is used to develop the conflict and characters, but both conflict and characters could be more fully and dramatically developed. Stage directions are present, but should be more concise in places.	In some places, dialogue is used to develop the conflict and characters, but both conflict and characters lack development. Some stage directions are unclear or missing.	The central conflict is missing or unclear. Characters lack development. Dialogue does not develop the characters or the plot. Stage directions are unclear or missing.
Grammar, Usage, Mechanics, and Spelling	There are few or no errors in usage, grammar, or spelling. Mechanical conventions specific to drama, such as those that show speakers, speakers' lines, and stage directions, have been used correctly throughout.	There are some errors in usage, grammar, or spelling. Mechanical conventions specific to drama, such as those that show speakers, speakers' lines, and stage directions, have been used correctly in most places.	The play is difficult to understand because of errors in usage, grammar, spelling, and mechanical conventions specific to drama, such as those that show speakers, speakers' lines, and stage directions.	The play is consistently difficult to understand because of numerous and serious errors in usage, grammar, spelling, and mechanical conventions specific to drama, such as those that show speakers, speakers' lines, andstage directions.

APPENDIX B

Rubric of Presentation

	Below Standard 1	Approaching Standard 2	At Standard 3	Above Standard 4
Voice	• mumbles or speaks too quickly or slowly • speaks too softly to be understood • frequently uses "filler" words ("uh, um, so, and, like, etc.") • does not adapt speech for the context and task	• speaks clearly most of the time • speaks loudly enough for the audience to hear most of the time, but may speak in a monotone • occasionally uses filler words • attempts to adapt speech for the context and task but is unsuccessful or inconsistent	• speaks clearly; not too quickly or slowly • speaks loudly enough for everyone to hear; changes tone and pace to maintain interest • rarely uses filler words • adapts speech for the context and task, demonstrating command of formal English when appropriate	
Presentation Aids	• does not use audio/visual aids or media • attempts to use one or a few audio/visual aids or media, but they do not add to or may distract from the presentation	• uses audio/visual aids or media, but they may sometimes distract from or not add to the presentation • sometimes has trouble bringing audio/visual aids or media smoothly into the presentation	• uses well-produced audio/visual aids or media to enhance understanding of findings, reasoning, and evidence, and to add interest • smoothly brings audio/visual aids or media into the presentation	
Response to Audience Questions	• does not address audience questions (goes off topic or misunderstands without seeking clarification)	• answers audience questions, but not always clearly or completely	• answers audience questions clearly and completely • seeks clarification, admits "I don't know" or explains how the answer might be found when unable to answer a question	
Participation in Team Presentations	• Not all team members participate; only one or two speak	• All team members participate, but not equally	• All team members participate for about the same length of time • All team members are able to answer questions about the topic as a whole, not just their part of it	

	Below Standard 1	Approaching Standard 2	At Standard 3	Above 4Standard 4
Explanation of Ideas & Information	• does not present information, arguments, ideas, or findings clearly, concisely, and logically; argument lacks supporting evidence; audience cannot follow the line of reasoning • selects information, develops ideas and uses a style inappropriate to the purpose, task, and audience (may be too much or too little information, or the wrong approach) • does not address alternative or opposing perspectives	• presents information, findings, arguments and supporting evidence in a way that is not always clear, concise, and logical; line of reasoning is sometimes hard to follow • attempts to select information, develop ideas and use a style appropriate to the purpose, task, and audience but does not fully succeed • attempts to address alternative or opposing perspectives, but not clearly or completely	• presents information, findings, arguments and supporting evidence clearly, concisely, and logically; audience can easily follow the line of reasoning • selects information, develops ideas and uses a style appropriate to the purpose, task, and audience • clearly and completely addresses alternative or opposing perspectives	
Organization	• does not meet requirements for what should be included in the presentation • does not have an introduction and/or conclusion • uses time poorly; the whole presentation, or a part of it, is too short or too long	• meets most requirements for what should be included in the presentation • has an introduction and conclusion, but they are not clear or interesting • generally times presentation well, but may spend too much or too little time on a topic, a/v aid, or idea	• meets all requirements for what should be included in the presentation • has a clear and interesting introduction and conclusion • organizes time well; no part of the presentation is too short or too long	
Eyes & Body	• does not look at audience; reads notes or slides • does not use gestures or movements • lacks poise and confidence (fidgets, slouches, appears nervous) • wears clothing inappropriate for the occasion	• makes infrequent eye contact; reads notes or slides most of the time • uses a few gestures or movements but they do not look natural • shows some poise and confidence, (only a little fidgeting or nervous movement) • makes some attempt to wear clothing appropriate for the occasion	• keeps eye contact with audience most of the time; only glances at notes or slides • uses natural gestures and movements • looks poised and confident • wears clothing appropriate for the occasion	

APPENDIX C

Rubric for Storytelling

Criteria	Exemplary 4	Accomplished 3	Developing 2	Beginning 1
Knows the Story	Knows the story well; has obviously practiced telling the story; uses no notes; speaks with confidence	Knows the story pretty well; some practice; may use notes; fairly confident	Knows some of the story; has not practiced; relies on notes; appears uncomfortable	Does not know story; reads from notes
Voice	Always speaks loudly, slowly, and clearly Correct pronunciation; explains unfamiliar words	Usually speaks loudly, slowly, and clearly Correct pronunciation; does not explain unfamiliar words	May speak too softly or too rapidly; mumbles occasionally Incorrect pronunciation of some words; does not explain unfamiliar words	Speaks too softly or too rapidly; mumbles Incorrect pronunciation; does not know what unfamiliar words mean
Acting	Consistently motivates and assists others	Quick to volunteer and assist others	Generally works well with others	Seldom works well with others
Duration	Story lasts 5 to 7 minutes	Story lasts less than 5 or more than 7 minutes	Story lasts less than 4 or more than 8 minutes	Story lasts less than 3 or more than 9 minutes
Audience Contact	Storyteller looks at all the audience; involves them with questions	Storyteller looks at a few people in the audience; involves only a few with questions	Story told to only 1 to 2 people in the audience; little audience involvement	Storyteller does not look at audience; no attempt to involve audience with questions
Pacing	Story told at the appropriate pace, depending on the story line	Story told well, but some parts may be rushed or dragged in some parts	Story rushed or dragged in several parts	Story told at one pace; no excitement
Appropriateness	Story is developmentally appropriate for audience	Most of the story is developmentally appropriate for audience	Some of the story is developmentally appropriate for audience	Story is developmentally inappropriate for audience
Props	Outstanding use of props; props are appropriate	Good use of props; props are appropriate	Uses props some of the time; some props not appropriate or are distracting	Poor use of props; uses no props or inappropriate props

APPENDIX D

Speaking Pre-posttests

Speaking pretest
CET-SET   May, 2006

Topic: English Learning

Part 1: Questions: (Warm-up questions)
  (5 minutes)
  Examiner:
  Good morning (Good afternoon), everybody. Could you please tell me your name and the

number of your admission ticket? Your name, please. And your number? … Your name? …

And your number? ... Thank you.

  Now would you please briefly introduce yourselves to each other? Remember, you should

not mention the name of your university. (1.5 minutes)

  OK, now that we know each other we can do some group work. First of all, I'd like to ask

each of you to say something about life in the city.

  [Candidate1(C1), Candidate 2(C1), Candidate 3(C3)]

1) Do you find learning English enjoyable? Why or why not?

2) Do you do any reading in English outside classroom?

3) How much time do you spend listening in English every day?

4) Is there any English corner in your campus? Do you find it helpful?

5) How much homework do you have in English?

Part 2: Discussion (10 minutes)

Examiner:

Now let's move on to something more specific. The topic for our discussion today is "English Learning". Each of you will be given a card with instruction for you presentation. You'll have one minute to prepare and each of you will have one and a half minutes to give your presentation. Don't worry if I interrupt you at the end of the time limit. Now here are your pictures.

Card for candidate 1

The following are thought to be the biggest difficulties encountered in learning English. Please comment on either or both:

Listening / Reading

Card for candidate 2

The following are thought to be the biggest difficulties encountered in learning English. Please comment on either or both:

Speaking / Writing

Card for candidate 3

The following are thought to be the biggest difficulties encountered in learning English. Please comment on either or both:

Grammar / Vocabulary

Examiner: Right, now that we all have some ideas of English learning, we'd like you to develop this topic further and have a discussion for about four and a half minutes. During your discussion, you may challenge each other or ask each other questions to make a point clear. Our discussion today is :

**Whether There Is a Short-cut to learning English.**

Part 3: Last questions (5 minutes)

Examiner:

Now I'd like to ask you just one last question on the topic of "Life after retirement".

[Select a question from the following list to ask each of the candidates.]

[C1 or C2 or C3]

1) Why do some people prefer late retirement to early retirement?

2) Do you think elderly people would like to live in homes for the elderly? (Please explain.)

3) Do you think jogging is good exercise for elderly people? (Please explain.)

4) What can people do for their community after they retire?

5) Do elderly people like living with their children or grandchildren? (Why or why not?)
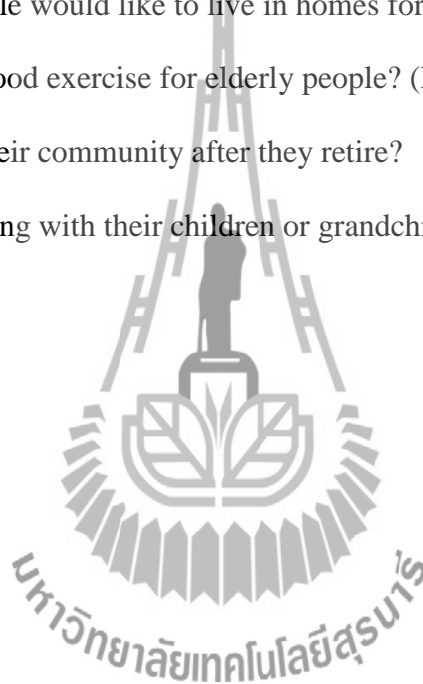
Speaking posttest

CET-SET   December, 2007

Top: City life

Part 1 Questions: (Warm-up questions) (5 minutes)

Examiner:

Good morning (Good afternoon), everybody. Could you please tell me your name and the number of your admission ticket? Your name, please. And your number? … Your name? … And your number? ... Thank you.

Now would you please briefly introduce yourselves to each other? Remember, you should not mention the name of your university. (1.5 minutes)

OK, now that we know each other we can do some group work. First of all, I'd like to ask each of you to say something about life in the city.

[Candidate1(C1), Candidate 2(C1), Candidate 3(C3)]

1) How do you like living in Beijing (Shanghai , Nanjing …)?

2) What do you think is the most serious challenge of living in a city like Beijing (Shanghai , Nanjing …)?

3) How do you like shopping in a supermarket?

4) Where would you like to live, downtown or in the suburbs, and why?

5) What measures do you think we should take to reduce air pollution in Beijing (Shanghai , Nanjing …)?

6) Can you say something about the entertainment available in your city?

7) Where would you like to find a job after graduation, in a big city like Beijing or Shanghai or in a small town and why?

8) What's your impression of the people in Beijing (Shanghai , Nanjing …)?

Part 2: Discussion (10 minutes)

Examiner:

Now let's move on to something more specific. The topic for our discussion today is "City Traffic". You'll have a picture (some pictures) showing two different types of transport. I'd like each of you to give a brief description of each type and then compare the two types. You'll have one minute to prepare and each of you will have one and a half minutes to talk about the picture(s). Don't worry if I interrupt you at the end of the time limit. Now here are your pictures.

[1 minute later]

Now, [C1], would you please start first? [C2] and [C3], please put your pictures aside and listen to what [C1] has to say.

[1.5 minutes later] OK. [C2], now it's your turn.

[1.5 minutes later] OK, [C3], and now it's your turn.

Right. Now we all have some idea of various kinds of city transport. I'd like you to discuss this topic further and see if you can agree on which is the best type of transport for a big city like Beijing (Shanghai , Nanjing …). During the discussion you may argue with each other or ask each other questions to clarify a point. You will have about four and a half minutes for the discussion. Your performance will be judged according to your contributions to the discussion.

[If one candidate talks too long]

Sorry, I'll have to stop you now. Let's listen to what [C?] has to say.

[If one candidate keeps silent for a long time] / [If the group is silent for some time, then ask one of the candidates to start the discussion.]

Now, [C?], could you please say something about your view of …?

[4.5 minutes later]

All right, that's the end of the discussion.

Part 3: Last Question(5 minutes)

Examiner:

Now I'd like to ask you just one last question on the topic of "City Traffic".

[Select a question from the following list to ask each of the candidates.]

[C1 or C2 or C3]

1) During the discussion, why did you say that ... ?
2) What kind of transport do you usually use in your city?
3) Do you have any suggestions as to how traffic conditions can be improved in big cities?
4) Do you think private cars should be encouraged?
5) Why do you think some Western countries encourage people to ride bicycles?

Now, that's the end of the test. Thank you, everybody.

APPENDIX E

Rubric of Speaking Tests

Score	Accuracy & Range	Size & Discourse Management	Flexibility & Appropriacy
5	-Basically correct use of grammatical and lexical items. -Adequate vocabulary and a fair range of grammatical structures for the given task. -Fairly good pronunciation though some residual accent is acceptable.	-The ability to produce extended and fairly coherent discourse concerning the given task, though with occasional pauses due to loss of words.	-Natural and active participation in the discussion. -Use of language generally appropriate to context, function and intention
4	-Errors in the use grammatical/lexical items that do not seriously interfere with communication are permissible. -A basically satisfactory range of vocabulary to deal with the given task. -Acceptable pronunciation.	-Manifestation of ability to produce coherent and more complex utterances, though most contributions are short. -Frequent pauses while organizing thoughts and searching for words, which sometimes interfere with communication.	-Frequent contribution to the discussion but sometimes not to the point or without directly interacting with other participants. -Use of language basically appropriate to context, function and intention
3	-The use of grammatical/lexical items may be incorrect and sometimes impede communication. -A minimum range of vocabulary and grammatical structures to cope with the given task. -Pronunciation may be faulty and sometimes impede communication.	-Mainly short utterances. -Long and frequent pauses while organizing thoughts and searching for words, which often interfere with communication, though basically fulfilling the given task.	-Less active participation in the discussion, and occasional inability to adapt to new topics or changes of direction.
2	-Unintelligibility caused by grammatical/lexical errors. -Insufficientgrammatical/lexical items to cope with the given task. -Poor pronunciation that causes breakdowns in communication.	-Short utterances and disconnected speech, which is difficult to follow, making communication almost impossible.	-Inability to take part in group discussion.

Brand	Description
A+ (14.5 – 15) A (13.5 – 14.4)	The student can communicate fluently without any difficulty.
B+ (12.5 – 13.4) B (11 – 12.4)	The student can communicate, but has some difficulties. However, doesn't affect understanding.
C+ (9.5 – 10.9) C (8 – 9.4)	The student can communicate, but has a lot of difficulties. However, doesn't affect understanding.
D (under 7.9)	The student is not capable to communicate

APPENDIX F

Questionnaire

This questionnaire aims at investigating the students' opinions on implementing PBL approach in language learning and improvement of speaking abilities.

Instruction: Please answering the following questions：put a tick(√) in the box which best matches your answer

5 = strongly agree 4 = agree 3 = not sure 2 = disagree 1 = strongly disagree

Content	5	4	3	2	1
1. I can speak more fluently after this class.					
2. My pronunciation is better after this class.					
3. My grammar in speaking is better after this class.					
4. I use words more appropriately in speaking after this class.					
5. I can speak longer sentences after this class.					
6. My speaking is more coherent after this class.					
7. Doing projects is challenging.					
8. I encountered a lot of problems while doing projects.					
9. I like project-based learning.					
10. The amount of work in doing projects can be handled.					
11. I gain a lot of new knowledge while doing projects.					
12. I am more willing to speak English after this class.					

Content	5	4	3	2	1
13. I want more opportunities to practice my speaking					
14. I am more confident to speak in front of the class.					
15. I spent more time for learning English after the class					
16. I can solve most of the problems in learning by myself.					
17. I can plan my study better after this class.					
18. I can work well with others.					
19. I am more open to others' opinions after this class.					
20. Learning through PBL develops my discipline e.g. punctuality, responsibility, etc					
21. Besides speaking skills, my other skills (information searching skill, data collecting skill and technology skill) are improved.					

Thank you for cooperation ☺☺☺

Questionnaire

(Chinese version)

该问卷调查学生关于利用项目教学法教学的观点意见。

<u>说明:</u> 请回答下列问题，并在负责的答案上打钩

5 = 非常同意 4 = 同意 3 = 不确定 2 = 不同意 1 = 非常不同意

内容	5	4	3	2	1
1. 在项目学习后，我的口语比以前流利了。					
2. 在项目学习后，我的发音比以前标准了。					
3. 在项目学习后，我口语中的语法比之前正确了。					
4. 在项目学习后，我可以说较长的句子了。					
5. 在项目学习后，我口语中的用词更加准确了。					
6. 在项目学习后，我的口语更加连贯了。					
7. 项目学习很有挑战性。					
8. 项目学习的时候，我遇到很多困难。.					
9. 我喜欢项目学习。					
10. 项目学习的工作量不大，可以完成。					
11. 在项目学习的过程中我学到很多新的知识。					
12. 在项目学习后我更愿意说英语了。					
13. 我希望有更多机会练习口语。					

| 内容	5	4	3	2	1
14. 在项目学习后，我在课堂上发言更自信了。					
15. 在课后我花更多时间学习英语了。					
16. 在学习过程中我能解决大部分学习上的问题.					
17. 在项目学习后，我能很好地计划自己的学习了。.					
18. 在项目学习后，我可以更好的跟其他人合作了。					
19. 在项目教学后，我能接受其他人的意见					
20. 通过项目学习，我得到了的锻炼，比如，守时，做事负责任。					
21. 除了口语能力，我的其他能力（搜索信息技巧，收集数据技巧和科技技巧）					

谢谢合作

Appendix G

Semi-structured Interview Questions

1. What do you think about learning through the project based learning approach?

2. Could you improve your speaking skills in aspects, accuracy and range, size and discourse management, flexibility and appropriacy?

3. Which skills other than speaking skills were developed during doing projects? Which one?

4. Which project do you like most? why?

5. During doing projects, which step do you like most? why?

6. Which step did you encounter the most amount of problems? How did you solve it?

7. What do you think about cooperative learning? Did you have any problems?

8. In your opinion, in which aspects the lessons need to be improved?

9. In your opinion, will the experience you got from PBL benefit your future learning and work? What is it?

Semi-structured Interview Questions

(Chinese version)

1. 你对基于项目的学习有什么看法？

2. 你的口语能力在语言准确性和范围，话语的长短和连贯性，语言灵活性和适切性这三方面得到了提高吗？

3. 除了语言能力以外，其他技能得到提高了吗?什么技能？

4. 你最喜欢是哪个项目中的哪一个？为什么?

5. 在项目学习当中，哪个步奏是你最喜欢的？为什么?

6. 在项目学习中，你在哪个步奏遇到最多的问题？你是怎么解决的?

7. 你对合作学习有什么看法？你遇到什么问题吗？

8. 在你看来，该项目教学的在哪些方面需要进行改进?

9. 在你看来，在项目学习中获得的经验对你将来的学习和工作会有帮助吗？是什么经验？
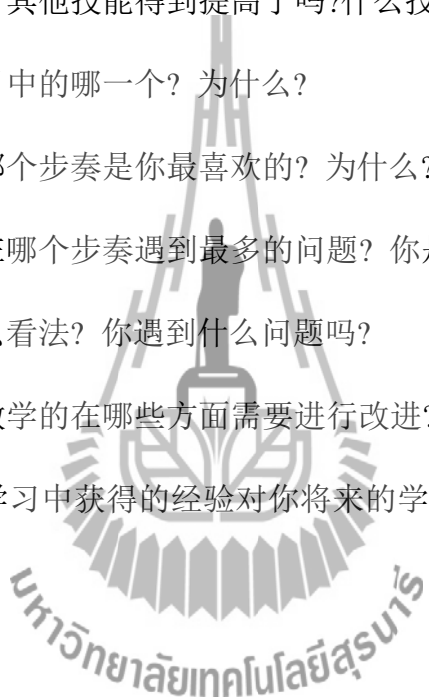
APPENDIX H

Procedure of PBL Instruction

Drama project: week1-5

Investigation project + storytelling project: week 6-12

Session	Inside classroom activities	Outside classroom activities
Week 1 **(3 hrs)**	**Step 1: The students and teacher agree on a theme for the project** • Class orientation • T. introduces PBL to Ss • T. descript criteria of project to Ss • Ss. form groups • T. introduces the drama project to Ss • Ss. decide the theme of projects **Step2: The students and teacher structure the project** • T. prepares language needed for the project. -T. implements unit 1	<u>Speaking pretest</u> **Step 3: the students collect information**
Week 2 **(3 hrs)**	**Step4: The students present the outline of their drama, and then the teacher and other groups give suggestions.** • T. prepares language needed for the project. -T. implements unit 1	• Ss. revise the script and start to practice.
Week 3 **(3 hrs)**	• T. prepares language needed for the project. -T. implements unit 2	**Step 5: the students practice and rehearsal** **their drama**
Week 4 **(3 hrs)**	• T. prepares language needed for the project. -T. implements unit 2	**Step 5: the students practice and rehearsal their drama.**

Session	Inside classroom activities	Outside classroom activities
Week 5 (3 hrs)	**Step 6: The students present their drama** **Step7:The students and the teacher evaluate the work.** • T. prepares language needed for the project. -T. implements unit 3	
Week 6 (3 hrs)		
(1.5 hrs) Investigation project	**Step 1: The students and teacher agree on a theme for the project.** **Step 2: The students and teacher determine the final outcome.** **Step3: The students and teacher structure the project** • T. prepares language needed for the project. -T. implements 3	
(1.5 hrs) Storytelling project	**Step 1: The teacher introduces the project to the students** • T. introduces the storytelling project to Ss. • T. prepares language needed for the project. -T. implements unit 3	**Step2: The students prepare their story and collect information**
Week 7 (3 hrs)		
(1.5 hrs) Investigation project	**Step 4: Teacher prepares the students for the language demands of information gathering** • T. prepares language needed for the project. -T. implements unit 4	**Step 5: The students collect information**
(1.5 hrs) Storytelling project	**Step3: the students share the outline of the story with their group member.** **Step 4: The teacher prepares the students for language demands of telling a story** • T. prepares language needed for the project. -T. implements unit 4	**Step5: the students prepare for the story telling.**
Week 8 (3 hrs)		
(1.5 hrs) Investigation project	**Step 4: Teacher prepares the students for the language demands of information gathering** • T. implements unit 4	**Step 5: The students collect information**
(1.5 hrs) Storytelling project	• <u>Mid-term exam</u>	**Step5: the students prepare for the story telling.**
Week 9 (3 hrs)		
(1.5 hrs) Investigation project	**Step 6: Teacher prepares the students for the language demands of categorizing and analyzing data.** • T. implements unit5 • Ss. Submit the first draft to T.	**Step7: The students organize and analyze information**

Session	Inside classroom activities	Outside classroom activities
(1.5 hrs) Storytelling project	• T. prepares language needed for the project. -T. implements unit 5 •	**(2 Ss each day from Monday to friday)** **Step 6: the students present their story** **Step 7: The teacher and the students evaluate the final product.**
Week 10 (3 hrs)		
(1.5 hrs) Investigation project	**Step 8: Teacher prepares the students activities for the final presentation.** • T. prepares language needed for the project. -T. implements unit 5	Ss. prepare for the presentation
(1.5 hrs) Storytelling project	• T. prepares language needed for the project. -T. implements unit 5 •	**(2 Ss each day from Monday to friday)** **Step 6: the students present their story** **Step 7: The teacher and the students evaluate the final product.**
Week 11 **(3 hrs)**		
(1.5 hrs) Investigation project	**Step 8: Teacher prepares the students activities for the final presentation.** • T. prepares language needed for the project. -T. implements unit 6 •	
(1.5 hrs) Storytelling project	• T. prepares language needed for the project. -T. implements unit 6 •	**(2 Ss each day from Monday to friday)** **Step 6: the students present their story** **Step 7: The teacher and the students evaluate the final product.**
Week 12 **(3 hrs)**		
(1.5 hrs) Investigation project	**Step 9: The students present final product** **Step 10: The students evaluate the project** • T. implements unit 6	
(1.5 hrs) Storytelling project	• T. implements unit 6	**(2 Ss each day from Monday to friday)** **Step 6: the students present their story** **Step 7: The teacher and the students evaluate the final product.**
Week 13	• T. implements unit 7	<u>Speaking posttest</u> <u>Questionnaire</u>
Week 14	• T. implements unit 7	<u>Semi-structure interview</u>

CURRICULUM VITAE

Di Yang was born on March 22, 1989 in Kaili, Guizhou province, China. She obtained her Bachelor's degree in Guizhou Medical University in 2011. Right upon graduation, she started her teaching career at Kaili University, Guizhou province, China.

Since September 2013, Di Yang has been enrolled in the M. A. program of English Languages Studies at Suranaree University of Technology, Thailand. Her academic research interests include teaching methodologies and applied linguistics. She can be reached at the e-mail: *387804384@qq.com.*