



**THE APPLICATION OF PROJECT-BASED LEARNING TO
IMPROVE ENGLISH READING SKILL OF GRADE 6
STUDENTS IN GUANGDONG PROVINCE, CHINA**

**BY
MENGMEI YING**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
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Abstract

This study aimed to compare the English reading skill of Grade 6 Chinese students before and after implementing Project-Based Learning (PBL) and to assess their learning satisfaction with the PBL. In this study, 30 sixth-grade students from a compulsory school in Guangdong Province participated in practical teaching sessions. The experimental process was structured into distinct phases: a pre-test conducted before the experiment, instructional activities during the experiment, and a post-test, followed by the administration of questionnaire, semi-structured interview, and statistical analysis after the experiment. Data analysis revealed a significant difference between the pre-test and post-test scores. The average pre-test score was 10.10 while the average post-test score increased to 15.80, reflecting an average improvement of 5.70 points, equivalent to a 28.50% increase. The average results of the questionnaire indicated high levels of satisfaction across all categories. For Part A: Interest and Motivation, the mean score was 4.26 (SD = 0.88); for Part B: Engagement, the mean was 4.31 (SD = 0.96); and for Part C: Efficacy of PBL on Student Learning, the mean was 4.27 (SD = 0.88). Additionally, responses from the semi-structured interview revealed that students were satisfied with the application of PBL in their English reading class. The findings of the study suggest that the application of Project-Based Learning significantly improved the English reading skill of Grade 6 Chinese students.

(Total 131 pages)

Keywords: Project-Based Learning, English Reading Skill, Learning Satisfaction, Grade 6 Students

Student's Signature Thesis Advisor's Signature

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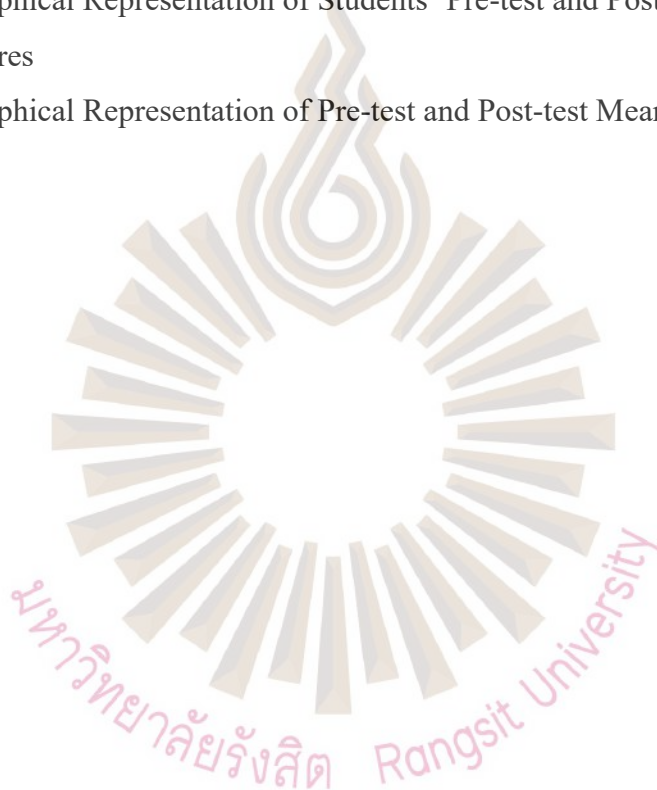
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CHAPTER 1

INTRODUCTION

This chapter begins with an exploration of the study's background and rationale. It then outlines the research objectives, research questions, and research hypothesis. Additionally, the scope, the conceptual framework, research terminologies, limitations and significance of the study are presented sequentially.

1.1 Background and Rationale of the Study

The globalization trend has made English the primary language for global communication, aiding in the exchange of knowledge worldwide. Prioritizing English education in compulsory schooling in China not only fosters international development but also cultivates cross-cultural talents, addressing modern demands (Chen, 2022). And English, as an international language of communication, plays a crucial role in global societal interactions. Nowadays, exchanges between different countries, regions and ethnicities are becoming increasingly frequent. Modern society demands higher proficiency in English. Listening, reading, writing and speaking are fundamental skills in English and among the most important. Among these four skills, reading occupies an indispensable position (Zhang, 2021).

Reading in English serves as not just the foundation for learners to enhance other language skills, but also as a crucial method for nurturing students' overall English abilities. Therefore, English reading holds significant importance within English teaching (Fan, 2021). As Anderson (2000) stated, reading is a fundamental skill for English language learners as a second or foreign language. For many individuals, reading is an exceedingly vital skill. And Xiao (2006) mentioned English learning proved challenging without reading support, yet student proficiency notably

surged through reading endeavors. Thus, nurturing and refining students' reading skills remains paramount in contemporary English education. According to Ma (2011), English reading as a crucial component for acquiring language skills, serves as a primary facet of language input, holding an exceptionally significant position in English teaching. Cultivating students' reading skills stands as one of the key instructional objectives. English reading is an important skill for students to master and serves as a benchmark for measuring their proficiency in the language. High scores are often equated with being good at English. Therefore, teachers should prioritize English reading and strive to enhance students' reading skills and abilities (Song, 2018).

Primary school serves as the initial phase for English learning, crucial for igniting student interest, nurturing confidence and fostering resilience. Additionally, it establishes a strong groundwork for future English studies and the exploration of related scientific and cultural subjects in English. China prioritizes primary school English education, as evidenced by the explicit focus on inspiring student interest and developing independent learning, imagination and creativity within the new curriculum standards (Xiong, 2019). Reading is one of the crucial pathways for students to acquire information, accumulate knowledge and understand the external world, playing a significant role in primary school English curriculum teaching. It is also an integral component of English instruction and an effective means of cultivating students' language skills (Fan, 2024).

In the 2022 "Compulsory Education English Curriculum Standards" issued by the Ministry of Education of China, new requirements have been introduced for English reading in the sixth grade. Students are expected to use images and contextual clues to try to infer the meanings of new words in the text. When reading texts related to specific themes, they should be able to organize information about characters, settings and plots, think independently, and express personal opinions (Ministry of Education of the People's Republic of China, 2022). This demonstrates that the curriculum standards for sixth-grade English reading have been raised. Therefore, in sixth-grade English reading instruction, the learning objectives for students are to

enhance their knowledge system through English reading, develop the critical thinking and gradually improve their ability to analyze articles.

However, the realistic situation of the sixth-grade students' reading teaching is not actually optimistic in China. Ma (2011) noted that English reading is often neglected in teaching, making it challenging for students. Many students lack interest and motivation due to traditional teaching methods that focus on grammar and translation. This approach fails to adequately develop students' reading comprehension, critical thinking and overall abilities. As Song (2018) mentioned that traditional English reading teaching is teacher-centered, exam-oriented and focuses on grammar and vocabulary. It emphasizes knowledge accumulation, centering on vocabulary and grammar. In reading classes, teachers often translate texts word by word, with students passively taking notes. This method results in poor text comprehension and low reading ability, preventing students from fully grasping main ideas. Additionally, in accordance with Zhang (2021), teachers' teaching concepts and methods are outdated, with many still using antiquated approaches that overlook the development of students' initiative and innovation. The teaching tools are outdated and the teaching process lacks preparation. During classes, teachers solely rely on chalk and blackboards for dull and monotonous lectures, which undermines students' motivation for reading.

Nevertheless, there are still some issues with the current English reading instruction. For instance, the emphasis on student-centered learning has not been fully realized; students are used to passively absorbing information, lacking self-regulation and being easily influenced by their surroundings. Additionally, many students are unsure of what to do without explicit directions from the teacher. If these teaching methods remain unchanged, students may gradually lose interest in English reading, hindering their overall development (Fan, 2021). As Shi (2023) stated that despite significant reforms in English reading teaching, many upper-grade primary school classes still rely on traditional methods. Teachers hesitate to adopt new models, considering traditional methods time-saving and safe. This approach emphasizes grammar and vocabulary over classroom interaction, leading to low student interest

and shallow comprehension. To improve reading skills, teachers should focus on developing students' comprehension, reading interest and critical thinking abilities.

Based on the current English reading teaching problems, it is evident that English teachers should adopt a more effective and beneficial approach to teaching English reading. Therefore, Project-Based Learning (PBL) is able to implement into the current English reading teaching. PBL recognized as an effective teaching approach, has garnered considerable attention from scholars and educators and has been extensively employed across various teaching domains in foreign nations. Despite its growing popularity, PBL remains relatively new in China and has been implemented for only a brief period in English teaching (Song, 2018).

Wang (2021) said PBL is centered on students, who choose, plan and present projects, solving problems through diverse approaches. Students are central to posing questions, planning, executing and evaluating solutions, either in individual or collaborate. Throughout this process, students hold the primary responsibility. Teachers serve as guides, adjusting project and teaching plans based on students' progress. As Zhang (2021) stated that PBL is a student-centered teaching method where students work in groups to complete projects, fostering their critical thinking and self-directed learning abilities. Teachers act as guides and project designers, encouraging students to solve problems and accomplish tasks. This approach emphasizes the close connection between learning and problem-solving, with teachers providing necessary guidance while students pose questions and seek solutions. This interactive teaching method enhances students' interest in reading and their engagement in learning, facilitating interaction and progress between teachers and students. Song (2018) claimed PBL requiring students to use their existing knowledge and resources to solve problems and acquire relevant skills. With teacher guidance, students can work independently or in teams. PBL effectively consolidates knowledge, enhances learning skills and cultivates language comprehension abilities. Moreover, Fan (2021) mentioned that PBL prioritizes learning before teaching. Initially, students explore and solve problems independently, after which teachers assist in overcoming

any difficulties encountered. This approach stimulates students' creativity and enthusiasm for learning while fostering their autonomous learning abilities.

In PBL, students' central role in reading is emphasized, requiring teachers to design activities from their perspective. Teachers should first understand students' interests and psychological needs when selecting project themes. They should then base the projects on themes. Additionally, choosing themes closely related to students' lives is crucial for engagement. Teachers can design themes that spark curiosity based on textbook texts. Creating authentic contexts is essential for meaningful learning. Students must integrate language skills, grammar and background knowledge to construct knowledge and transfer abilities during the project (Lu, 2023). Integrating PBL into English reading teaching to provide students with opportunities for reflection, experience and expression in English learning. Through experiencing and presenting project-based reading activities, students can not only cooperate and practice independently, but also master language knowledge from reading, expand the depth and breadth of reading comprehension, and appreciate emotions, think deeply, gain insights and form correct values in the process of project experience (Yang, 2022).

This study endeavored to apply PBL aligns with cooperative learning theory to improve the English reading skill of grade 6 students in one of the compulsory schools in Guangdong Province, China. Students worked in groups with assigned roles for implementing projects, fostering positive interdependence and mutual responsibility. The group discussions and presentations encouraged face-to-face interaction. Additionally, through the evaluations, individual accountability was ensured that recognized each student's contribution and learning. It was expected that PBL could make up for the shortcomings of traditional teaching methods and create a better teaching environment and atmosphere for English reading teaching. The interest of the grade 6 students for English reading could be stimulated, gradually their English reading skill could be improved with the collaborative and interactive learning experiences and hold high learning satisfaction towards the application of PBL.

1.2 Research Objectives

1.2.1 To compare the English reading skill of grade 6 Chinese students before and after the application of Project-Based Learning.

1.2.2 To investigate the grade 6 Chinese students' learning satisfaction towards the application of Project-Based Learning.

1.3 Research Questions

1.3.1 Would the application of Project-Based Learning improve the English reading skill of grade 6 Chinese students?

1.3.2 What would be the grade 6 Chinese students' learning satisfaction towards the application of Project-Based Learning?

1.4 Research Hypothesis

The English reading skill of grade 6 Chinese students would be improved after the application of Project-Based Learning.

1.5 Scope of the Study

This study was conducted in one of the compulsory schools in Guangdong Province, China with grade 6 students. One class of grade 6 from this school was randomly selected as subject, the class including 30 students which was applied PBL in the English reading class. The researcher aimed to the effectiveness of PBL could improve students' English reading skill and their satisfaction.

1.5.1 Location of the study

The study was conducted in one of the compulsory schools in Guangdong Province, China. It is situated in the city and has 120 students in the grade 6.



Figure 1.1 Location of the Study

Source: Baidubaike, 2024

1.5.2 Population

Population: The target population of this study consisted of four classes with 120 in grade 6 students from a compulsory school in Guangdong Province. There were 65 males and 55 females. The age range of these students was between 11 to 12 years old, encompassing different levels of English reading proficiency.

1.5.3 Sample

Sample: The researcher used a clustered random sampling method to choose one class out of from the population. The class comprised 16 males and 14 females in different levels of English reading proficiency.

1.5.4 Time Frame

The study was carried out during academic year 2024 and it lasted for 4 weeks from September to October, 2024.

Table 1.1 Timeline of the Study

Project	Research Activities	Month / Year							
		Apr, 2024	May, 2024	Jun, 2024	Jul, 2024	Aug, 2024	Sept, 2024	Oct, 2024	Nov, 2024
1	Literature review								
2	Research proposal								
3	Data collection								
4	Data analysis								
5	Final defense								

1.5.4 Content of Lesson plans

The researcher designed and implemented four lesson plans in four weeks, two classes in each lesson. The topic of each lesson was based on the Elementary School English textbook for PEP Grade 6 Book 1 (for Grade 3 starting) (2012). The lesson plans as shown in the below Table 1.2.

Table 1.2 Lesson Plans

Week	Lesson Plans	Topics	Project Based Learning
1	Lesson plan 1	How can I get there?	The students make a group of five to do a tourists' guide paper. It consists of the famous places' maps in one Chinese city and how to travel.
2	Lesson plan 2	Ways to go to school	The students make a group of five to do a stimulation PowerPoint. It consists of the different countries students' ways to go to school and traffic safety knowledge.

Table 1.2 Lesson Plans (Cont.)

Week	Lesson Plans	Topics	Project Based Learning
3	Lesson plan 3	My weekend plan	The students make a group of five to do a poster. It consists of one weekend plan and detailed activities.
4	Lesson plan 4	I have a pen pal	The students make a group of five to do a role-playing. It consists of the first conversation with a pen pal.

1.6 Conceptual Framework

The conceptual framework was formed according to the theories of the research. Project-Based Learning (PBL) based on the constructivism learning theory which gave the opportunities for students to develop self-construction abilities and allowed students to engage in English reading projects with a positive attitude. The core concept of PBL aligns with the characteristics of cooperative learning theory, the students in groups to work together, discuss and present the project results, through the collaborative and interactive learning experiences to improve their English reading skill.

In this study, the researcher aimed to the effectiveness of PBL to English reading skill and their satisfaction. The independent variable was the application of PBL, and the dependent variables were the English reading skill and students' learning satisfaction. The conceptual framework of this study is shown in the Figure 1.2.

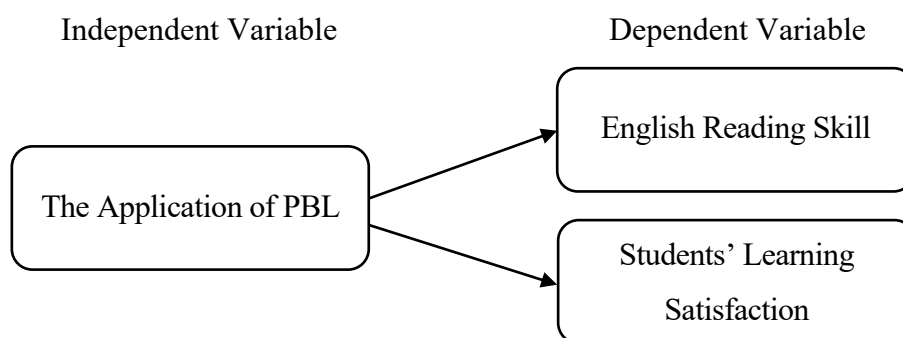


Figure 1.2 Conceptual Framework

1.7 Limitations of the Study

1.7.1 The study was limited to Grade 6 Chinese students in one compulsory school in Guangdong, students in different districts and schools have different abilities, which may lead to different results.

1.7.2 The study was only four weeks long and covered a small number of topics of teaching and learning, students may be affected by the time and the number of topics, which may influence their knowledge and skill acquisition.

1.8 Research Terminologies

Project-Based Learning (PBL) refers to a systematic teaching method that fully engages students in autonomous, cooperative, and exploratory learning through collaboratively designed projects, enhancing their learning skills. In this study, the researcher designed the PBL aligned with cooperative learning theory to teach the students in the sample group by implementing the projects according to the specific topics. There were five steps for teaching as follows:

- 1) Project preparation: Students engage with the lead-in activities, learn the key words and expression, then form diverse group and select project;
- 2) Project implementation: Students independently gather, share and analyze English reading materials, then collaboratively create their final project with the teacher support;
- 3) Project presentation: Each group present their projects, teachers and classmates taking notes for evaluation;
- 4) Evaluation: Students discuss and share their ideas about project results with teacher and other classmates;
- 5) Practice on reading: Students complete textbook exercises, then teacher give feedback and encourage them to do more reading.

English Reading Skill refers to the ability of the students in the sample group can read, retrieve basic information, make straightforward inferences, interpret and integrate information of written texts in English through the PBL. The pre-test and

post-test were adopted to assess the English reading skill in this study. The test consisted of 20 English reading skill questions, with each question worth one point, totaling 20 points.

Students' Learning Satisfaction refers to the feelings or attitudes of grade 6 Chinese students in the sample group towards the application of PBL. In this study, a questionnaire from 5-point of Likert scale and semi-structured interview were designed and conducted to measure the students' learning satisfaction. The questionnaire and interview questions consisted of three parts: students' interest and motivation, students' engagement and efficacy of PBL on student learning.

Grade 6 students refer to the students who are in the sixth year of compulsory education in Guangdong Province, China, usually between the ages of 11 to 12. These students were the participants of the study.

1.9 Significance of the Study

1.9.1 The application of Project-Based Learning helped to improve the English reading skill of grade 6 students in Guangdong Province, China.

1.9.2 The grade 6 Chinese students had high learning satisfaction towards the application of Project-Based Learning.

CHAPTER 2

LITERATURE REVIEW

This chapter defines and classifies the main concepts in the research questions, introduces the theoretical foundations of this study and summarizes the research results related to Project-Based Learning.

This chapter is divided into 8 parts:

- 2.1 The Importance of English Language in China
- 2.2 English Learning in China
- 2.3 The English Reading Skill
- 2.4 Project-Based Learning (PBL)
- 2.5 The Application of PBL to English Reading
- 2.6 The Assessment and Evaluation of PBL
- 2.7 Related Theories
- 2.8 Related Research and Studies

2.1 The Importance of English Language in China

As a global common language, English has always been an essential tool in international communication and the exchange of scientific and cultural knowledge. Emphasizing the study and reading of English can better facilitate understanding of the advanced achievements of human civilization and enhance mutual understanding between nations (Ma, 2016).

Lu (2019) pointed that China gradually moving towards internationalization with continuous development and progress of Chinese society. In Chinese daily life, English language is commonly used in many areas. Being proficient in only one's

native language is insufficient to keep pace with the times. Mastering English language is not only enriching your life but also broadens your horizons, making the world more vibrant. Therefore, learning English has become essential. China's educational policies have explicitly stated that learning and mastering a foreign language, especially English, is indispensable for being a qualified global citizen in the 21st century. As the largest nation in terms of teaching English within the same native language and cultural background, China has emerged as a "superpower" in English language education. Zhou (2023) also noted that with the deepening of global economic integration, China, as a rising developing country, has become an important member of the world economy. To achieve national development and social progress, mastery of English, the universal language of scientific and technological communication, is essential and an important skill for applied talents in the new era.

As we all know, listening, reading, writing, and speaking are fundamental skills in English language and are also the most important ones. Among these four skills, reading skill holds an indispensable position. Reading skill is one of the most important standards to measure a person's English language proficiency (Zhang, 2021). To a certain extent, students' English reading skill reflects the depth and breadth of their mastery of the English language, and has a profound impact on the improvement of students' oral communication abilities in English (Zhang, 2020).

Carrell (1992) said reading skill have gained heightened importance in the information age, prompting a greater focus on them in English language teaching. For many students, especially those learning English as a second or foreign language, reading remains the most vital of the four language skills. And Reading skill is also the basis and prerequisite for developing other English language skills (Fan, 2021). Reading skill plays a crucial role in English language learning, profoundly impacting students' overall language abilities and cognitive development. Reading provides essential language input and opportunities to encounter vocabulary, grammar, and expressions, aiding language acquisition. Through reading, students accumulate vocabulary and enhance their understanding of grammar and sentence structures, laying a solid foundation for improved language expression and communication.

Reading hones students' comprehension skills, enabling them to grasp the themes, details and author's intent in texts. By reading literature and news, students gain deeper insights into the culture and history of English-speaking countries, broadening their international perspectives (Ge, 2024).

The Chinese society will inevitably develop based on advancements in technology, which will continuously lead to the updating of information. The fastest way to acquire and process this information is through reading. To better serve society with the valuable information obtained, it is essential to emphasize the learning of foreign languages, in which English is most widely used. Therefore, developing students' English reading skill is the most crucial aspect of English language learning in China (Liu, 2017).

In the process of improving students' reading skill, it can not only enhance students' confidence in learning English and cultivate their interest in reading, but also help them to promote the formation and development of their independent learning ability, so that they can take the initiative to read and enjoy reading, and lay a solid foundation for lifelong learning (Liu, 2020).

2.2 English Learning in China

Nowadays, English language as a major international language, is being increasingly used in the process of learning and communication. In China, with the rapid development of the economy and the fast advancement of science and technology, English is involved in many aspects of daily life. For the young generation, more people would like to learn English language to adapt to societal development and demands. In this part informs about how the English language learning in China.

2.2.1 English Learning Management

In China, the current English learning model in basic education is predominantly exam-oriented. With students' learning aimed at serving the needs of all level English

examinations, from primary school to university. The English instruction is also inevitably geared towards exams. Various levels of English examinations, constrained by outdated exam concepts, conditions and methods, primarily test students' language knowledge (such as vocabulary and grammar) and reading skill, rather than their comprehensive application skills (Zhang, 2019). From primary school to university, the traditional teaching method remains the main approach for English learning. This method is relatively rigid and singular, placing greater emphasis on the teacher's transmission of knowledge and the process of student memorization. Teachers predominantly use verbal explanations and blackboard writing to present the content and key points of their lessons (Ni, 2014).

In recent years, the level of English learning in China has continuously improved. From primary to secondary school, English has become an integral part of the three core subjects, alongside Chinese and mathematics, underscoring its equal importance. China regards English learning as a fundamental component of national learning. Teachers and relevant educational departments have increased their efforts in English learning and teaching, not only enforcing strict requirements on students' vocabulary memorization and grammar training but also continually guiding students to improve their listening and speaking skills. The emergence of English corners is a testament to this effort. And some schools have implemented bilingual learning, consistently enhancing students' skills in listening, speaking, reading, and writing in English in their daily lives (Zhang, 2018).

Based on recent education policies promoting core competencies and the "double reduction" policy, five improvement strategies are proposed for English learning management by Tian (2024). The details as following:

- 1) Build a scientific view of learning management, clear classroom learning management objectives. The objectives are mainly reflected in the following three aspects: set classroom rules to reduce problematic behaviors and ensure smooth running of teaching and learning; Encourage students to learn independently, and promote active inquiry and cooperative learning; Improve the effectiveness of teaching and learning.

2) Create a relaxed and cordial psychological atmosphere to enhance students' interest and enjoyment of learning. Build mutual trust and respect between teachers and students, consider students' needs and interests, provide support and care. Clarify reward systems and develop self-management skills. Create a positive emotional classroom experience and reinforce positive management.

3) Implement integrated unit teaching, enriching classroom activities and enhancing the attractiveness of the classroom. Divide the teaching content into small units and integrate multiple teaching material elements into one theme to increase the coherence of the classroom. Utilize multimedia and visual aids, such as pictures, videos and audio, to make the classroom livelier and more interesting.

4) Adopt appropriate management approach based on the specific characteristics of different levels students. In order to create a supportive learning environment, the approachable and friendly teaching methods could be used. Provide clear and visible learning objectives to students understand tasks and feel a sense of achievement.

5) Emphasize integrated "Teaching-Learning-Assessment" to improve learning management effectiveness. Plan classroom activities in advance to align learning objectives with assessment methods, ensuring students understand how to achieve goals during lessons. Provide timely feedback to help students understand learning progress and improvements.

Overall, the English learning management in China would be developed according to the different education policies. And in this study, the effective English learning management was considered. It would help the students to have positive attitudes and clear learning objectives for English reading learning. It also would help the research to establish more useful reading lesson plans to improve the English reading skill.

2.2.2 English Curriculum in China

Basic curriculum is a curriculum in which students learn basic theories, fundamental knowledge and basic skills. Its role is to lay a solid foundation for

students to acquire knowledge, learn science and technology, and develop relevant abilities. With the changes of the times and the development of society and economy, the role played by the English curriculum as a basic curriculum is becoming more and more obvious (Yi, 2010). And the English curriculum is a necessary factor in building the comprehensive quality of China's modern talents, and is an indispensable ingredient in the advancement and development of the country and society. It is essential to offer English curriculum in China (Zhang, 2014).

In defining the nature of the English curriculum, “Compulsory Education English Curriculum Standards (2022 Edition)” states that the English curriculum for compulsory education embodies the unity of instrumentality and humanity, and characterized by its fundamental, practical, and comprehensive nature (Ministry of Education of the People's Republic of China, 2022). Additionally, Zhao (2022) said the nurturing value of the English curriculum is mainly reflected in the three aspects of moral, intellectual and aesthetic education. In the intellectual aspect, the English curriculum not only cultivates students' skill to listen, read and write, but also their study habits, learning ability and thinking ability. English learning should not be confined to shallow listening, reading and writing training, the cultivation of higher-order thinking skills is even more important, and students' analytical ability, judgement and critical awareness can be cultivated through English reading.

In the “Compulsory Education English Curriculum Standards (2022 Edition)” issued by the MOE of China, the content of the English curriculum consists of themes, texts, language knowledge, cultural knowledge, language skills, and learning strategies. Language skills are divided into comprehension skills and expression skills, specifically including listening, speaking, reading, viewing and writing skills and their integrated use. Listening, reading and watching are comprehension skills, while speaking and writing are expression skills. The content of the compulsory education English curriculum is presented in three levels: Level 1 for grade 3 to 4, Level 2 for grade 5 to 6, and Level 3 for grade 7 to 9. This study focuses on grade 6 students, thus describing the Level 2 content of comprehension skills as follows:

- 1) Understand simple instructions and complete tasks in daily learning and life;
- 2) Comprehend texts on common themes with the help of pictures, images, etc., and extract, organize, and summarize key information;
- 3) Guess the meanings of words in texts based on contextual clues and non-verbal information, infer unknown information while listening and reading;
- 4) Summarize the occurrence, development, and conclusion of the main events in narrative texts;
- 5) Classify information within the text;
- 6) Compare similarities and differences between characters, events, or viewpoints in the text and attempt to observe and understand the world from different perspectives;
- 7) Summarize the main content of the text and appreciate the connections between the main information;
- 8) Understand the meaning conveyed by multi-modal texts (such as animations, posters, front and back covers of books, and other print materials) and extract key information;
- 9) Engage in extracurricular listening and viewing activities for no less than 30 minutes per week;
- 10) Accumulate an extracurricular reading volume of 4000-5000 words.

Moreover, MOE of China (2022) also established the learning objectives through the English curriculum. The learning objectives are in following four aspects:

- 1) Develop English language skills. Students are able to understand the similarities and differences between English and Chinese through language practice activities such as perception, experience, accumulation, and application. Gradually form language awareness, accumulate language experience, and engage in meaningful communication and exchange.

- 2) Cultivate cultural awareness. Students are able to understand the outstanding achievements of different countries, compare the similarities and differences between Chinese and foreign cultures, develop the ability for cross-cultural communication and exchange, form a healthy and positive aesthetic taste and correct

values. Deepen the understanding and recognition of Chinese culture, establish an international perspective, and strengthen cultural confidence.

3) Enhance thinking quality. Students are able to develop thinking skills through English learning and promote English learning through the development of thinking skills. Initially observe and understand the world and things from multiple perspectives, express viewpoints logically and coherently. Gradually develop logical thinking, dialectical thinking and innovative thinking, so as to make thinking agile, flexible, creative, critical, and profound.

4) Improve learning abilities. Students are able to set up correct English learning goals, maintain interest in learning and actively participate in English practice activities. Pay attention to listening, enjoy communication and dare to try during learning. Learn to explore independently, cooperate and help each other. Learn to reflect on and evaluate learning progress, adjust learning methods, practice self-management, improve learning efficiency and be willing to learn and good at learning.

This study followed the English curriculum standards in China, combined a student-centered teaching method to achieve the learning objectives. Additionally, this study focused on the English reading curriculum to improve the students' reading skill of the comprehension skills.

2.2.3 Challenges and Obstacles in Learning English in China

With the implementation of the new curriculum reform, there is an increasing emphasis on English education, higher demands are placed on teachers. English teachers are required not only to impart knowledge but also to develop students' comprehensive language skills. The new curriculum standards emphasize the humanistic and utilitarian aspects of English, requiring students to use English in various contexts. And the new curriculum standards clearly advocate for student-centered teaching, encouraging students to actively participate in classroom activities. Therefore, English teachers need to create an open and democratic learning atmosphere to help students learn English better. But in practice, some teachers'

learning management concepts fail to reflect the new curriculum standards, revealing certain drawbacks (Dong, 2018).

Zhou (2019) stated that there are 5 kinds of obstacles for English learning in China. First, the monotonous teaching methods. Currently, some English teachers still adhere to traditional teaching concepts in the classroom, using monotonous and boring teaching methods. This approach fails to stimulate students' interest in learning English and their classroom participation. Second, low English proficiency among students. Due to individual differences in learning abilities, some students have relatively low English proficiency, which directly affects the effectiveness of English teaching. Some students have difficulties with English phonetics and spelling, hindering the improvement of their English performance. Third, neglecting students' central role. In English classroom teaching, teachers neglect the central role of students. They follow predetermined teaching plans without engaging in sufficient interactive teaching with students, which cannot ignite students' enthusiasm for learning English. Fourth, dull and rigid classroom atmosphere. At present, in many primary school English classrooms, teachers often use dull and rigid lecture-based teaching methods. These methods fail to arouse students' interest in learning, leading to poor English learning outcomes. And the last, lack of good English learning habits among students. Some students have not developed good learning habits in their English learning, which directly affects their English learning performance and overall proficiency improvement, hindering the achievement of better English learning outcomes.

Furthermore, Li (2022) pointed that the challenges for English learning of primary schools in China. 1) Some teachers pay little attention to the vocabulary of primary school students in their teaching; 2) Lack of language environment in English learning; 3) The primary school professionally competent English teacher is inadequate; 4) Poor articulation between the content of primary school English teaching materials and junior secondary school; 5) The teaching method is monotonous, lacking proper instructional communication.

2.3 The English Reading Skill

As Sadiku (2015) said, English reading is an interesting way to hunt for knowledge. It also could bring wisdom. We can learn a lot through reading, which is the most important language skill. And English reading as a key component of English learning, is crucial for students to fully master the skills to use the English language. We all need to recognize the importance of English reading. So, this part mainly talks about the English reading skill in China.

2.3.1 The Importance of English Reading

English reading, as a vital input method, plays a crucial role in acquiring language knowledge in English learning. It encompasses basic knowledge like vocabulary, sentence structures, and grammar, while also conveying deeper meanings such as emotions and cultural insights. Rather than rote memorization, students grasp meanings more effectively through reading. This helps students retain basic knowledge longer and more naturally. Additionally, reading exposes students to foreign cultures, different viewpoints, and attitudes, fostering a better understanding of Western culture and an appreciation for cultural diversity. Ultimately, reading enhances students' writing and oral communication skills by providing authentic expressions and demonstrating effective writing skills (Liu, 2022).

He (2021) stated that there are great variety of advantages of English reading. The advantages as following: 1) Enhance vocabulary by exposing students to new words frequently and repeatedly, allowing them to understand and master these words through different contexts; 2) Improve comprehension and critical thinking skills; 3) Help memory and academic improvement; 4) Enhance analytical skills and ones' self-confidence; 5) Help to enhance communication skills and broaden one's horizons; 6) Improve writing skills; 7) Foster one's empathy; 8) Deepen emotional connections, enriching the mind and strengthening the emotional bond between the reader and the author; 9) Help to get the knowledge and skills to become a leader; 10) Reading is

flexible, everyone could adjust the reading time in accordance with their own pace to read.

Additionally, Ge (2024) pointed that the importance of English reading in primary school stage. The primary school stage is a crucial period for developing students' English reading skill, holding multiple developmental significance. Firstly, during the primary school phase, students establish core skills in vocabulary, grammar, and pronunciation, which provide a solid base for future advanced language studies. Secondly, English reading cultivates students' cognitive abilities, requiring them to think, analyze, infer and solve problems. Moreover, English reading skill serves as a crucial support tool for subject learning. In primary school, students need to read English textbooks and materials in other subjects, making strong English reading skill is essential for comprehensive learning. Most importantly, nurturing English reading skill during primary school could establish a foundation for lifelong learning. Educators and parents should focus on cultivating and nurturing students' English reading skill, creating broader opportunities for their future learning and growth, and injecting vitality and wisdom into societal development.

In a conclusion, English reading could help students to expand their knowledge and enhance learning capabilities through processes such as extracting information, identifying issues, critical thinking, and problem-solving. Proficient English reading skill enabled students to accurately extract pertinent information from texts, process it effectively, and internalize it into their own cognitive frameworks.

2.3.2 The Current Situation of English Reading in Primary Schools

English Reading instruction is one of the approaches to comprehensively developing students' overall language skills. Although the curriculum standards clearly outline the objectives for reading teaching and learning, Wang (2016) found that the current situation of primary schools English reading instruction is not promising. The main problems observed in Pre-reading, While-reading and Post-reading session of English reading teaching:

1) Disconnect the context in the Pre-reading session, focus on vocabulary teaching. Some teachers fear that vocabulary will hinder students' reading, so they explain new words' sounds, shapes, and meanings individually before reading. This boring method weakens students' interest in learning and reading. Teaching words out of context leads to mechanical memorization without proper usage. As a result, students fail to learn reading skills like guessing words and making predictions, making independent reading difficult.

2) Translate the text in the While-reading session, neglecting skill guidance. The while-reading session is essential, and teachers should guide students to read with tasks or problems to achieve text comprehension. Some teachers translate every sentence and word, disrupting the reading process and preventing students from developing their comprehension skills. Primary students need graded questions and strategic guidance from teachers to understand key points and improve reading skills. Without proper guidance and skill teaching, simply having students read and copy texts can lead to a loss of interest and sense of achievement in reading. While some teachers encourage word guessing, the complexity of texts and limited class time often prevent students from effectively understanding vocabulary.

3) Mechanical drilling in the Post-reading session, lacking extracurricular reading. After reading, teachers should design extension exercises to enhance comprehension. PEP textbooks use "Read and Write" lessons for reading instruction, with common activities including retelling, discussing pictures, imitation writing, rewriting, and continuation writing. However, some teachers limit post-reading activities to simply copying or memorizing key sentences. Additionally, some teachers emphasize extensive vocabulary and sentence pattern exercises, focusing solely on mechanical language output, which can detract from students' overall language proficiency. Most schools rely heavily on textbook reading materials for language acquisition, potentially narrowing students' reading perspectives. This approach confines students' learning within textbook contents, restricting their intellectual growth over time.

Wang (2023) also pointed three aspects of the problems in the English reading teaching. First, teachers ignore the overall comprehension of the article. Due to the exam-oriented education, teachers prioritize vocabulary mastery over holistic article

comprehension. This leads students to rely on rote memorization, hindering English learning efficiency and confidence building. Primary school students, in their developmental phase, often lack cognitive ability and curiosity, limiting their engagement and understanding of English texts holistically. Ignoring overall text comprehension prevents students from grasping deeper meanings and contextual connections, ultimately stunting their English reading skill improvement. Second, teachers adopt single teaching method. Single teaching method used in primary school English reading diminishes student enthusiasm and engagement, hindering effective internalization of English knowledge and stifling comprehensive skill development. Third, teachers possess outdated teaching and learning concepts. Under outdated concepts, teachers often prioritize students' English grades over their mastery of reading skills, which can lead to students developing a negative perception of reading instruction.

In addition to the current situation of teachers in primary schools English reading teaching, there is also the current situation of students in English reading learning. Sun (2017) said that there are several problems existing in the primary school students during the English reading learning. Firstly, students have limited vocabulary and insufficient accumulation of phrases. For some English reading tasks, it is difficult to proceed without a certain amount of vocabulary and phrase accumulation. Secondly, students have low reading volume and lack reading materials. Due to heavy burdens of schoolwork, some students have almost no time for extracurricular English reading, resulting in their English reading volume falling far below curriculum standards. Moreover, students have poor reading methods and bad reading habits. Good reading habits directly impact reading skill, efficiency, and academic performance. However, few primary school students can master good reading techniques or possess good reading habits.

Li (2018) pointed that primary school students have poor comprehension abilities. At this stage of primary education, their information gathering and processing abilities are just beginning to develop cognitively. Their intellectual development is also in its early stages, making their understanding of concepts and things relatively shallow. Coupled with insufficient self-awareness, this hinders their

ability to engage effectively in English reading. Specific manifestations include poor comprehension of sentences, slow reading speed, and lack of organization. Except the poor comprehension abilities, they also have difficulty in grasping language factors in English reading. Due to limited exposure to English among Chinese primary school students, and the substantial differences between English idioms, grammar rules, and Chinese language, English is perceived as more complex and challenging. Moreover, in actual English teaching, many teachers do not emphasize vocabulary spelling and recognition, focusing more on students' speaking and listening skills. Consequently, when faced with lengthy English materials, primary school students often feel overwhelmed and struggle to maintain coherent thoughts. Furthermore, Jiang (2022) also mentioned that primary school students lacking of the interest and the cultural background knowledge in English reading, also have differential reading psychology. Which results in students possess negative attitude towards English reading learning.

2.3.3 The Development of English Reading Skill in Primary Schools

Mo (1996) pointed out that the reading skill structure of sixth-grade primary school students includes language decoding ability, organizational coherence ability, pattern recognition ability, selective storage ability, linguistic intuition ability, and reading transfer ability. Ye (2000) believed that English reading skill refers to the ability to obtain information from written materials, mainly comprising four aspects: linguistic ability, inferential ability, analytical and inductive ability, and speed-reading ability. Zuo (2013) proposed that reading skill mainly including the ability to filter important information, the ability to understand important information, the ability to appreciate important content, and the ability to store important information. Liu (2017) stated that reading skill mainly includes as following: 1) recognition ability; 2) comprehension ability; 3) evaluation & appreciation ability; 4) transfer & application ability. It has characteristics of being phased, interrelated, and complementary.

The "China Standards of English Language Ability (2018)" defined reading skill as: "Reading comprehension skill is the ability of language learners and users to read and process written materials, using various knowledge (including linguistic and

non-linguistic knowledge) and strategies to construct meaning around the reading materials. This including the ability to identify and extract written information; summarize and analyze written information; critically evaluate written information.” Liu (2020) combined the understanding of many scholars on English reading skill and based on the “China Standards of English Language Ability (2018)”, summarized the reading skill as follows: 1) identification and extraction ability; 2) comprehension and recognition ability; 3) generalization and analysis ability; 4) evaluation and appreciation ability. According to these understanding of scholars, the English reading skill in this study refers to the ability of the grade 6 students in the sample group can read, retrieve basic information, make straightforward inferences, interpret and integrate information of written texts in English through the PBL.

It is not enough to have some understanding of English reading skill, but more importantly in the development of the reading skill. So Liu (2020) summarized the related strategies to the development of primary schools students’ English reading skill. The strategies as follows:

First, from the perspective of students, they need to develop good reading habits and increase their reading speed. They should have a strong motivation to read, as reading motivation is a direct influencing factor on reading enthusiasm. When engaging in English reading, having a correct attitude, a positive mindset, confidence, and clear goals can help them reach the optimal state for developing the English reading skill.

Second, from the perspective of teachers, ways to change reading teaching methods and develop students’ English reading skill including: emphasize the teaching of word memory techniques to boost students’ reading confidence; Increasing students’ interest in reading by selecting engaging reading materials; Purposefully training students in extensive reading, and choosing reading materials appropriate for their grade level; Cultivating good reading habits and innovating reading techniques.

Third, from the perspective of schools, they should take the following measures to develop students’ English reading skill: organize various forms of English reading activities. Arrange for students to manage English radio broadcasts, English bulletin boards, English corners, and other series of English reading activities,

providing students with opportunities to learn about the cultural backgrounds of foreign countries. Increase the collection of English reading books in the library and adjust the library's opening hours flexibly to facilitate students' borrowing of books, greatly satisfying their reading needs.

And the last, from the perspective of parents, to develop their children's English reading skill in primary school, they could try to ensure a certain amount of time each week to read English books with their children. When they have free time on weekends, could take their children to libraries and bookstores, actively creating a reading environment for children to stimulate reading enthusiasm. During the children's reading process, parents should also pay attention to cultivating good reading habits, using fragmented time to read physical books and setting a learning example for their children.

2.4 Project-Based Learning (PBL)

Project-based learning (PBL) is a positive teaching method which centers on students using their existing knowledge and resources to solve problems, gaining new skills and insights in the process. With teacher guidance, PBL helps students consolidate knowledge, enhance learning skills, and improve language comprehension through independent or cooperative efforts (Song, 2018). PBL is described in detail in this part.

2.4.1 Definitions of Project-Based Learning

There are several scholars have contributed to defining and elaborating on the concept of project-based learning (PBL). The following are some definitions.

Kilpatrick (1918) regarded PBL as a student-centered teaching method focused on their interests and experiences. He believed that PBL involves learners fully engaging in projects closely connected to the real world, thereby continuously acquiring knowledge, developing skills, and enhancing abilities through practical activities. Adderly (1975) proposed that the main purpose of PBL is problem-solving,

with a strong emphasis on encouraging student initiative. In this approach, students must be fully involved in planning, designing, data collection and presenting their work. During the teaching process, the teacher's role is that of a guide, providing assistance and suggestions to the students. Bransford and Stein (1993) proposed that PBL is a comprehensive instructional method that encourages students to engage in cooperative learning. Thomas (2000) defined PBL as an instructional model that combines students' actual learning needs by integrating limited learning resources to solve challenging problems, ultimately arriving at answers or results. Markham, Larmer, and Ravitz (2003) summarized research from the Buck Institute for Education (BIE) and concluded that PBL is a systematic instructional method where students gain knowledge and develop skills and abilities by producing tangible products and completing tasks. The aim is to drive student learning through carefully designed and deeply researched real-world contexts and tasks, fostering both knowledge acquisition and skill development.

Liu and Zhong (2002) are among the earliest Chinese scholars to comprehensively discuss PBL. They described it as an inquiry-based learning model centered around disciplinary concepts and principles. Students collaborate in authentic contexts, using online research, surveys, or materials provided by teachers to tackle complex or challenging problems within a specified time frame. Ultimately, students showcase their outcomes. Throughout this process, students gradually construct new knowledge and develop various skills. Xu (2008) believed that "PBL" integrates teaching and learning, combining "learning through doing". It is an advanced teaching method that effectively stimulates students' initiative and creativity, enhancing their practical abilities. Compared to traditional learning methods, PBL advocates for students to engage in self-exploration and self-directed learning while solving real-world problems. It emphasizes collaborative decision-making between teachers and students and places a focus on developing students' process skills and core competencies (Hou, 2016). Ke (2018) argued that PBL is a student-centered teaching model that significantly challenges the teacher-centered traditional teaching approach. Students engage in solving real-life or socially relevant problems based on authentic or interesting scenarios. They participate together in designing, planning, and making decisions related to

learning tasks. This process is characterized by its longer duration, openness, and emphasis on innovation. Ultimately, the goal of PBL is to enhance capabilities and increase knowledge. Moreover, Wang (2023) concluded PBL is a teaching method guided by teachers, placing students in authentic problem contexts. Through group collaboration, students discover and solve problems during the learning process. In this approach, students are at the center with teachers providing guidance, aiming to cultivate innovative, logical, and critical thinking. They acquire and apply knowledge and skills, igniting enthusiasm and interest in learning, enhancing teamwork capabilities, and promoting comprehensive personal development.

Summary from the above definitions, PBL refers to a systematic teaching method that fully engages students in autonomous, cooperative, and exploratory learning through collaboratively designed projects, enhancing their learning skills in this study.

2.4.2 The Importance of Project-Based Learning

Project-based learning (PBL) creates an ideal learning environment that fosters freedom and encourages students to express their ideas and collaborate with peers. By leveraging advanced teaching methods, including technology, PBL assists teachers in effectively delivering curriculum content while enhancing students' subject-specific knowledge and comprehensive abilities through collaborative projects. Ultimately, PBL develops individuals who are adept at exploration, communication, and prepared to meet the evolving challenges of modern society. PBL promotes a student-centered approach where teachers play crucial roles in guiding and supporting students throughout the instructional process. This model emphasizes the importance of teachers enhanced observational skills to address students' queries and adapt instruction based on project progress. Continuous professional development is essential for teachers to effectively meet evolving student needs and refine their instructional strategies, ultimately enhancing the overall teaching process and instructional capabilities in primary school English education (Wu, 2020).

Wang (2021) stated that PBL effectively enhances students' problem-solving abilities. In PBL, individuals or groups of students actively provide feedback, gather information, and apply their knowledge to effectively solve problems. This process significantly improves students' ability to think critically about and resolve issues. PBL stimulates students' initiative in learning. By shifting the focus to students and reducing the teacher's central role, PBL encourages active exploration and learning among students. Participation in group projects particularly enhances students' teamwork skills and fosters a greater sense of initiative in tackling complex problems. And PBL also improves students' mastery of subject-specific knowledge. Integrating theoretical knowledge with practical applications within PBL requires students to develop a deeper understanding of theoretical concepts. Whether reviewing theoretical knowledge or applying it in new contexts, this approach significantly enhances efficiency and mastery of subject-specific knowledge.

PBL opens a new window for the English subject, especially through the project sections of each unit, providing new avenues for subject development. It integrates and permeates across various subjects, emphasizing interdisciplinary integration and fostering deep cultivation based on creative thinking. And aligns with the current direction of classroom reform by organizing activities that are authentic and challenging. It promotes the integration of subjects with real-world contexts, stimulates students' initiative and engagement, and allows them to experience the true value and significance of learning. Its student-centered approach enhances students' overall quality of learning (Wang, 2023). Furthermore, Zhang (2021) said that PBL involves creating learning themes based on actual learning content, most of which are closely related to daily life. This enhances students' observational skills of their surroundings and environment, effectively changing the traditional learning mode's singularity and abstraction. PBL incorporates rich theoretical and practical content, as well as a diverse range of knowledge, making it a comprehensive learning skill. It enables students to analyze and grasp issues from multiple perspectives, breaking away from the limitations of textbook-based learning. PBL allows students to acquire knowledge beyond textbooks and enhances their practical skills, analytical abilities, as

well as interpersonal communication and collaboration skills through practical activities.

2.4.3 Characteristics of Project-Based Learning

Liu and Zhong (2002) proposed seven characteristics of project-based learning: 1) There is a driving or triggering question; 2) There is one or a series of final products; 3) It focuses on interdisciplinary knowledge; 4) It emphasizes collaboration in learning activities; 5) The learning has certain social benefits; 6) The learning involves inquiry into real-life situations; And 7) The learning process requires the use of various cognitive tools and information resources. Yang and Han (2012) stated that PBL has five notable characteristics. First, it's a systematic teaching model that integrates teaching and learning. Second, it emphasizes core concepts of the subject, foundational knowledge, and skills. Third, it focuses on addressing the real complexities of the world. Fourth, it prioritizes students' agency and autonomy. Fifth, it emphasizes investigating problems and proposing solutions. Additionally, Li (2020) said there are three characteristics of PBL: 1) Authenticity and student-centered; 2) Emphasis on collaborative learning and interdisciplinary approach; 3) Diverse and long-term evaluation.

Wang (2023) after a review of various literature, summarized six detailed characteristics of PBL as follows:

1) Student-centered, students have the right to choose projects based on their interests. They can select the methods for obtaining information, such as through printed media or multimedia sources. Students also have the authority to decide how to present their results, whether through oral presentations or written posters.

2) Problem-oriented, the goal of PBL is to guide students to apply their learning to solve real-life problems. Therefore, the selected projects must be authentic and challenging, as well as engaging for the students.

3) Teacher as facilitator, in the preparation phase, teachers act as designers, helping students plan the entire project and its presentation format. During the implementation phase, teachers transition to the role of guides and facilitators.

4) Combination of self-directed learning and group collaboration, in the PBL process, students are the center, while teachers serve as guides. Students rely on their self-directed learning abilities to gather information, analyze, and solve problems. However, since not all students can independently solve problems, learning groups are formed. These groups are organized on the principle of “heterogeneity within the group, homogeneity between groups”, allowing students to maximize their strengths through collaboration within their groups.

5) Visualization of project outcomes, students’ project outcomes are showcased through three main categories: oral, written, and multimedia works. This includes written works such as manuals and letters, oral presentations like interview and performances, as well as multimedia projects like comics, audio, and video productions.

6) Diverse evaluation methods, PBL employs a variety of evaluation methods, including self-assessment, peer assessment, group evaluation, and feedback from teachers or experts. Evaluation covers aspects such as the choice of project materials, individual student performance, and the effectiveness of the project presentation. Both formative and summative evaluations are used to provide a comprehensive assessment.

2.4.4 Procedures of Project-Based Learning

Liu and Zhong (2002) stated that project-based learning consists of four elements: content, activities, context, and outcomes. They also outlined six basic procedures for implementing PBL: selecting the project; planning; conducting activities and investigations; creating the project; presenting results; and evaluating the activities. Li (2010) summarized the procedures of PBL into four steps: 1) setting the project theme; 2) autonomously constructing the topic; 3) optimizing the construction results; 4) integrating comprehensive evaluation.

Additionally, Li (2020) proposed that the PBL consists of the following five procedures:

First, project selection. Project selection in PBL is pivotal, marking the outset of the learning process and profoundly influencing its success. It should align with curriculum standards, reflect real-world relevance, cater to student interests and needs, and integrate interdisciplinary knowledge to align with educational objectives and language skills.

Second, project planning. After project selection, teachers form student groups based on “homogeneous groups, heterogeneous within groups” principles, typically comprising 4 to 6 students with varying academic abilities. Guided by teachers, students then deconstruct and refine the project, followed by collaborative planning and task scheduling under teacher supervision to ensure effective project execution.

Third, project implementation. Implementation in PBL involves groups conducting investigative activities under the guidance of a project plan. This procedure emphasizes stimulating student curiosity, fostering collaboration among group members and between teachers and students, and integrating resources to achieve project goals effectively and on schedule.

Fourth, project presentation. After completing the project, students collaborate to finalize the project outcomes, presenting them in diverse formats like images, dramas, PPT, stories and so on. Teachers facilitate classroom presentations, ensuring each group’s time management, focusing on key aspects, and maintaining order, while encouraging peer feedback and mutual learning among groups to prepare for project evaluations.

Fifth, project evaluation. The project evaluation marks the culmination of PBL, emphasizing diverse evaluation subjects and objects, and ensuring connectivity of evaluation outcomes. Methods such as self-assessment, group peer evaluation, and teacher evaluation are employed to assess activity results, student performance, attitudes, and cooperative skills within groups.

In this study, the researcher designed the PBL to teach the students in the sample group by implementing the projects according to the specific topics. There were five procedures summarized from above classifications for teaching as follows: 1) Project

preparation; 2) Project implementation; 3) Project presentation; 4) Evaluation; 5) Practice on reading.

2.5 The Application of PBL to English Reading

The application of project-based learning (PBL) in English reading instruction can transform the traditional passive learning model. PBL places greater emphasis on cultivating students' strong reading skill and accumulating vocabulary and grammar. The application of PBL to English reading requires consideration of several key points. First, when planning a project direction, teachers need to identify essential knowledge and skills, focusing on grammar and vocabulary based on the current teaching context. Reading skill development should be tailored to students' varying learning stages, ensuring that each module addresses their specific needs. Second, it is essential to raise challenging issues that hold significant learning value, guiding students to pose such questions within the project design. Teachers should provide appropriate guidance for any deviations from the theme or learning direction, helping students understand the fundamental purpose of PBL and master correct learning methods. Third, attention must be paid to the authenticity and feasibility of the projects. Teachers should ensure that student-proposed projects can be practically applied and explored, providing correct guidance to align them with real-world relevance. Fourth, it's crucial to respect student subjectivity, allowing them to make their own choices. Teachers should play a guiding role without overly interfering in students' decisions during project planning and modification, as long as these choices align with the main educational direction. Fifth, coordination is essential, guiding students to reflect and modify their work after solving problems. Upon project completion, teachers and students should evaluate its effectiveness, identify shortcomings, and provide feedback, encouraging students to make necessary modifications or further improvements (Wang, 2021).

Zhang (2023) also proposed four strategies for application PBL to English reading. The strategies as following:

1) Understand learning needs and scientifically design reading projects. Teachers should determine reading tasks based on students' skill characteristics and their developmental needs. Starting from the goals of English reading instruction, teachers should prepare a large amount of English reading materials to meet students' reading demands. In English reading instruction, it is important not only to convert appropriate textbook content into specific projects but also to integrate both in-class and extracurricular English resources, ensuring that the reading projects are highly engaging and offer a sense of freedom.

2) Flexibly organize projects and optimize reading plans. In the application of PBL to English reading, planning is a crucial means to achieve teaching objectives. To ensure the effectiveness of learning, teachers should guide students in reasonable task distribution. Different members within a group should have different tasks and strengths, enabling them to efficiently complete the reading projects through mutual cooperation.

3) Reflect on projects to improve reading effectiveness. Reflection is an essential step in enhancing the effectiveness of PBL. After students conduct self-evaluation, teachers should refine, summarize, and supplement their reflections, using this as a starting point for further reflection.

4) Consider Students skills for group instruction. Since PBL demands high individual capabilities, different teaching methods should be applied for different students. Group instruction can help advanced students achieve self-improvement while preventing less proficient students from falling behind. Therefore, before implementing an English reading lesson, teachers should assess students' overall skills and group them according to their skill levels.

It can be concluded that the application of PBL to English reading can stimulate students' sense of ownership, fostering initiative in the reading curriculum. It encourages students to actively raise and solve problems, enhancing their ability to review and apply classroom knowledge, and strengthening their reading skill. Moreover, effective teacher guidance is essential in PBL, as it helps create a positive learning environment, involves teachers in the students' projects, and uses diverse

evaluation methods to encourage students, thereby improving the quality of reading instruction.

In this study, the application of PBL to English reading was demonstrated in four designed classes. Each class had independent topic for students to make a group of five to do a project. In the classes, there were five steps as follows. First, project preparation, students engage with the lead-in activities, learn the key words and expression, then form diverse group and select project; Second, project implementation, students independently gather, share and analyze English reading materials, then collaboratively create their final project with the teacher support; Third, project presentation, each group present their projects, teachers and classmates taking notes for evaluation; Fourth, evaluation, students discuss and share their ideas about project results with teacher and other classmates; Fifth, practice on reading, students complete textbook exercises, then teacher give feedback and encourage them to do more reading.

2.6 The Assessment and Evaluation of PBL

2.6.1 The Assessment and Evaluation of PBL

Due to the different objectives of assessment, PBL assessment can be divided into formative assessment and summative assessment. Formative assessment focuses more on the learning process. It pays attention to the learning methods in PBL and emphasizes the learning outcomes. Formative assessment values the unintended outcomes in teaching. In PBL, students' learning processes are rich and diverse, and each student's learning experience is different, leading to different learning outcomes. Formative assessment focuses on the complete learning experience of each student, advocating that all valuable behaviors and results should be acknowledged. At the same time, PBL does not reject summative assessment in the form of paper-and-pencil tests, because the understanding of core concepts, self-evaluation, and peer evaluation involved in formative assessment cannot do without the supplement of summative assessment (Ji, 2022). Dixson (2016) stated that formative assessments can be divided

into two main types: spontaneous and planned. Spontaneous formative assessments encompass in-class activities, while planned formative assessments include structured tasks like quizzes and homework exercises designed to monitor student progress. On the other hand, summative assessments are usually graded, occur less frequently, and are administered at the end of instructional periods. Examples of summative assessments include final exams, state tests, college entrance exams, final performances and so on.

Due to the different subjects of evaluation, PBL evaluation can be divided into self-evaluation and evaluation by others. Self-evaluation specifically includes: first, evaluating one's performance and outcomes in the PBL; second, assessing the organization, efficiency, and results of one's project group; third, evaluating the performance and outcomes of all participants in the project. Concurrently with self-evaluation, evaluation by others is also conducted. Evaluation by others typically includes: first, evaluations by other group members or instructors on the participant's performance and outcomes; second, evaluations by other project groups or instructors on the organization and efficiency of a particular group; and third, evaluations by external individuals such as parents, project partners, or experts in relevant fields on the entire project activity. In PBL evaluation, we often see a combination of self-evaluation and evaluation by others (Ji, 2022).

Wang (2023) proposed that the diverse evaluation methods used in PBL including behavioral evaluation, knowledge assessment, emotional value evaluation, and skill assessment. Behavioral evaluation aims to identify the behavioral characteristics displayed by learners during the learning process, as well as their attitudes and participation. Knowledge assessment primarily tests the learners' mastery of the learned knowledge. Emotional value evaluation emphasizes how learners view and solve problems during the learning process and their ability to propose innovative solutions. Skill assessment focuses on evaluating the learners' actual skill levels. Moreover, the evaluation subjects in PBL are diversified: self-evaluation, peer evaluation, and teacher evaluation. Self-evaluation helps students fully explore their potential and identify their learning deficiencies. Peer evaluation fosters students'

collaborative spirit and motivates them to achieve better learning outcomes. Teacher evaluation provides a comprehensive overview of the students' learning situation and results, offering more targeted feedback.

Larmer (2016) summarized how to assess the PBL into several points as following. 1) Prioritize assessments over traditional grading; 2) Value informal assessments, encourage students to explain and reflect on their learning process; 3) Maintain transparency with students regarding the assessment process and actively involve them in it; 4) Incorporate student voice and choice in assessments, including differentiation; 5) Ensure students comprehend, utilize, and take ownership of assessment tools like rubrics; 6) Evaluate essential skills such as critical thinking, problem-solving, and collaboration, alongside content knowledge; 7) Assess individual learning and contributions, not just team-created projects; 8) Emphasize formative assessments, providing students opportunities to improve their work; 9) Expand your perspective on who conducts assessments; students benefit from diverse assessment voices, including peers, outside experts, parents, and community members, in addition to teachers. Additionally, Rakesh Hansrajani et al. (2024) also summarized 6 principles as follows. 1) Set explicit goals and criteria, which align with the project's key aspects, share expectations with students, and involve them in creating rubrics or checklists for self-evaluation; 2) Implement both formative and summative assessments. Utilize tools like observation, questioning, journals and peer feedback for formative data, and employ presentations, portfolios, tests, and self-evaluations for summative data collection; 3) Assess content and skills. Through tests, quizzes, reports to assess content mastery, and evaluate skills using rubrics, checklists, or observations to capture students' performance and behavior; 4) Assess the process and the final product. Evaluate the process through journals, logs, reflections that capture students' thinking and decision-making, and assess the product with rubrics, criteria, or feedback to judge the quality and creativity of their work; 5) Incorporate diverse sources and perspectives. The data could be gathered from multiple sources like personal observations, student self-assessment, and colleagues' input, while also seeking feedback from various perspectives such as students' peers, parents, or experts

for comprehensive evaluation; 6) Offer timely and actionable feedback. The feedback can be provided through various channels, such as oral, written, or digital.

In this study, formative and summative assessments were combined to assess the improvement of student's English reading skill in PBL. The pre-test and post-test were adopted to assess the English reading skill. The test comprised of 20 English reading skill questions, with each question worth one point, totaling 20 points. The classmates and teacher discussed and shared ideas to evaluate the project results in the reading class.

2.6.2 The Evaluation of Student's Learning Satisfaction

Student's learning satisfaction refers to students' subjective perceptions of how effectively a learning environment supports their academic success (Winberg & Hedman, 2008). The satisfaction is an evaluation that occurs at the end of the consumer psychology process following the use of a product or service. Students' learning satisfaction is viewed as the cumulative satisfaction with their entire course of study. Students are clients whose interests and satisfaction should be prioritized as a key dependent variable. The success of learning activities hinges on students' satisfaction with the learning experience. Student's learning satisfaction reflects their affective and cognitive reactions to the teaching provided by the instructor during the learning process (Putri & Syafitri, 2021). In PBL, Likert scale questionnaire, open-ended questionnaire, focus group discussions, individual interview, observation and other methods could be used to measure the student's learning satisfaction.

Harvey, Plimmer, Moon, and Geall (1997) stated the student satisfaction evaluation emphasizes that the questionnaire should be driven by students' perspectives and concerns, prioritizing their feedback over the preferences of senior management. And proposed the principles to measure the student's learning satisfaction. First, student-driven questions which emphasizes understanding the holistic learning experience as defined by students themselves. Second, satisfaction and importance ratings, it assesses student satisfaction across various aspects of educational provision and identifies which areas

students deem important. Third, management information for action, those areas which are important to students but where they express dissatisfaction are prioritized for management intervention.

In this study, a questionnaire from 5-point of Likert scale and semi-structured interview were designed and conducted to measure the students' learning satisfaction. The questionnaire and interview questions consisted of three parts: students' interest and motivation, students' engagement and efficacy of PBL on student learning.

2.7 Related Theories

Project-based learning is a teaching approach that significantly enhances students' professional abilities, autonomous learning skills, and information processing capabilities. It draws support from three main theoretical foundations: cooperative learning theory, constructivism learning theory, and Bruner's discovery learning theory.

2.7.1 Cooperative Learning Theory

Cooperative learning refers to a learning method where students achieve a common goal through mutual assistance and cooperation, involving clear division of responsibilities and collaborative learning. Cooperative learning theory emphasizes that teachers should form reasonable groups and pair students based on their characteristics, learning tasks, and grouping principles. Through small-group collaboration, students communicate and learn from each other to accomplish shared tasks and achieve common goals within their groups. Cooperative learning serves as both a learning method and a teaching strategy (Lv, 2014).

Wang (2023) said that PBL aligns with the cooperative learning theory from three perspectives. First, the objective perspective of cooperative learning theory, emphasizes the emotional and cognitive balance in teaching goals, aiming to integrate knowledge transmission with the development of moral emotions and collaborative

skills. This aligns with the educational objectives of PBL, which combines theory with practice to enhance students' mastery of subject knowledge efficiently while fostering social-emotional skills such as collaboration, communication, responsible decision-making, and ethical handling of challenging situations. Second, the teacher-student perspective of cooperative learning theory that students' autonomy is fully into a joyful experience where they ultimately achieve proficiency, mastery, and enjoyment in learning. Teachers act as supervisors, guides, and active participants, integrating themselves into the student community. The relationship between teachers and students evolves into one of equal and free exchange of ideas. This aligns well with the teacher-student relationship in PBL, where students are central to the learning process and teachers facilitate, supervise, and guide. Teachers encourage communication and collaboration among students, provide support and necessary resources, and continually monitor group cooperative learning dynamics. Third, the evaluation perspective of cooperative learning theory, emphasizes self-comparison and progress over time. As long as students are better now than they were in the past, they have achieved their goals. This evaluation perspective aligns with the diverse evaluation in PBL. PBL focuses on issues arising from students' design, optimization and iteration, encouraging them to think critically and experiment with solutions to these problems, while teachers conduct timely assessments.

In conclusion, using the cooperative learning theory as the theoretical basis support for the application of PBL to English reading in this study, which helps students to take better ownership of their learning, enhance their motivation to learn, receive effective assessment and gradually improve their English reading skill.

2.7.2 Constructivism Learning Theory

Constructivism learning theory as one of the most important theoretical foundations of PBL. Constructivism is a branch of cognitive psychology. Based on Piaget's theory of cognitive structures, Kernberg further researched the nature and developmental conditions of cognitive structures. Sternberg and Katz emphasized the crucial role of individual initiative in the construction of cognitive structures,

exploring how individuals actively participate in cognitive processes. Vygotsky's cultural-historical development theory emphasizes the role of learners' social-cultural historical backgrounds in cognitive processes and introduces the theory of the "zone of proximal development" (Liu & Zhong, 2002). The research of these scholars not only enriched and developed constructivism theory but also provided practical conditions for its application in teaching. Additionally, it is evident that constructivism learning theory comprises various theoretical perspectives. Its core principles are "active exploration," "active discovery," and "active construction," emphasizing that learners acquire new knowledge through meaningful construction in real-life contexts using multiple resources, rather than through forced instruction by teachers (Ke, 2018).

PBL is an inquiry-based teaching method grounded in constructivism learning theory. During the implementation of PBL, students work in groups to manage projects, comprehensively mastering all processes within the project, including information gathering, project design, project execution, and project evaluation. Students use projects as a basis for their learning, gaining knowledge by completing these projects. In practice, the process of completing a project involves reconstructing existing and new knowledge. Throughout the project exploration, students are proactive and engaged, constructing their own knowledge and enhancing their practical skills. PBL also emphasizes a student-centered approach, with teachers acting as guides and facilitators during project implementation. Teachers are required to create authentic learning environments for students, encouraging collaborative communication and enabling students to apply their existing knowledge to solve problems, ultimately achieving meaningful knowledge construction (Zhao, 2023).

Therefore, in this study, under the guidance of constructivism learning theory, applying PBL to English reading should emphasize the active role of students and the guiding role of teachers. Teachers should provide students with authentic learning contexts, encourage cooperative learning, and help students construct meaning through collaboration.

2.7.3 Bruner's Discovery Learning Theory

In response to the traditional "warehouse theory" of teaching, the renowned American educator Bruner proposed the discovery learning theory. He believed that the cognitive process of students shares similarities with the cognitive process of humanity, and the teaching process is essentially a process where teachers guide students to discover. According to Bruner, "learning is based on discovery". He advocated those students, during the teaching process, should use materials provided by teachers or textbooks to independently discover conclusions and patterns, thus becoming "discoverers." He believed that for students, discovery is not limited to seeking unknown aspects of humanity, but rather it includes all methods by which students personally acquire knowledge using their own minds. He designed the following discovery learning procedures: 1) Posing questions, the teacher selects one or several general principles. Students' task is to study with questions in mind and raise any unclear issues or difficulties; 2) Creating a problem situation, the problem in the situation should match the students' existing knowledge and abilities, yet require some effort to solve, thereby encouraging students to develop an inquisitive attitude towards the unknown; 3) Formulating hypotheses, students use the information they have to propose various possibilities for the problem; 4) Testing hypotheses and drawing conclusions, students repeatedly verify, discuss and seek answers for the various possibilities (Liu & Zhong, 2002).

PBL is not about passive learning; it is about discovery-based learning. During the implementation of PBL, teachers need to provide students with sufficient freedom to learn, encouraging and creating conditions for students to independently design or participate in designing learning projects. Students engage in autonomous inquiry and teamwork to solve problems, working diligently toward the final project outcomes. In the PBL process, students think about how to solve problems, form their own hypotheses, propose solutions, and then validate these hypotheses through information gathering and project activities to draw conclusions. Thus, PBL aligns with the essence of Bruner's discovery learning (Wu, 2020).

Moreover, discovery learning theory emphasizes students as active explorers in teaching, where teachers facilitate environments for self-directed exploration rather than merely transmitting knowledge. Discovery learning values students' intuitive thinking alongside analytical skills, encouraging educators to foster both in educational practices. Teachers also prioritize students' intrinsic motivation, driven by curiosity and interest in new discoveries, while effective information extraction through active participation enhances memory consolidation. PBL requires students to independently plan and execute projects, necessitating information extraction, exploration, and continual reflection. It emphasizes evaluating both the products and the learning process itself. PBL encourages students to explore and discover knowledge autonomously, fostering intrinsic motivation through active engagement in information extraction and organization. It could be concluded that the core concept of PBL coincides with the characteristics of Bruner's discovery learning (Fan, 2021).

In short, PBL based on the discovery learning theory, which encourages students to explore and discover the knowledge by themselves in the English reading process, it could improve their English reading skill to retrieve and integrate the information from the written texts in this study.

2.8 Related Research and Studies

The PBL has been applied in a lot of research and studies to improve students' English reading skill over the years. Research and studies related to this area are discussed in this part.

Shiraz and Larsari (2014) studied the relationship between PBL and English reading comprehension skill among middle school students. In the study, 120 participants were divided into three groups: two experimental groups using PBL and one control group using the PWP teaching method. The results showed that PBL can enhance students' reading comprehension skill. Barr and Chinwonno (2016) investigated the impact of integrating PBL with English reading instruction among Thai undergraduates. The research aims to enhance both English reading skill and

intercultural competence through culturally enriched project-based tasks. Findings suggest that this method not only motivates students to engage deeply with the material but also fosters their intercultural awareness and communication skill. Kurnely (2018) conducted a qualitative-descriptive study of PBL in English reading classroom involving students from SMPN 2 Gunungsindur and SMP Madania, using observation, interview, questionnaire and documentation as research instruments. The study found that PBL increased student interest and collaborative activity, though challenges included reliance on peers and time management issues. An (2023) explored the impact of PBL on eighth graders' attitudes towards learning English reading skills at a public secondary school in Ho Chi Minh City, Vietnam. Using a mixed-methods approach, the findings indicated that PBL significantly enhanced students' engagement, understanding and retention of English reading materials, while also fostering positive attitudes and reduced anxiety towards learning. These results suggest that PBL can be a highly effective method for teaching English reading skill, promoting active learning and addressing challenges in traditional Vietnamese education methods.

In addition, Imbaquingo and Cárdenas (2023) investigated the effectiveness of PBL in enhancing English reading skill among ninth-grade students in Quito, using a mixed-methods approach and comprehensive literature review. Observations and questionnaire revealed that PBL increased students' motivation and improved their reading skill through relevant projects. The findings suggest that PBL is an effective teaching strategy for developing English reading skill and should be widely adopted. The study emphasizes the role of educators in fostering reading skill, particularly at the early stages of education.

Although there are not many studies on the application of PBL to improve English reading skill in China, the following scholars have conducted studies on students at different stages. Wang (2023) applied PBL in high school English reading classrooms through an 8-week teaching case study. She identified 5 basic steps for PBL implementation: establishing the project theme, planning the project, conducting project inquiries (in-class and out-of-class), showcasing project outcomes, and

providing multidimensional evaluation feedback. Wang also developed evaluation criteria for project outcomes, including student self-assessment, peer assessment, and teacher evaluation forms. The survey questionnaire and interview in the study indicated that PBL significantly enhances high school students' interest and motivation in English reading, as well as their ability to use learning strategies. Educational experiments further confirmed that PBL significantly improves high school students' English reading scores and skill.

Song (2018) experimentally demonstrated that PBL is beneficial for improving grade 9 students' English reading scores and enhancing their reading skill. PBL is advocated as a highly recommended and promising teaching method worth implementing. Chen (2021) based on constructivism theory, cooperative learning theory, and multiple intelligences theory to apply PBL in two eighth-grade classes from S Middle School in Shihezi, with a total of 98 students as participants. The research mainly employed experimental methods, tests, and questionnaire surveys to investigate the feasibility and effectiveness of PBL in junior high school English reading teaching. From the analysis of the research data, it was found that PBL could improve the participants' English reading scores. And could enhance the participants' reading skill. The research data indicated significant improvements in the experimental group's abilities to summarize, guess new words, infer comprehensively and extract details. Additionally, Fu (2022) conducted a study using 108 students from two parallel classes in the second grade of a junior high school in Shenyang as subjects. Class 14 served as the experimental group and adopted the PBL, while Class 15 was the control group and used the traditional grammar-translation method. After the experiment, post-tests on reading skill were conducted for students in both classes. The data analysis results indicated that the reading skill of the students in the experimental group improved.

Zhang (2023) selected 49 students from the first grade at M Junior High School in Changchun as research subjects. The research methods included questionnaire, interview, and tests to explore junior high school English reading instruction. It could be concluded from the research results that students' autonomous

learning abilities improved, which could be reflected in seven dimensions: learning motivation, learning content, learning time, learning methods, learning process, learning outcomes, and learning environment. And it also enhanced students' English reading skill. Furthermore, Gao (2022) conducted an action research study on the application of PBL in English reading with 47 fifth-grade students from an elementary school in Kunming, Yunnan Province. Pre-tests, interview, and questionnaire revealed issues such as low reading interest, limited vocabulary and reading skill, a narrow range of reading materials, and low student engagement in reading classes. An action research plan was developed to address these issues. After two rounds of action research, students' English reading scores and skill significantly improved, their reading interest increased, and more students became willing to read actively and participate in class.

From the above summary of research and studies, it was clear that the research on the application of PBL to improve English reading skill was mainly conducted at the junior high school level and above. There were very few scholars' studies had been conducted specifically at the primary school level. Therefore, this study applied PBL to improve the English reading skill of Chinese grade 6 students.

CHAPTER 3

RESEARCH METHODOLOGY

This study was designed to improve grade 6 Chinese students' English reading skill and satisfaction with learning English reading through application of PBL. In this chapter, the methodology of this study is outlined. It includes the research design, population and sample, the research instruments, content validity and reliability, data collection and data analysis.

3.1 Research Design

This study used both quantitative and qualitative approach to collect the data. A pre-test and a post-test to assess grade 6 Chinese students' English reading skill, and then a questionnaire to indicate their learning satisfaction towards the application of PBL to improve their English reading skill for collecting quantitative data. Additionally, semi-structured interview was used to collect qualitative data for supporting the students' learning satisfaction. The research design is illustrated in Figure 3.1 as follows:

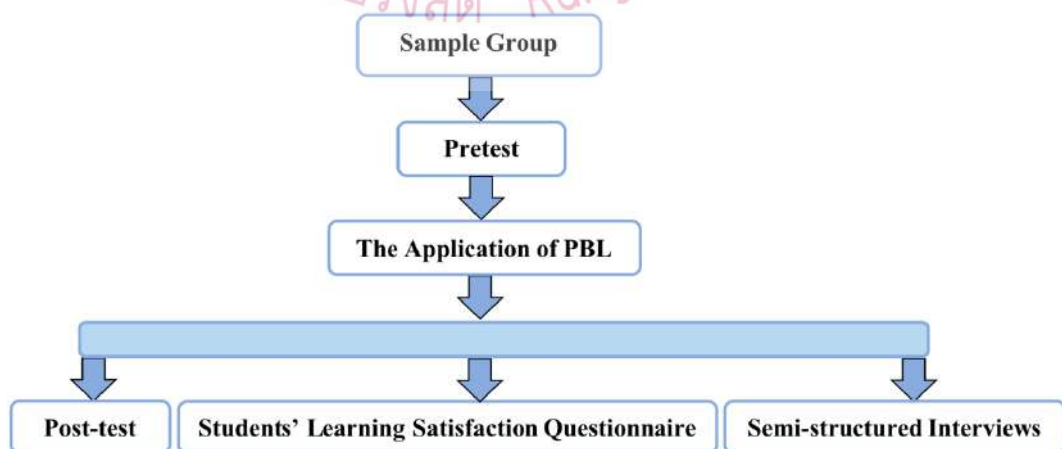


Figure 3.1 Research Design of the Study

3.2 Population and Sample

3.2.1 Population

The target population of this study consisted of four classes with 120 in grade 6 students from a compulsory school in Guangdong Province. There were 65 males and 55 females. The age range of these students was between 11 to 12 years old, encompassing different levels of English reading proficiency.

3.2.2 Sample group

The researcher used a clustered random sampling method to choose one class out of from the population. There were comprised with 16 males and 14 females in different levels of English reading proficiency.

3.2.3 Location

The study was conducted in one of the compulsory schools in Guangdong Province, China. It is situated in the city and has 120 students in the grade 6.

3.3 Research Instruments

Four instruments were used for collecting data for this study: lesson plans, English reading skill tests (pre-test and post-test), students' learning satisfaction questionnaire and semi-structured interview.

3.3.1 Quantitative Data Collection Instruments

3.3.1.1 Lesson plans

The researcher designed and implemented four lesson plans in four weeks, two classes in each lesson. The topic of each lesson was based on the Elementary

School English textbook for PEP Grade 6 Book 1 (for Grade 3 starting) (2012). The outline of the lesson plan is shown in Table 3.1 below. (See Appendix A for the specific content of the lesson plans).

Table 3.1 Lesson Plans

Topics	Time	Learning Objectives	Project Based Learning
1. How can I get there?	90 mins	1.The students can express the sentences with the key words, phrases about the topic: “How can I get there?” from the textbook. 2.The students can make a tourists’ guide paper about the famous places in one Chinese city and how to travelling.	The students make a group of five to do a tourists’ guide paper. It consists of the famous places’ maps in one Chinese city and how to travel.
2. Ways to go to school	90 mins	1.The students can express the sentences with the key words, phrases about the topic: “Ways to go to school” from the textbook. 2.The students can do a stimulation PowerPoint about the different countries students’ ways to go to school and traffic safety knowledge.	The students make a group of five to do a stimulation PowerPoint. It consists of the different countries students’ ways to go to school and traffic safety knowledge.
3. My weekend plan	90 mins	1.The students can express the sentences with the key words, phrases about the topic: “My weekend plan” from the textbook. 2.The students can do a poster about one weekend plan and detailed activities.	The students make a group of five to do a poster. It consists of one weekend plan and detailed activities.

Table 3.1 Lesson Plans (Cont.)

Topics	Time	Learning Objectives	Project Based Learning
4. I have a pen pal	90 mins	1.The students can express the sentences with the key words, phrases about the topic: “I have a pen pal” from the textbook. 2.The students can do a role-playing about the first conversation with a pen pal.	The students make a group of five to do a role-playing. It consists of the first conversation with a pen pal.

3.3.1.2 English Reading Skill Tests (Pre-test and Post-test)

In order to compare the English reading skill before and after the application of PBL, the tests were divided into pre-test and post-test. The questions of the test paper were the same but in different order. The test comprised of 20 English reading skill questions, including four parts with five questions per each. Additionally, each question worth one point, totaling 20 points (Details as shown in Appendix C).

3.3.1.3 Students’ Learning Satisfaction Questionnaire

The students’ learning satisfaction questionnaire to investigate grade 6 students’ contentment towards the application of PBL to improve English reading skill. The questionnaire including three parts: students’ interest and motivation, students’ engagement and efficacy of PBL on student learning. The statements rated on a Likert scale ranging from 5 to 1 as follows: (1) Strongly Agree, (2) Agree, (3) Neutral, (4) Disagree, (5) Strongly Disagree. (The contents of the questionnaire are shown in Appendix E)

Table 3.2 The Range of Mean Score Interpretation

Likert-Scale Description	Score Range	Students’ Satisfaction Level
Strongly Agree	4.01-5.00	Highest
Agree	3.01-4.00	High

Table 3.2 The Range of Mean Score Interpretation (Cont.)

Likert-Scale Description	Score Range	Students' Satisfaction Level
Neutral	2.01-3.00	Moderate
Disagree	1.01-2.00	Low
Strongly Disagree	1.00	Lowest

3.3.2 Qualitative Data Collection Instrument

3.3.2.1 Semi-Structured Interview

In this study, the researcher conducted semi-structured interview with students following the application of PBL. To select participants, the researcher used simple random sampling, choosing 1 student from each of six groups and in a total of 6 interviewees.

The semi-structured interview was divided into three sections: students' interest and motivation (Question 1 and 2), students' engagement (Question 3 and 4) and efficacy of PBL on student learning (Question 5 and 6). Each section including two questions, making a total of six questions. The interview session was conducted in a comfortable and open environment to encourage candid responses from the students. During the interview, the researcher was the guider, asking the six questions to gather comprehensive data. Participants' verbal responses were carefully recorded and categorized according to thematic content. These responses were used to assess students' learning satisfaction after the application of PBL. The researcher ensured the privacy and confidentiality of all participants throughout the process, strictly following research ethics guidelines. Prior to the interview, the researcher communicated the purpose and procedure to the participants and obtained their informed consent to take part in the study (Interview questions can be found in Appendix G).

3.4 Validity and Reliability of Research Instruments

3.4.1 Validity

The study used the Item Objective Congruence (IOC) index to evaluate the effectiveness of these instruments before the application of PBL. The validation of research instruments, including lesson plans, English reading skill tests, students' learning satisfaction questionnaire and semi-structured interview, was conducted by three experienced English teachers in China. The IOC was calculated by applying the formula: $IOC = \Sigma R/N$, in which ' ΣR ' represents the total score of the experts rating and ' N ' represents the number of experts. The IOC score, ranging from -1 to +1, would be a pivotal metric for assessing the conceptual alignment of the research instruments. The interpretation as follows:

- 1) +1: The item clearly consistent with the stated objectives.
- 2) 0: The item is uncertain if it consistent with the objectives or not.
- 3) -1: The item does not consistent with the stated objectives.

Additionally, the operational score range domain is from 0.67 to +1. Items scoring between 0.67 and 1.00 would be retained as part of the instrument. Conversely, items with values below 0.67 would be considered unclear and may necessitate rephrasing or removal to ensure optimal instrument validity.

In this study, all instruments were validated by three experienced primary English experts with the score which was higher than 0.67. The IOC result of the lesson plans was 1, of English reading skill tests was between 0.67 to 1, of students' learning satisfaction questionnaire was 1, and of semi-structured interview was 1 (Details as shown in Appendix B, D, F, H).

3.4.2 Reliability

In this study, the Kuder-Richardson formula (KR-20) was used to check the reliability of the English reading skill test, and Cronbach's Alpha was used to test the

students' learning satisfaction questionnaire. If the score is below 0.7, the item will be defined as unreliable and removed, it needs to be reconsidered or changed. The Cronbach's Alpha internal consistency is shown below:

Table 3.3 Cronbach's Alpha Rule of Thumb

Cronbach's Alpha Rule of Thumb	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

The reliability of the test items was assessed by administering them to a group of 30 students who were not part of the main sample. The reliability coefficients for the English reading skill tests and the students' learning satisfaction questionnaire were calculated, yielding values of 0.75 and 0.97, demonstrating that the tests meet the required statistical reliability standards. Consequently, the test items were deemed reliable for data collection purposes (Details are provided in Appendix K).

3.5 Data Collection Procedures

3.5.1 Ethical Approval

In order to carry out this study, the researcher obtained official authorization from the compulsory school in Guangdong Province, China. Due to the age range of participants was between 11 to 12 years old, the researcher also sought consent from parents or guardians.

3.5.2 Confidentiality

Throughout the study, the researcher maintained the confidentiality of all students' personal data and questionnaire responses. Furthermore, all data was carefully deleted when the study completed, in compliance with ethical research standards.

3.6 Data Analysis

The data was analyzed in three aspects which consistent with the two research objectives. First, analyzed the quantitative data from the pre-test and post-test to measure the improvement of English reading skill in the sample group after the application of PBL. Second, collected quantitative data through students' learning satisfaction questionnaire to measure the students' satisfaction with the application of PBL to improve their English reading skill. Third, collected qualitative data from semi-structured interview also for measuring students' learning satisfaction.

3.6.1 English Reading Skill Test Analysis

To compare the English reading skill after the application of PBL, the data was collected from the pre-test and post-test. The data was analyzed through a paired sample t-test (t-test for dependent sample). The mean, standard deviation, and significance value of the pre-test and post-test were calculated using reliable computer software.

3.6.2 Analysis of Students' Learning Satisfaction Questionnaire

For analysis of the students' learning satisfaction questionnaire, the researcher used SPSS software as well to analyze the data collected from the responses. The students' responses to each item were statistically analyzed using the mean and standard deviation.

3.6.3 Semi-Structured Interview

The qualitative data from semi-structured interview was used for supporting the assessment of grade 6 Chinese students' learning satisfaction with the application of the PBL to improve English reading skill. During the interview, the researchers meticulously recorded the participants' verbal responses, which were subsequently transcribed. The researcher then applied thematic analysis to interpret and analyze the data.



CHAPTER 4

RESEARCH RESULTS

This study used a quasi-experimental design to compare the improvement of English reading skill of grade 6 students before and after the application of Project-Based Learning. Additionally, it explored students' learning satisfaction towards the application of PBL. The study utilized pre-test, post-test, questionnaire and semi-structured interview to gather data. The results of the study are explained and illustrated as follows:

- 4.1 Analysis of English Reading Skill Test Scores
- 4.2 Analysis of Student's Learning Satisfaction Questionnaire
- 4.3 Analysis of Semi-Structured Interview

4.1 Analysis of English Reading Skill Test Scores

The results shown in this section address the first research question: Would the application of Project-Based Learning improve the English reading skill of grade 6 Chinese students? The findings were derived by analyzing the pre-test and post-test scores from the English reading skill test, administered before and after the application of PBL. The same test questions were used for both the pre-test and post-test, and the researcher conducted a paired t-Test to compare and analyze the results. The comparison was based on the mean, standard deviation, and inferential statistics, with a significant level set at $p < 0.05$.

4.1.1 Comparison of Pre-test and Post-test Scores of the Sample Group

Before the application of PBL to improve English reading skill, the sample group which 30 students included was given pre-test that totaling 20 points. Students'

scores ranged between 5 and 18. After the application of PBL, the students were given the post-test that full scores were 20, students' scores ranged from 10 to 20. Additionally, 30 participants exhibited improvement in their scores, with increases ranging from 2 to 9 points (10% - 45%). The pre-test and post-test scores of the sample group are shown in the Table 4.1 below.

Table 4.1 Pre-test and Post-test Scores of the Sample Group

Student	Pre-test Scores (Full score = 20)	Post-test Scores (Full score = 20)	Increase in test score	Difference %
1	7	13	6	30.00%
2	8	16	8	40.00%
3	8	15	7	35.00%
4	6	13	7	35.00%
5	14	18	4	20.00%
6	8	17	9	45.00%
7	6	12	6	30.00%
8	9	15	6	30.00%
9	12	18	6	30.00%
10	10	17	7	35.00%
11	6	13	7	35.00%
12	9	15	6	30.00%
13	5	10	5	25.00%
14	16	19	3	15.00%
15	10	16	6	30.00%
16	9	14	5	25.00%
17	5	11	6	30.00%
18	13	18	5	25.00%
19	15	19	4	20.00%
20	11	17	6	30.00%
21	6	13	7	35.00%
22	14	19	5	25.00%
23	8	16	8	40.00%
24	17	20	3	15.00%

Table 4.1 Pre-test and Post-test Scores of the Sample Group (Cont.)

Student	Pre-test Scores (Full score = 20)	Post-test Scores (Full score = 20)	Increase in test score	Difference %
25	12	18	6	30.00%
26	8	15	7	35.00%
27	18	20	2	10.00%
28	10	16	6	30.00%
29	9	13	4	20.00%
30	14	18	4	20.00%
Mean Scores \bar{x}	10.10	15.80	5.70	28.50%

4.1.2 Analysis of Paired Sample t-Test

The researcher conducted a paired sample t-Test to analyze the pre-test and post-test scores. The pre-test had a mean score of 10.10 with a standard deviation of 3.65, while the post-test had a mean score of 15.80 with a standard deviation of 2.70. The difference between the two means was 5.70, and the significant level was less than 0.01. These results indicated that after the application of PBL, the students' English reading skill has great improved. level set at $p < 0.05$.

Table 4.2 Paired Sample t-Test

Group	n	Pre-test		Post-test		Mean difference	t	p-value
		\bar{x}	SD	\bar{x}	SD			
Sample Group	30	10.10	3.65	15.80	2.70	5.70	-19.51	0.000

* $p < .05$

4.1.3 Pre-test and Post-test comparison

Figure 4.1 below illustrates the pre-test and post-test scores of participants. The green line represents the pre-test scores, while the purple line represents the post-test scores

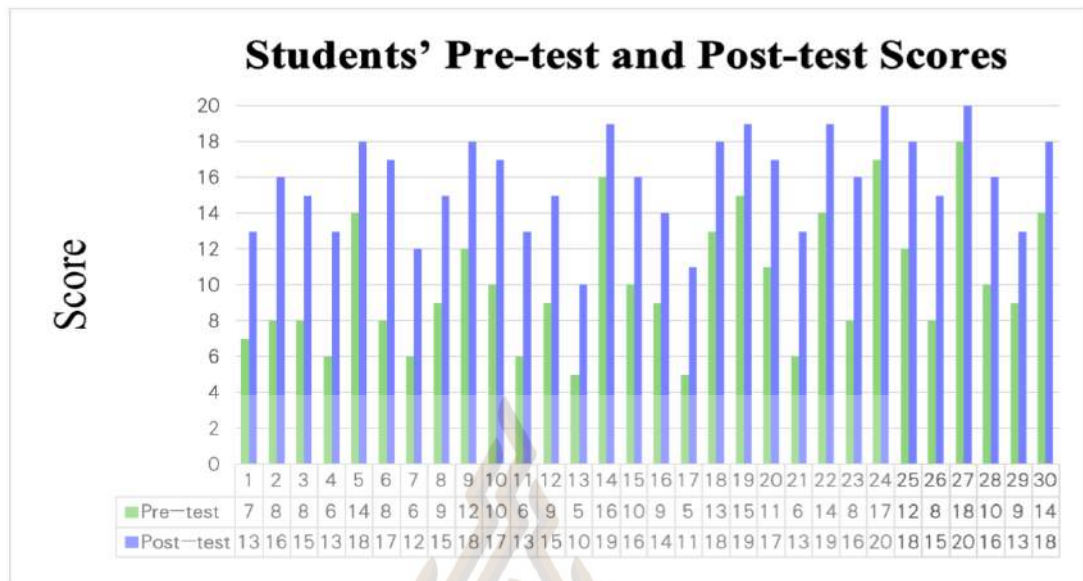


Figure 4.1 Graphical Representation of Students' Pre-test and Post-test Scores

Figure 4.2 below presents a comparison between the mean scores of the pre-test and post-test. The mean score for the post-test was significantly higher than that of the pre-test. The purple bar, representing the post-test scores, shows an increase of 5.7 points compared to the green bar, representing the pre-test scores.

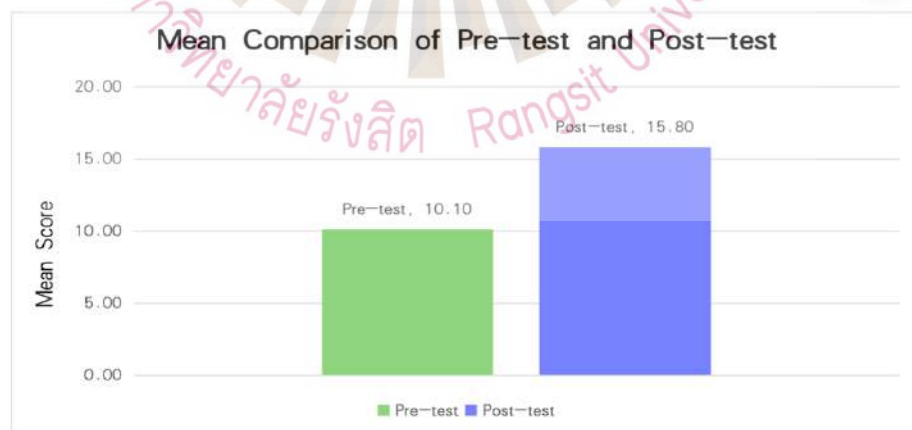


Figure 4.2 Graphical Representation of Pre-test and Post-test Mean

4.2 Analysis of Students' Learning Satisfaction Questionnaire

A questionnaire was collected to assess students' learning satisfaction after the application of PBL to improve English reading skill. The questionnaire comprised three parts: Part A: Interest and motivation, Part B: Engagement and Part C: Efficacy of PBL on student learning. The researcher analyzed the questionnaire results using mean and standard deviation for statistical description. From the table 4.3 below, it could be seen that the mean scores were 4.26, 4.31 and 4.27 for part A, part B and part C respectively, which were all at the highest level. The overall average was also at the highest level with the mean scores of 4.28.

Table 4.3 Questionnaire of the Sample Group

Part	n	Mean	SD	Interpretation
A: Interest and Motivation	30	4.26	0.88	Highest level
B: Engagement	30	4.31	0.96	Highest level
C: Efficacy of PBL on student learning	30	4.27	0.88	Highest level
Overall	30	4.28	0.91	Highest level

Table 4.4 below showed the questionnaire results of Part A: Interest and motivation. Item 4 "The projects in PBL could help me see the relevance of English reading to real-life situations" received the highest mean score (\bar{x}) of 4.33, while Item 2 "The activities of PBL motivated me to learn English reading" had the lowest mean score (\bar{x}) of 4.20. All items of Part A were rated at the highest level, the students demonstrated a strong interest and motivation to the application of PBL to improve English reading skill.

Table 4.4 Mean and Standard Deviation (Part A: Interest and Motivation)

No.	Part A-Interest and Motivation	Mean	SD	Description
1	The project assignment made learning English reading more enjoyable for me.	4.27	0.83	Highest
2	The activities of PBL motivated me to learn English reading.	4.20	0.93	Highest

Table 4.4 Mean and Standard Deviation (Part A: Interest and Motivation) (Cont.)

No.	Part A-Interest and Motivation	Mean	SD	Description
3	The steps of PBL in teaching made me interesting to learn in reading.	4.23	0.86	Highest
4	The projects in PBL could help me see the relevance of English reading to real-life situations.	4.33	0.84	Highest
5	All the classmates' atmosphere in PBL class could motivated me to learn reading.	4.27	0.94	Highest
	Average	4.26	0.88	Highest

Table 4.5 below showed the results of Part B: Engagement. Item 10 "I felt challenged in a positive way during making projects related to English reading" received the highest mean score (\bar{x}) of 4.40, while Item 6 "The projects in English reading class could keep me involved in learning" had the lowest mean score (\bar{x}) of 4.20. All items of Part B were also rated at the highest level, the students demonstrated strong engagement with the application of PBL to improve English reading skill.

Table 4.5 Mean and Standard Deviation (Part B-Engagement)

	Part B-Engagement	Mean	SD	Description
6	The projects in English reading class could keep me involved in learning.	4.20	1.10	Highest
7	PBL could help me more actively participated in group working.	4.33	0.92	Highest
8	I had more opportunities to interact with my classmates during English reading class.	4.33	0.96	Highest
9	PBL encouraged me to ask questions and seek answers about English reading topics.	4.27	0.91	Highest
10	I felt challenged in a positive way during making projects related to English reading.	4.40	0.89	Highest
	Average	4.31	0.96	Highest

Table 4.6 below showed the results of Part C: Efficacy of PBL on student learning. Item 14 "I could improve in reading skill " received the highest mean score (\bar{x}) of 4.33, while Item 11 "When I learned reading from PBL, made me understand grammatical more " had the lowest mean score (\bar{x}) of 4.20. All items of Part C rated at the highest level indicated that students with the application of PBL could improve English reading skill well.

Table 4.6 Mean and Standard Deviation (Part C-Efficacy of PBL on student learning)

No.	Part C-Efficacy of PBL on student learning	Mean	SD	Description
11	When I learned reading from PBL, made me understand grammatical more.	4.20	0.81	Highest
12	PBL helped me understand how to read English better.	4.30	0.92	Highest
13	I felt more confident in my English reading skill.	4.27	0.83	Highest
14	I could improve in reading skill.	4.33	0.96	Highest
15	I have believed the PBL was an effective method to improve English reading skill.	4.27	0.91	Highest
	Average	4.27	0.88	Highest

In conclusion, Part B had the highest mean score among the three parts, with a mean of 4.31 and a standard deviation of 0.96. Part C had a slightly lower mean score of 4.27 with a standard deviation of 0.88, and Part A had the lowest mean score, with a mean of 4.26 and a standard deviation of 0.88. The overall mean score of 4.28 indicated that students were highly satisfied with the application of PBL to improve English reading skill.

4.3 Analysis of Semi-Structured Interview

The researcher gathered useful insights into students' learning satisfaction through semi-structured interview and effectively collected the data through thematic analysis. A random sampling method was used to select six students from participants who were divided into 6 groups for interview (one student per group), and this data

supplemented the questionnaire results to provide a more comprehensive student perspective. The interview data was analyzed under three themes: interest and motivation, engagement, and the efficacy of PBL on student learning. Each theme was described in more detail below.

4.3.1 Part A: Interest and Motivation

For Question 1: Was the PBL interesting or motivating to improve English reading skill more? The students' responses were as follows.

"I found PBL very interesting, especially the process of learning English reading through real projects, which motivated me to improve more." (Student 1, personal communication, October 8, 2024).

"PBL was challenging, but this challenge was exciting and motivated me to work harder to improve my English reading skill." (Student 2, personal communication, October 8, 2024).

"PBL offered a variety of reading materials, making the learning process interesting and motivating me to explore more English reading content." (Student 3, personal communication, October 8, 2024).

"PBL was highly interactive, and we understood the reading materials through group discussions, which was fun and motivating." (Student 4, personal communication, October 8, 2024).

"Through the PBL, my English reading comprehension has improved, and this progress made English reading interesting and motivated me to keep improving." (Student 5, personal communication, October 8, 2024).

"The projects in PBL were related to real-world, which I found interesting and motivating." (Student 6, personal communication, October 8, 2024).

For Question 2: What were the important things about PBL that made you more interested or motivated to learn English reading in class? The students' responses were as follows.

"Teamwork in PBL was important, and working with classmates on projects motivated me to learn English reading." (Student 1, personal communication, October 8, 2024).

"PBL allowed me to choose projects that I was interested in, and this autonomy gave me more motivation to learn English reading." (Student 2, personal communication, October 8, 2024).

"PBL offered a personalized learning experience, allowing me to learn at my own pace, and this flexibility motivated me to improve." (Student 3, personal communication, October 8, 2024).

"In the PBL, I received continuous feedback from teachers and classmates, and this feedback motivated me to keep improving." (Student 4, personal communication, October 8, 2024).

"In the PBL, we were able to show our project results gave me a great sense of achievement, and this motivated me to learn English reading better." (Student 5, personal communication, October 8, 2024).

"Through the PBL, I was able to solve real-world problems, and this improvement in problem-solving skills motivated me to learn English reading." (Student 6, personal communication, October 8, 2024).

4.3.2 Part B: Engagement

For Question 3: What were the reasons that made you would like to participate in the class? The students' responses were as follows.

"I felt like I could learn a lot of useful things from PBL." (Student 1, personal communication, October 8, 2024).

"I enjoyed working with my classmates on projects." (Student 2, personal communication, October 8, 2024).

"I felt that every time I engaged in discussions or completed a project, my English reading skill improved." (Student 3, personal communication, October 8, 2024).

"The teacher's encouragement made me more willing to participate in the class." (Student 4, personal communication, October 8, 2024).

"I was interested in the content of PBL, and this interest drove me to engage in class." (Student 5, personal communication, October 8, 2024).

"My classmates were also actively involved, and this positive learning atmosphere influenced me, making me more willing to participate actively in the class." (Student 6, personal communication, October 8, 2024).

For Question 4: What were the teaching strategies or activities interesting that made you prefer to learn in the class? Do not use answer yes or no. The students' responses were as follows.

"Group discussions. Through exchanging ideas with classmates, I could gain a deeper understanding of the reading material." (Student 1, personal communication, October 8, 2024).

"I liked student-led discussions because they gave me the opportunity to steer the conversation and actively participate in learning." (Student 2, personal communication, October 8, 2024).

"I enjoyed presenting our project results in class because it gave me a chance to express my ideas and also learned a lot from my classmates' presentations." (Student 3, personal communication, October 8, 2024).

"Using multimedia resources made the class more interesting for me. These resources helped me better understand and remember what we've learned." (Student 4, personal communication, October 8, 2024).

"The assessment sessions from teachers and classmates very interesting, as they allowed me to improve more." (Student 5, personal communication, October 8, 2024).

"Cooperative learning was a strategy I enjoyed. By working with classmates to complete projects, I could learn in a relaxing environment." (Student 6, personal communication, October 8, 2024).

4.3.3 Part C: Efficacy of PBL on Student Learning

For Question 5: Did the use of PBL make you have more confident in English reading skill for applying in your daily life? Why? The students' responses were as follows.

"The projects in PBL simulated real-life situations, so I felt more confident." (Student 1, personal communication, October 8, 2024).

"Working with my classmates on projects gave me more confidence to face English reading challenges in daily life." (Student 2, personal communication, October 8, 2024).

"Through PBL, I've realized there are many opportunities in daily life to apply my English reading skill, which made me more confident to try." (Student 3, personal communication, October 8, 2024).

"PBL allowed me to practice English reading through real projects, which made me feel like I can apply in daily life." (Student 4, personal communication, October 8, 2024).

"In the PBL, I learned from my mistakes, which made me realize that making mistakes is part of learning, so I felt more relaxed and confident." (Student 5, personal communication, October 8, 2024).

"We discussed what we read in projects a lot, which not only deepened my understanding but also made me more confident to apply English reading in daily life." (Student 6, personal communication, October 8, 2024).

For Question 6: How did you improve in English reading skill? The students' responses were as follows.

"When I encountered unfamiliar words in the project, I learned to infer their meanings through context." (Student 1, personal communication, October 8, 2024).

"The projects required me to solve problems, and I had to find answers through reading, which made me more focused on the details of the text." (Student 2, personal communication, October 8, 2024).

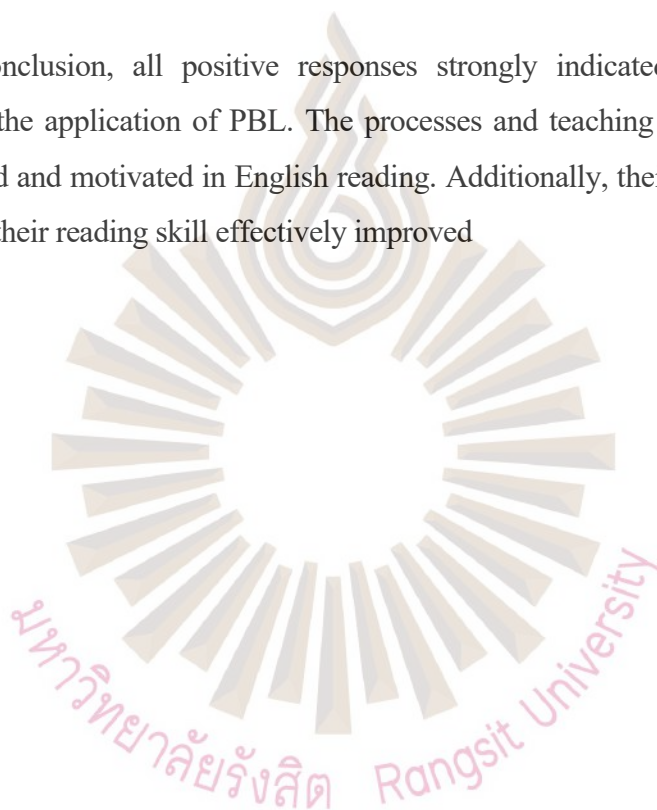
"Every time I successfully completed a reading material, my confidence improved, and I felt more confident tackling more difficult texts next time." (Student 3, personal communication, October 8, 2024).

"PBL gave me clear objectives, like finding specific information, which gave me a clear direction when reading." (Student 4, personal communication, October 8, 2024).

"I received feedback from the teacher and classmates, which helped me identify my weaknesses in understanding the text and improve accordingly." (Student 5, personal communication, October 8, 2024).

"The vocabulary and phrases I learned in the project were used multiple times, making it easier for me to remember and recognize them while reading." (Student 6, personal communication, October 8, 2024).

In conclusion, all positive responses strongly indicated that students were satisfied with the application of PBL. The processes and teaching strategies made them more interested and motivated in English reading. Additionally, their engagement in class increased and their reading skill effectively improved



CHAPTER 5

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

This chapter summarized and described the study according to the following sequence:

- 5.1 Conclusion
- 5.2 Discussion
- 5.3 Recommendations

5.1 Conclusion

The two research objectives stated for this study were:

- 1) To compare the English reading skill of grade 6 Chinese students before and after the application of Project-Based Learning.
- 2) To investigate the grade 6 Chinese students' learning satisfaction towards the application of Project-Based Learning.

The researcher carried out the study with grade 6 students at a compulsory school in Guangdong Province, China, applying PBL to improve English reading skill and their learning satisfaction. The collected data were analyzed, leading to the following conclusions.

5.1.1 The Result of English Reading Skill Test Scores Analysis

The first objective of the study was to compare the English reading skill of grade 6 Chinese students before and after the application of Project-Based Learning in Guangdong Province, China. The paired sample t-Test was conducted to analyze and compare the differences between the pre-test and post-test results for the sample group.

1) The mean score of the post-test was 15.80 (SD=2.70), compared to the pre-test mean of 10.10 (SD=3.65), representing a difference of 5.70 points (28.5%), with a significance level of less than 0.01, demonstrating that the application of PBL contributed to improve English reading skill among the students.

2) All students showed varying degrees of improvement, ranging from 2 to 9 points. This result demonstrated that every student has made some degree of progress

3) In the post-test, 17 out of 30 participants scored 16 or higher out of 20. In comparison, only 3 participants achieved a score of 16 or above in the pre-test.

The data analysis demonstrated a significant improvement in students' post-test scores. Consequently, the results suggested that the application of PBL was effective in improving the English reading skill of grade 6 students in Guangdong Province, China.

5.1.2 The Result of Students' Learning Satisfaction Questionnaire Analysis

The second objective of the study was to investigate students' learning satisfaction with the application of Project-Based Learning to improve English reading skill. A questionnaire including 3 parts was used to collect the data.

Part A: Interest and motivation.

Part B: Engagement.

Part C: Efficacy of PBL on student learning

1) The results of Part A showed that students had the highest level of interest and motivation in application of PBL to improve English reading skill (\bar{x} =4.26, SD=0.88).

2) The results of Part B showed that students had the highest level of engagement in application of PBL to improve English reading skill (\bar{x} =4.31, SD=0.96).

3) The results of Part C showed that students had the highest level of effectiveness in application of PBL to improve English reading skill (\bar{x} =4.27, SD=0.88).

Therefore, the questionnaire data analysis demonstrated that students had a high level of learning satisfaction with the application of PBL in improving the English reading skill.

5.1.3 The Result of Semi-Structured Interview Analysis

The semi-structured interview including six questions were implemented to collect the qualitative data with three themes.

The responses from Part A: Interest and motivation of the semi-structured interview indicated that students found PBL to be both interesting and motivating, particularly due to its interactive and real-world nature. They appreciated the variety of reading materials, teamwork, and the opportunity to work on projects that matched their interests. Continuous feedback and the sense of achievement from completing projects also played a key role in motivating them to improve their English reading skill.

The responses from Part B: Engagement of the semi-structured interview indicated that students were eager to participate in the English reading class due to the perceived usefulness of PBL, enjoyment of cooperative work, and the improvement they experienced in their English reading skill. They appreciated teaching strategies such as group discussions, student-led conversation, project presentation, and the use of multimedia resources, all of which contributed to a more engaging and interactive learning environment. The positive influence of their classmates and the encouragement from the teacher also played a significant role in their active participation.

The responses from Part C: Efficacy of PBL on student learning of the semi-structured interview indicated that PBL increased students' confidence in applying English reading skill to real-life situations. They felt more assured due to the real-life relevance of the projects, cooperative work, and the opportunity to practice and learn from their mistakes. Improvements in their English reading skill were attributed to strategies such as inferring word meanings from context, solving problems through

reading, receiving feedback, and repeated use of vocabulary and phrases learned during the projects. Overall, PBL effectively enhanced their confidence and proficiency in English reading.

5.2 Discussion

The researcher used English reading skill test scores to demonstrate that the application of PBL significantly improved English reading skill of grade 6 Chinese students. In addition, questionnaire and semi-structured interview were used to demonstrate that students have high level learning satisfaction. Consequently, the objectives of this study have been achieved. A detailed discussion on how the two research questions posed in this study were addressed in the following section.

5.2.1 English Reading Skill Test Scores

The English reading skill test results revealed that the application of PBL significantly improved English reading skill of grade 6 Chinese students. The pre-test and post-test results of the participants showed an average improvement of 5.70 points. In addition, all participants showed varying degrees of improvement, ranging from 2 to 9 points. Notably, Students No. 2, No. 6 and No. 23 made the greatest improvement, with their scores increasing by 8, 9 and 8 points, respectively. Although Student No. 27 improved by only 2 points, her score ranked among the top in both the pre-test and post-test. The results from the tests provided clear and reliable evidence to support the first research question. So that in this study, the application of PBL to improve English reading skill was demonstrated in four designed classes. Each class had different topics for students to make a group of five to do a project. For completing the projects, students cooperated with group members, read the materials to find the useful information, discussed and designed the projects. It made students read more and have their independent ideas for their projects. Moreover, the projects were presented in the class, students could learn more diverse knowledge from others' projects. All processes of PBL asked students to cooperate with others for sharing ideas and

learning English reading more, their knowledge of English increased and English reading skill improved in a subtle way.

As Li (2020) stated that with the application of PBL, teachers give students more opportunities for independent exploration and cooperative learning to the maximum extent possible, and students become the masters of learning. Students design their own projects of interest, take the initiative to look for materials, and are not afraid of difficulties, their motivation to learn is greatly enhanced. At the same time, students' English reading skill improved and enhance their self-confidence and broaden their horizons. Additionally, Liu (2020) also found that with the help of PBL, students have shown significant improvement in their reading skill. During the planning and implementation of projects, students are required to engage in group cooperation and discussions, which has enhanced their teamwork abilities. Furthermore, in order to successfully complete projects, students need to effectively search for, utilize, and filter various types of information, which has strengthened their information extraction skill. This, in turn, has further contributed to the improvement of their English reading skill.

Zhang (2023) also found PBL that can significantly improve students' English reading skill. Students are able to learn to analyze textual information and make reasonable interpretations, which enable them to understand projects effectively. The learning atmosphere enables students to remain motivated and continually enthusiastic about English reading. Thus, students could make different remarkable improvement. In addition, Zhao (2023) stated that the most students like the application of PBL in English reading, that is the reason that students could improve. The students have the solid foundation in English reading, although made the less improvement, always have the reading skill that are superior to others.

5.2.2 Students' Learning Satisfaction

The students' learning satisfaction was assessed through both questionnaire and semi-structured interview. All participants expressed positive views regarding the

application of PBL to English reading class. The findings from the questionnaire and semi-structured provided clear and reliable evidence to support the second research question.

The results of the questionnaire showed that all 15 items were rated "highest" and the responses of the semi-structured interview were all positive. This indicated that the students found the application of PBL engaging and effective in helping them improving English reading skill in a meaningful way. In this study, PBL aligned with cooperative learning, the processes of PBL needed the students' cooperation in different group. The group cooperation made students feel more comfortable to complete the projects. In the group, students could complement each other's strengths and improve their English reading skill together. Furthermore, the teacher just gave some support and suggestions for their projects, the students had greater autonomy for their projects design and English reading. And the atmosphere of the PBL class was more relaxed than the traditional class. Therefore, student would be more interested of PBL, the group cooperation made them more engaged in the English reading class, and the evaluation of PBL gave them the neutral suggestions to improve their projects and English reading learning.

The result was same as Zhao's (2023) finding that the students have highly satisfaction with the application of PBL to English reading class and hope that PBL could be widely applied in classroom teaching. Chen (2021) demonstrated that PBL applied in the process of English reading teaching and learning could help students improve their enthusiasm for learning English reading, so that students have a certain interest in English learning and English reading. Through the guidance of teachers, students could take the initiative to learn and explore knowledge according to the requirements of the projects. The application of PBL could effectively improve the English reading skill and independent learning ability of students, gradually cultivate good learning habits.

This study also revealed that students did not find learning English reading with the PBL dull, which motivated them to take the initiative in improving English reading skill. This finding aligned with Li's (2020) study result, the application of PBL

in English reading instruction has been well-received among students. They believe that PBL is based on their interests, significantly enhancing their desire to learn and increasing their engagement compared to before. At the same time, students feel that their choices and ability to engage in self-directed inquiry are respected and recognized. As Zhao (2023) also found that students take the lead in their learning process, which boosts their enthusiasm and engagement. Through group work and active research, their English knowledge and reading skill improved. Additionally, preparing projects enhances their confidence and independence in English reading learning. In a conclusion, students have highly satisfaction towards the application of PBL to improve English reading skill and have the motivation and enthusiasm to learning English reading better.

5.3 Recommendations

On the basis of this study's findings and conclusion, the researcher proposes the following recommendations:

5.3.1 Recommendations for Implementation

1) The application of PBL to improve English reading skill has demonstrated positive results. After the implementation of the PBL to English reading class, the English knowledge of students increased, the English reading skill improved and awareness of cooperation enhanced. However, this study was limited to just four weeks. To gather more comprehensive data and achieve better learning outcomes, it is suggested that schools expand the application of PBL to English reading class in other educational settings.

2) The implementation of PBL in English reading class to sixth-grade students has received favorable feedback from participants. Consequently, the researcher recommends that English teachers across all grade levels integrate the PBL into their teaching practices to boost student engagement and motivation in learning English reading.

3) As an essential component of English learning, reading skill has been successfully improved with the application of PBL, so that PBL can also be applied to improve other areas of English learning skill, such as listening, speaking, and writing.

5.3.2 Recommendations for Future Research

There are several limitations to this study that the researcher will now address. Additionally, recommendations will be provided for those interested in pursuing further research in this field.

1) This study was conducted with 30 sixth-grade students from a compulsory school in Guangdong Province. Since different regions and grade levels may yield varying results, it is recommended to expand the sample size and conduct similar studies across different grades to ensure more robust and reliable findings.

2) The process of becoming familiar with the application of the PBL to learn English reading requires significant time for both teachers and students to adapt. However, due to the short duration of the experiment, the results may have been somewhat impacted. To obtain more accurate data, it is suggested that the research period be extended.

3) Mastery of English knowledge and improvement in reading skill may vary depending on the topics and the different types of projects used. In this study, just four topics and four types of projects including. So a wider variety of topics and project formats could be selected to better stimulate students' interest in learning English reading and improve their reading skill.

All aspects of this study have been thoroughly discussed. In summary, the application of PBL positively impacts the students' learning in English reading and improvement of reading skill. It is particularly effective in enhancing students' interest in learning, active participation and awareness of cooperation. PBL has been proven to be a valuable resource for both English teachers and students in Guangdong Province, China, and it can be successfully implemented in English reading instruction as well as other related areas.

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Lesson Plan 1

Lesson Plan 1 (Class:1&2)	
<p>Class Type: English Reading Class</p> <p>Topic: How can I get there?</p> <p>Grade: 6</p> <p>Class Strengths: 30 students</p> <p>Time: 90 minutes (45 minutes/1 class)</p> <p>Teaching and learning strategy: Project-Based Learning</p> <p>Teaching and learning materials: Elementary School English textbook for PEP Grade 6 Book 1 (for Grade 3 starting) (2012), Music, PowerPoint.</p> <p>Learning Objectives:</p> <p>1) The students can express the sentences with the key words, phrases about the topic: “How can I get there?” from the textbook.</p> <p>2) The students can make a tourists’ guide paper about the famous places in one Chinese city and how to travel.</p>	
Teaching with PBL	Activities
<p>1. Project preparation (In the first reading class)</p>	<p>1. Lead-in (15 minutes)</p> <p>Play the song “Let’s go to the town”, which is closely related to the topic of the lesson. Perceive the locations and directional phrases involved in appreciating the song. Then ask students to read the textbook Page 2-3 and answer some questions.</p> <p style="text-align: center;">Questions 1: Are there any locations and directional phrases heard in the song that are the same as those in the textbook?</p> <p>If so, then teacher ask students share the phrases that they remember from the song.</p> <p style="text-align: center;">Questions 2: Have you ever had an experience of asking for directions or giving directions?</p> <p>If so, then teacher ask students share their experiences.</p>

Teaching with PBL	Activities
	<p>2. Key words and expression (20 minutes)</p> <p>Words & Phrases: science, museum, post office, bookstore, turn left, go straight, turn right, next to, etc.</p> <p>Sentences: Where is the museum shop/... --It's next to/...</p> <p>The teacher needs to summarize the key knowledge from the reading on the PPT, providing explanations of their usage.</p> <p>3. Grouping (5 minutes)</p> <p>The teacher organizes students into 6 groups based on their learning abilities, academic performance, and personality traits, ensuring a mix from high to low abilities and introverted to extroverted personalities. Each group has 5 members and selects one as the leader.</p> <p>4. Project selection (5 minutes)</p> <p>The teacher proposes the project theme based on an analysis of the reading materials and the students' circumstances. The project needs students to do a tourists' guide paper. It consists of the famous places' maps in one Chinese city and how to travelling. Then students could discuss in the group and select one Chinese city that aligns with their abilities and interests to make projects.</p>
<p>2. Project implementation</p>	<p>After the first reading class</p> <p>After class, when students work on their projects, they will need a lot of English reading materials. The process of searching for information serves as a reading exercise for them. They can read any relevant content, using the information provided in this article and other related materials as a starting point.</p>

Teaching with PBL	Activities
	<p>After gathering the information, they need to share, integrate, and analyze it with their group members. The teacher will join their discussions and assist them in selecting helpful information. Ultimately, they will reach a consensus on the final product to be presented, based on the collected information.</p>
<p>3.Project presentation (In the second reading class)</p>	<p>Presentation (20 minutes)</p> <p>After completing the project activities, each group will be asked to present their products. The 6 groups will present through their tourists' guide paper. The entire presentation will take approximately 20 minutes.</p> <p>During each group's presentation, the teacher and other group members take notes. When the presentation finishes, they need to evaluate others.</p>
<p>4.Evaluation (In the second reading class)</p>	<p>Evaluation (10 minutes)</p> <p>When all groups finish the presentations, then let students to discuss and share their ideas about the project results with classmates and teacher.</p>
<p>5.Practice on reading (In the second reading class)</p>	<p>Practice on reading (15 minutes)</p> <p>After the application of PBL, students could have a better understanding of this topic main concepts and knowledge. Additionally, the students' reading skill will be improved.</p> <p>Then, teacher will ask students to independently finish the textbook Page 8-9 "Read and write" part within 10 minutes.</p> <p>When they finish, teacher need to give some suggestions or some ideas to get the new concepts about this topic, summary this reading and ask students to read more materials to improve their reading skill.</p>

Lesson Plan 2

Lesson Plan 2 (Class:1&2)	
<p>Class Type: English Reading Class</p> <p>Topic: Ways to go to school</p> <p>Grade: 6</p> <p>Class Strengths: 30 students</p> <p>Time: 90 minutes (45 minutes/1 class)</p> <p>Teaching and learning strategy: Project-Based Learning</p> <p>Teaching and learning materials: Elementary School English textbook for PEP Grade 6 Book 1 (for Grade 3 starting) (2012), Video, PowerPoint.</p> <p>Learning Objectives:</p> <p>1) The students can express the sentences with the key words, phrases about the topic: “Ways to go to school” from the textbook.</p> <p>2) The students can do a stimulation PowerPoint about the different countries students’ ways to go to school and traffic safety knowledge.</p>	
Teaching with PBL	Activities
<p>1.Project preparation (In the first reading class)</p>	<p>1.Lead-in (15 minutes)</p> <p>Show students a video that show the ways in different countries students to go to school. Perceive the mode of travel and traffic safety phrases involved in appreciating the video. Then ask students to read the textbook Page 12-13 and answer some questions.</p> <p style="text-align: center;">Questions 1: Are there any phrases seen in the video that are the same as those in the textbook?</p> <p>If so, then teacher ask students to share the phrases that they remember from the video.</p> <p style="text-align: center;">Questions 2: How do you go to school? What traffic rules do you need to follow on the way?</p> <p>Students will have different ways and knowledge about traffic safety, then teacher ask students to share their ways and knowledge.</p>

Teaching with PBL	Activities
	<p>2.Key words and expression (20 minutes)</p> <p>Words & Phrases: bus, plane, ship, taxi, slow, stop, on foot, by subway, by train, etc.</p> <p>Sentences: How do you get there? By bus .../on foot.</p> <p>The teacher needs to summarize the key knowledge from the reading on the PPT, providing explanations of their usage.</p> <p>3.Grouping (5 minutes)</p> <p>The teacher organizes students into 6 groups based on their learning abilities, academic performance, and personality traits, ensuring a mix from high to low abilities and introverted to extroverted personalities. Each group has 5 members and selects one as the leader.</p> <p>4.Project selection (5 minutes)</p> <p>The teacher proposes the project theme based on an analysis of the reading materials and the students' circumstances. The project needs students to do a stimulation PowerPoint. It consists of the different countries students' ways to go to school and traffic safety knowledge. Then students could discuss in the group and select one country that aligns with their abilities and interests to make projects.</p>
2.Project implementation	<p>After the first reading class</p> <p>After class, when students work on their projects, they will need a lot of English reading materials. The process of searching for information serves as a reading exercise for them. They can read any relevant content, using the information provided in this article and other related materials as a starting point.</p>

Teaching with PBL	Activities
	<p>After gathering the information, they need to share, integrate, and analyze it with their group members. The teacher will join their discussions and assist them in selecting helpful information. Ultimately, they will reach a consensus on the final product to be presented, based on the collected information.</p>
<p>3.Project presentation (In the second reading class)</p>	<p>Presentation (20 minutes)</p> <p>After completing the project activities, each group will be asked to present their products. The 6 groups will present through their stimulation PowerPoint. The entire presentation will take approximately 20 minutes.</p> <p>During each group's presentation, the teacher and other group members take notes. When the presentation finishes, they need to evaluate others.</p>
<p>4.Evaluation (In the second reading class)</p>	<p>Evaluation (10 minutes)</p> <p>When all groups finish the presentations, then let students to discuss and share their ideas about the project results with classmates and teacher.</p>
<p>5.Practice on reading (In the second reading class)</p>	<p>Practice on reading (15 minutes)</p> <p>After the application of PBL, students could have a better understanding of this topic main concepts and knowledge. Additionally, the students' reading skill will be improved.</p> <p>Then, teacher will ask students to independently finish the textbook Page 18-19 "Read and write" part within 10 minutes.</p> <p>When they finish, teacher need to give some suggestions or some ideas to get the new concepts about this topic, summary this reading and ask students to read more materials to improve their reading skill.</p>

Lesson Plan 3

Lesson Plan 3 (Class:1&2)	
<p>Class Type: English Reading Class</p> <p>Topic: My weekend plan</p> <p>Grade: 6</p> <p>Class Strengths: 30 students</p> <p>Time: 90 minutes (45 minutes/1 class)</p> <p>Teaching and learning strategy: Project-Based Learning</p> <p>Teaching and learning materials: Elementary School English textbook for PEP Grade 6 Book 1 (for Grade 3 starting) (2012), Video, PowerPoint.</p> <p>Learning Objectives:</p> <p>1) The students can express the sentences with the key words, phrases about the topic: “My weekend plan” from the textbook.</p> <p>2) The students can do a poster about one weekend plan and detailed activities.</p>	
Teaching with PBL	Activities
<p>1.Project preparation (In the first reading class)</p>	<p>1.Lead-in (15 minutes)</p> <p>Show students a short video about a person’s weekend activities. Perceive the time and activities phrases involved in appreciating the video. Then ask students to read the textbook Page 22-23 and answer some questions.</p> <p>Questions 1: Are there any phrases seen in the video that are the same as those in the textbook?</p> <p>If so, then teacher ask students to share the phrases that they remember from the video.</p> <p>Questions 2: What are you going to do this weekend?</p> <p>Students will have different plans, then teacher ask students to share their weekend plans.</p>

Teaching with PBL	Activities
	<p>2.Key words and expression (20 minutes)</p> <p>Words & Phrases: visit, film, tomorrow, tonight, supermarket, take a trip, next week, etc.</p> <p>Sentences: What are you going to do? --I'm going to see a film/...</p> <p>The teacher needs to summarize the key knowledge from the reading on the PPT, providing explanations of their usage.</p> <p>3.Grouping (5 minutes)</p> <p>The teacher organizes students into 6 groups based on their learning abilities, academic performance, and personality traits, ensuring a mix from high to low abilities and introverted to extroverted personalities. Each group has 5 members and selects one as the leader.</p> <p>4.Project selection (5 minutes)</p> <p>The teacher proposes the project theme based on an analysis of the reading materials and the students' circumstances. The project needs students to do a poster. It consists of one weekend plan and detailed activities. Then students could discuss in the group and combine their opinions that aligns with their abilities and interests to make projects.</p>
2.Project implementation	<p>After the first reading class</p> <p>After class, when students work on their projects, they will need a lot of English reading materials. The process of searching for information serves as a reading exercise for them. They can read any relevant content, using the information provided in this article and other related materials as a starting point.</p>

Teaching with PBL	Activities
	<p>After gathering the information, they need to share, integrate, and analyze it with their group members. The teacher will join their discussions and assist them in selecting helpful information. Ultimately, they will reach a consensus on the final product to be presented, based on the collected information.</p>
<p>3.Project presentation (In the second reading class)</p>	<p>Presentation (20 minutes)</p> <p>After completing the project activities, each group will be asked to present their products. The 6 groups will present through their posters. The entire presentation will take approximately 20 minutes.</p> <p>During each group's presentation, the teacher and other group members take notes. When the presentation finishes, they need to evaluate others.</p>
<p>4.Evaluation (In the second reading class)</p>	<p>Evaluation (10 minutes)</p> <p>When all groups finish the presentations, then let students to discuss and share their ideas about the project results with classmates and teacher.</p>
<p>5.Practice on reading (In the second reading class)</p>	<p>Practice on reading (15 minutes)</p> <p>After the application of PBL, students could have a better understanding of this topic main concepts and knowledge. Additionally, the students' reading skill will be improved.</p> <p>Then, teacher will ask students to independently finish the textbook Page 28-29 "Read and write" part within 10 minutes.</p> <p>When they finish, teacher need to give some suggestions or some ideas to get the new concepts about this topic, summary this reading and ask students to read more materials to improve their reading skill.</p>

Lesson Plan 4

Lesson Plan 4 (Class:1&2)	
<p>Class Type: English Reading Class</p> <p>Topic: I have a pen pal</p> <p>Grade: 6</p> <p>Class Strengths: 30 students</p> <p>Time: 90 minutes (45 minutes/1 class)</p> <p>Teaching and learning strategy: Project-Based Learning</p> <p>Teaching and learning materials: Elementary School English textbook for PEP Grade 6 Book 1 (for Grade 3 starting) (2012), Video, PowerPoint.</p> <p>Learning Objectives:</p> <p>1) The students can express the sentences with the key words, phrases about the topic: “I have a pen pal” from the textbook.</p> <p>2) The students can do a role-playing about the first conversation with a pen pal.</p>	
Teaching with PBL	Activities
<p>1.Project preparation (In the first reading class)</p>	<p>1.Lead-in (15 minutes)</p> <p>Show students a video that about when a person meets a new friend to communicate. Perceive the hobby and family phrases involved in appreciating the video. Then ask students to read the textbook Page 36-37 and answer some questions.</p> <p>Questions 1: Are there any phrases seen in the video that are the same as those in the textbook?</p> <p>If so, then teacher ask students to share the phrases that they remember from the video.</p> <p>Questions 2: What are your hobbies?</p> <p>Students will have different hobbies, then teacher ask students to share their hobbies.</p>
	<p>2.Key words and expression (20 minutes)</p> <p>Words & Phrases: study, puzzle, dance, sing, cook Chinese food, go hiking, play football, read stories, etc.</p>

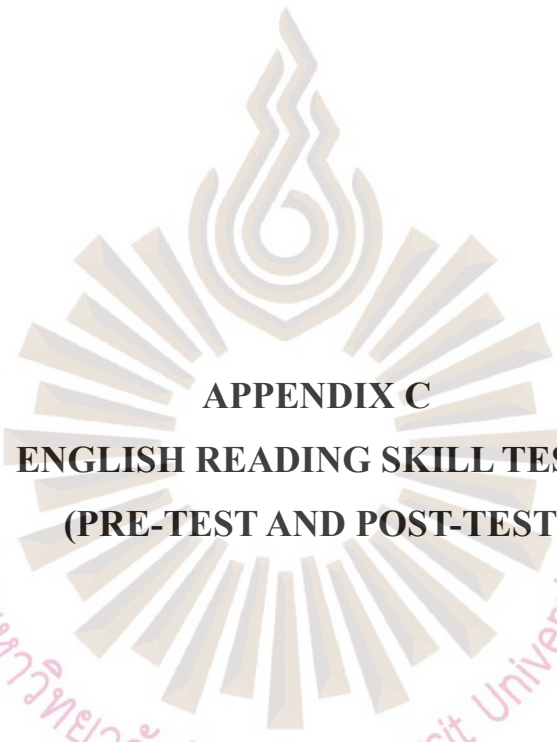
Teaching with PBL	Activities
	<p>Sentences: What are your hobbies? --I like reading stories. I also like dancing and singing/...</p> <p>Does he live in Sydney? --Yes, he does. / No, he doesn't.</p> <p>The teacher needs to summarize the key knowledge from the reading on the PPT, providing explanations of their usage.</p> <p>3.Grouping (5 minutes)</p> <p>The teacher organizes students into 6 groups based on their learning abilities, academic performance, and personality traits, ensuring a mix from high to low abilities and introverted to extroverted personalities. Each group has 5 members and selects one as the leader.</p> <p>4.Project selection (5 minutes)</p> <p>The teacher proposes the project theme based on an analysis of the reading materials and the students' circumstances. The project needs students to do a role-playing. It consists of the first conversation with a pen pal. Then students could discuss in the group and design the conversations that aligns with their abilities and interests.</p>
<p>2.Project implementation</p>	<p>After the first reading class</p> <p>After class, when students work on their projects, they will need a lot of English reading materials. The process of searching for information serves as a reading exercise for them. They can read any relevant content, using the information provided in this article and other related materials as a starting point.</p>

Teaching with PBL	Activities
	<p>After gathering the information, they need to share, integrate, and analyze it with their group members. The teacher will join their discussions and assist them in selecting helpful information. Ultimately, they will reach a consensus on the final product to be presented, based on the collected information.</p>
<p>3.Project presentation (In the second reading class)</p>	<p>Presentation (20 minutes)</p> <p>After completing the project activities, each group will be asked to present their products. The 6 groups will present through their role-playing. The entire presentation will take approximately 20 minutes.</p> <p>During each group's presentation, the teacher and other group members take notes. When the presentation finishes, they need to evaluate others.</p>
<p>4.Evaluation (In the second reading class)</p>	<p>Evaluation (10 minutes)</p> <p>When all groups finish the presentations, then let students to discuss and share their ideas about the project results with classmates and teacher.</p>
<p>5.Practice on reading (In the second reading class)</p>	<p>Practice on reading (15 minutes)</p> <p>After the application of PBL, students could have a better understanding of this topic main concepts and knowledge. Additionally, the students' reading skill will be improved.</p> <p>Then, teacher will ask students to independently finish the textbook Page 42-43 "Read and write" part within 10 minutes.</p> <p>When they finish, teacher need to give some suggestions or some ideas to get the new concepts about this topic, summary this reading and ask students to read more materials to improve their reading skill.</p>



Item-Objective Congruence for Lesson Plans				
Item No	Expert 1	Expert 2	Expert 3	Congruence
Lesson Plan 1	+1	+1	+1	Congruent
Lesson Plan 2	+1	+1	+1	Congruent
Lesson Plan 3	+1	+1	+1	Congruent
Lesson Plan 4	+1	+1	+1	Congruent





APPENDIX C
ENGLISH READING SKILL TESTS
(PRE-TEST AND POST-TEST)

มหาวิทยาลัยรังสิต Rangsit University

ENGLISH READING SKILL TEST

(英语阅读能力测试题)

This test is divided into four parts, each containing 5 questions. Choose the correct option for each question. Each question is worth 1 point, with a total of 20 points available. You have 40 minutes to complete the test.

(测试题分为四部分，每部分各有5个小题，选择正确的选项。一共20题，每题分值为1分，满分为20分。测试时间：40分钟)

PART 1: Read the dialogue and choose the correct option. One of the options is redundant! (读对话，选择正确的选项。选项中有一个是多余的哦!)

Lee: Hi, May. How was your Mid-Autumn Festival?

May: 1. _____ ▲ .

Answer: C

Lee: Where did you go over the holiday?

May: 2. _____ ▲ .

Answer: F

Lee: Hangzhou is a great place. It has hosted the 19th Asian Games.

3. _____ ▲ .

Answer: B

May: We visited Hangzhou Olympic Sports Centre Stadium (奥体中心) -- "the Big Lotus".

Lee: Really? 4. _____ ▲ .

Answer: A

May: It's in Binjiang, Hangzhou.

Lee: 5. _____ ▲ .

Answer: E



- A. Where is the stadium?
- B. What did you do there?
- C. It was great.
- D. I will visit you next weekend.
- E. Did you take any pictures in Hangzhou?
- F. I went to Hangzhou with my

May: Yes, I did. I took many beautiful pictures.

Lee: Can I see your pictures sometime?

TIME	Mon	Tue	Wed	Thu	Fri
8:00	Math	Chinese	science	Math	Chinese
8:55	science	Math	Chinese	English	science
gymnastics					
10:00	history	English	Chinese	P. E.	
10:55	art	P. E.	music	history	computer
Lunch time					
14:00	English	science	Math	Chinese	English
14:55	Chinese	biology	English	science	Math
15:50	music	computer	history	art	biology
16:45	class meeting	History Club	gymnastics	gymnastics	gymnastics

May: Of course.

PART 2: Below is Amy's class schedule, with each lesson lasting 45 minutes. Please answer the following questions based on the information in the schedule.

(下面是一张Amy的课程表，每节课为45分钟。请根据课程表中的信息回答下列问题。)

- () 6. Amy's favorite subject is art and music, her favorite day is _____.
 A. Monday B. Tuesday C. Friday D. Saturday

Answer: A

- () 7. When can the students have lunch?

--They can have lunch at_____.

- A. eight B. twelve C. two p.m. D. five

Answer: B

- () 8. How many days do they go to school in a week?

--They go to school _____days a week.

- A. four B. six C. five D. seven

Answer: C

() 9. When do they have computer subject?

--They have computer subject on_____.

A. Friday B. Monday C. Wednesday D. Thursday

Answer: A

() 10. How long do they have gymnastics in the morning?

--They have gymnastics for_____ minutes (分钟)。

A. ten B. fifteen C. twenty D. twenty-five

Answer: C

PART 3: Read the short passage and answer the following questions.

(阅读小短文，回答以下问题)

In different countries around the world, students have various ways of getting to school. In Japan, many students walk or ride their bicycles to school. They often travel in groups for safety and follow strict traffic rules. In the Netherlands, cycling is a very popular mode of transport. There are dedicated bike lanes and traffic lights specifically for cyclists. Children are taught the importance of wearing helmets and following road signs. In China, many students take public transportation like buses or subways. Schools often have specific drop-off points to keep the flow of traffic organized and ensure students can safely enter the school grounds. No matter the country, safety is a top priority(重点). Students are taught to follow traffic rules, use crosswalks, and be aware of their surroundings. Parents and schools work together to create a safe environment for children as they travel to and from school.

() 11. How do many students in Japan get to school?

A. By walking or riding bicycles B. By school bus

C. By car D. By subway

Answer: A

() 12. What mode of transportation is very popular for students in the Netherlands?

A. Walking B. School bus C. Cycling D. Public transportation

Answer: C

() 13. Why do Japanese students often travel in groups?

- A. To save time B. For safety C. To chat with friends D. To follow traffic rules

Answer: B

() 14. What does the presence(存在) of dedicated bike lanes(专用道) and traffic lights for cyclists in the Netherlands indicate?

- A. Cycling is dangerous in the Netherlands.
B. Cycling is not popular in the Netherlands.
C. There is a strong emphasis on safety for cyclists.
D. Students do not need to follow traffic rules.

Answer: C

() 15. How do the different ways of getting to school and the traffic rules in various countries ensure student safety?

- A. By making all students use the same mode of transportation
B. By focusing only on the safety of cyclists
C. By allowing students to travel alone
D. By teaching students to follow traffic rules, use crosswalks, and be aware of their surroundings

Answer: D

PART 4: Read the short passage and answer the following questions.

(阅读小短文，回答以下问题)

Jenny, a grade 6 student from Guangzhou, recently received a letter from her new pen pal, Alex, who lives in London. In his letter, Alex introduced himself and shared some details about his life. He mentioned that he enjoys playing soccer, reading mystery novels(推理小说), and exploring museums. He also wrote about his family: his mother is a teacher, his father is a chef, and he has a younger sister named Emily who loves drawing. Alex described his typical weekend. On Saturday mornings, he plays soccer with his friends at a park. Afterward, they often visit the local library to find new books to read. In the afternoon, his family usually visits a museum. On Sundays, Alex helps his father in the kitchen. In the evening, they all watch a movie together. Jenny was excited to read about Alex's life and planned to

write back to him soon. She wanted to share her interests and describe what a typical weekend looks like for her in Guangzhou.

() 16. What activity does Alex usually do on Saturday mornings?

- A. Visit the museum B. Play soccer
B. Cook with his father D. Watch a movie

Answer: B

() 17. Why might Alex and his friends visit the library after playing soccer?

- A. To return their books B. To find new books to read
C. To attend a class D. To meet their parents

Answer: B

() 18. Which description matches Alex' s family activities on weekends?

- A. They prefer to do separate activities.
B. They rarely go out together.
C. They only stay home and watch TV.
D. They enjoy spending time together on weekends.

Answer: D

() 19. How do Alex' s weekend activities help him develop different skills and interests?

- A. He spends all his time at home without engaging in any outdoor activities.
B. Playing soccer is his only activity, and he doesn' t like reading or museums.
C. Playing soccer helps him stay active, visiting the library encourages reading, and exploring museums broadens his knowledge.
D. He focuses only on sports and ignores other interests.

Answer: C

() 20. In what ways might Jenny and Alex' s exchange of letters benefit both of them?

- A. They can learn about different cultures and make a new friend.
B. They will compete to see who has the better weekend.
C. They will only talk about their favorite foods.
D. They will plan to meet in person immediately.

Answer: A



APPENDIX D

**IOC FOR ENGLISH READING SKILL TESTS
(PRE-TEST AND POST-TEST)**

Item-Objective Congruence for the English reading skill tests					
No.	Expert 1	Expert 2	Expert 3	Average	Congruence
1	+1	+1	+1	+1	congruent
2	+1	+1	+1	+1	congruent
3	+1	+1	+1	+1	congruent
4	+1	+1	+1	+1	congruent
5	+1	+1	+1	+1	congruent
6	+1	+1	+1	+1	congruent
7	+1	+1	+1	+1	congruent
8	+1	+1	0	0.67	congruent
9	+1	+1	+1	+1	congruent
10	+1	0	+1	0.67	congruent
11	+1	+1	+1	+1	congruent
12	+1	+1	+1	+1	congruent
13	+1	+1	+1	+1	congruent
14	0	+1	+1	0.67	congruent
15	+1	+1	+1	+1	congruent
16	+1	+1	+1	+1	congruent
17	+1	+1	+1	+1	congruent
18	+1	+1	+1	+1	congruent
19	+1	+1	+1	+1	congruent
20	+1	+1	0	0.67	congruent



APPENDIX E

STUDENTS' LEARNING SATISFACTION QUESTIONNAIRE

STUDENTS' LEARNING SATISFACTION QUESTIONNAIRE

Mark your level of opinion from 5-1 (from strongly agree to strongly disagree) against each statement. The description of each scale 5-1 is as shown in the table below.

Scale: Strongly Agree (SA)-5 Agree (A)- 4 Neutral (N)-3 Disagree (D)-2 Strongly Disagree (SD)-1						
No.	Items	SA 5	A 4	N 3	D 2	SD 1
PART A: INTEREST & MOTIVATION						
1.	The project assignment made learning English reading more enjoyable for me.					
2.	The activities of PBL motivated me to learn English reading.					
3.	The steps of PBL in teaching made me interesting to learn in reading.					
4.	The projects in PBL could help me see the relevance of English reading to real-life situations.					
5.	All the classmates' atmosphere in PBL class could motivated me to learn reading.					
PART B: ENGAGEMENT						
6.	The projects in English reading class could keep me involved in learning.					
7.	PBL could help me more actively participated in group working.					
8.	I had more opportunities to interact with my classmates during English reading class.					
9.	PBL encouraged me to ask questions and seek answers about English reading topics.					

No.	Items	SA	A	N	D	SD
		5	4	3	2	1
10.	I felt challenged in a positive way during making projects related to English reading.					
PART C: EFFICACY OF PBL ON STUDENT LEARNING						
11.	When I learned reading from PBL, made me understand grammatical more.					
12.	PBL helped me understand how to read English better.					
13.	I felt more confident in my English reading skill.					
14.	I could improve in reading skill.					
15.	I have believed the PBL was an effective method to improve English reading skill.					



The logo of Rangsit University is a circular emblem. At the top is a stylized flame or sunburst. Below it are several radiating lines of varying lengths, creating a sunburst effect. The text 'มหาวิทยาลัยรังสิต Rangsit University' is written in a semi-circle at the bottom of the emblem.

APPENDIX F
IOC FOR STUDENTS' LEARNING SATISFACTION
QUESTIONNAIRE

มหาวิทยาลัยรังสิต Rangsit University

Item-Objective Congruence for Students' Satisfaction Questionnaire					
No.	Items	Expert 1	Expert 2	Expert 3	Congruence
PART A: INTEREST & MOTIVATION					
1	The project assignment made learning English reading more enjoyable for me.	+1	+1	+1	congruent
2	The activities of PBL motivated me to learn English reading.	+1	+1	+1	congruent
3	The steps of PBL in teaching made me interesting to learn in reading.	+1	+1	+1	congruent
4	The projects in PBL could help me see the relevance of English reading to real-life situations.	+1	+1	+1	congruent
5	All the classmates' atmosphere in PBL class could motivated me to learn reading.	+1	+1	+1	congruent
PART B: ENGAGEMENT					
6	The projects in English reading class could keep me involved in learning.	+1	+1	+1	congruent
7	PBL could help me more actively participated in group working.	+1	+1	+1	congruent

Item-Objective Congruence for Students' Satisfaction Questionnaire					
No.	Items	Expert 1	Expert 2	Expert 3	Congruence
8	I had more opportunities to interact with my classmates during English reading class.	+1	+1	+1	congruent
9	PBL encouraged me to ask questions and seek answers about English reading topics.	+1	+1	+1	congruent
10	I felt challenged in a positive way during making projects related to English reading.	+1	+1	+1	congruent
PART C: EFFICACY OF PBL ON STUDENT LEARNING					
11	When I learned reading from PBL, made me understand grammatical more.	+1	+1	+1	congruent
12	PBL helped me understand how to read English better.	+1	+1	+1	congruent
13	I felt more confident in my English reading skill.	+1	+1	+1	congruent
14	I could improve in reading skill.	+1	+1	+1	congruent
15	I have believed the PBL was an effective method to improve English reading skill.	+1	+1	+1	congruent



APPENDIX G

SEMI-STRUCTURED INTERVIEW

Semi-Structured Interview Outline

This interview will be conducted for the purpose of this study only, the privacy and confidentiality of the participants are ensured during the interview, and ethical principles will be followed. Respondent responses will be recorded during the interview without possible risk.

Part	Questions
INTEREST & MOTIVATION	1. Was the PBL interesting or motivating to improve English reading skill more?
	2. What were the important things about PBL that made you more interested or motivated to learn English reading in class?
ENGAGEMENT	3. What were the reasons that made you would like to participate in the class?
	4. What were the teaching strategies or activities interesting that made you prefer to learn in the class? Do not use answer yes or no.
EFFICACY OF PBL ON STUDENT LEARNING	5. Did the use of PBL make you have more confident in English reading skill for applying in your daily life? Why?
	6. How did you improve in English reading skill?



APPENDIX H

IOC FOR SEMI-STRUCTURED INTERVIEW

Item-Objective Congruence for Semi-Structured Interview Outline					
No	Items	Expert 1	Expert 2	Expert 3	Congruence
PART A: INTEREST & MOTIVATION					
1	Was the PBL interesting or motivating to improve English reading skill more?	+1	+1	+1	congruent
2	What were the important things about PBL that made you more interested or motivated to learn English reading in class?	+1	+1	+1	congruent
PART B: ENGAGEMENT					
3	What were the reasons that made you would like to participate in the class?	+1	+1	+1	congruent
4	What were the teaching strategies or activities interesting that made you prefer to learn in the class? Do not use answer yes or no?	+1	+1	+1	congruent
PART C: EFFICACY OF PBL ON STUDENT LEARNING					
5	Did the use of PBL make you have more confident in English reading skill for applying in your daily life? Why?	+1	+1	+1	congruent
6	How did you improve in English reading skill?	+1	+1	+1	congruent



APPENDIX I
LETTER OF APPROVAL



Certificate of Approval

SHENZHEN BIAOSHANG SCHOOL Administration Department

Subject: Approval of data collection for M.Ed. Thesis

Dear Sir/Madam,

I am currently enrolled in the master in Curriculum and Instruction at Rangsit University, Thailand. I am conducting a research on the "THE APPLICATION OF PROJECT-BASED LEARNING TO IMPROVE ENGLISH READING SKILL OF GRADE 6 STUDENTS IN GUANGDONG PROVINCE, CHINA". This research requires students participation. The instruments involved during the study pretest and post-test for obtaining the required data. Therefore, I would like to seek permission from the administration to allow me to collect data at this school where the names and identities of the students will not be used publicly.

Yours Sincerely,
Mengmei Ying, Student
Rangsit University Thailand

Since the study requires data for analysis purposes, the researcher would collecting data from this school. There are several conditions must be followed.

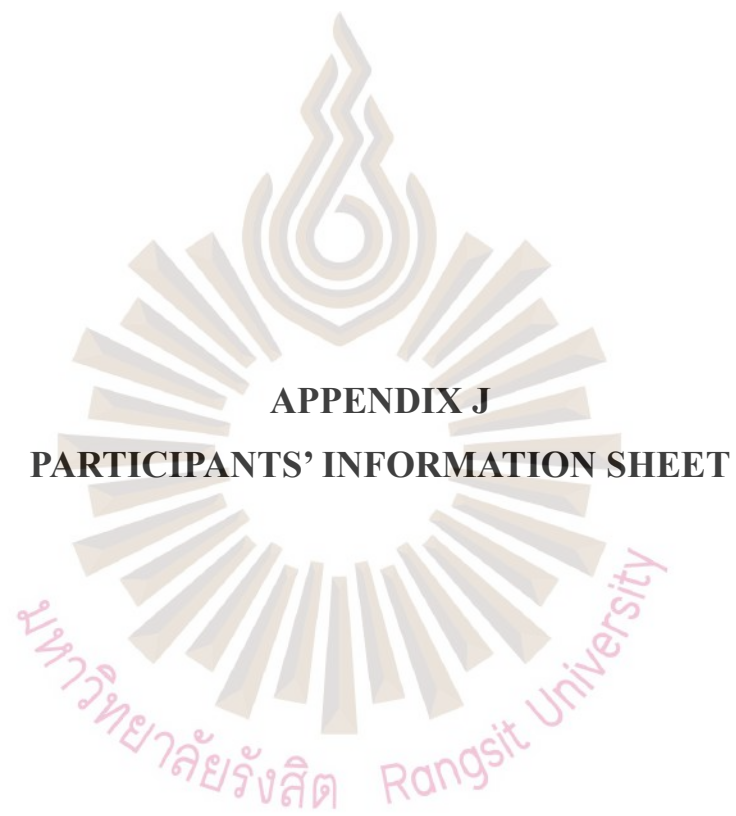
Providing research participants with information to make an informed decision as to whether to take part in research (informed consent).

Following the prior mentioned document have been reviewed and approved by the administration of SHENZHEN BIAOSHANG SCHOOL.

Signature:  Date: 2024.08.26.

SHENZHEN BIAOSHANG SCHOOL





APPENDIX J
PARTICIPANTS' INFORMATION SHEET



Participant's Legal Guardian Information Sheet

Dear Participant:

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Talk to others about the study if you wish.

Research School: SHENZHEN BIAOSHANG SCHOOL, Guangdong Province, China

Name: Mengmei Ying **Student ID:** 6609970

Studying University: Suryadhep Teachers College of Rangsit University, Thailand

Research Title:

THE APPLICATION OF PROJECT-BASED LEARNING TO IMPROVE ENGLISH READING SKILL OF GRADE 6 STUDENTS IN GUANGDONG PROVINCE, CHINA

1. What is the purpose of the study?

To compare the English reading skill of grade 6 Chinese students before and after the application of Project-Based Learning. To investigate the grade 6 Chinese students' learning satisfaction towards the application of Project-Based Learning.

2. Expected results

The application of Project-Based Learning will help to improve the English reading skill of grade 6 Chinese students. The grade 6 Chinese students will have high learning satisfaction towards the application of Project-Based Learning.

3. Number of participants in the study 30 individuals

4. Research procedures

The researchers will collect the data in four steps. First, the participants will be pretested. Second, the participants will be given the English reading lessons using Project-Based Learning. Third, a post test will be administered after the lessons have been given. Fourth, a questionnaire and semi-structured interview will be given to indicate their satisfaction towards the application of Project-Based Learning to improve their reading skill.

5. Duration

The research period will be 4 weeks, 8 sessions,

There is no possible risk in her research

The school has asked students who have volunteered to participate to inform their parents and has obtained consent to volunteer for the research, and the data from the study are true and valid. The school also allow 30 students to assist her with her thesis research, either voluntarily or by voluntary experiments, by agreeing to (Mengmei Ying), who is enrolled at Rangsit University in Thailand to research her thesis.

Signature:  Date: 224.8.26.

SHENZHEN BIAOSHANG SCHOOL Administration

มหาวิทยาลัยรังสิต Rangsit University



APPENDIX K

RELIABILITY OF RESEARCH INSTRUMENTS

มหาวิทยาลัยรังสิต Rangsit University

Reliability Test Result of English reading skill Test

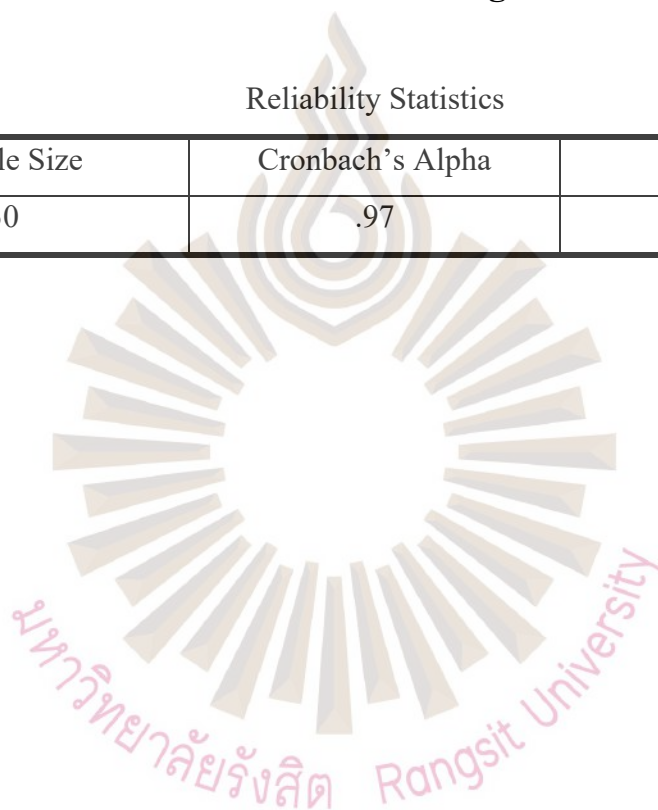
Reliability Statistics

KR-20	N of Items
.7517	20

Reliability Test Result of Students' Learning Satisfaction Questionnaire

Reliability Statistics

Sample Size	Cronbach's Alpha	N of Items
30	.97	15





Paired Sample t-Test

Paired Samples Statistics

		Mean	n	Std. Deviation	Std. Error Mean
Pair 1	Pre-Test	10.10	30	3.65	.67
	Post-Test	15.80	30	2.70	.49

Paired Samples Test

		Paired Differences					t	df	Sig.
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-Test - Post-Test	-5.70	1.60	.29	-6.30	-5.10	-19.51	29	.000



APPENDIX M

EXPERTS WHO VALIDATED RESEARCH INSTRUMENTS

มหาวิทยาลัยรังสิต Rangsit University

NO.	Name	Position/Title	Institution
1	Expert 1	English teacher (primary)	Shenzhen Biaoshang School, China
2	Expert 2	English teacher (primary)	Shenzhen Biaoshang School, China
3	Expert 3	English teacher (primary)	Shenzhen Biaoshang School, China



BIOGRAPHY

Name	Mengmei Ying
Date of birth	June 14, 1996
Place of birth	Zhejiang, China
Education background	Taizhou University, China Bachelor of Economics, 2018 Rangsit University, Thailand Master of Education in Curriculum and Instruction, 2024
Address	Wenzhou, Zhejiang, China
Email Address	Ashleeying9606@gmail.com

