

An Investigation on English Teaching Methods in Junior High School Based on Project-based Learning

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Abstract

Project-based teaching is a student-centered teaching method that conducts project exploration around real problems. It emphasizes both learning outcomes and processes, advocates cooperative learning and diversified evaluation, and aims to cultivate students' problem-solving abilities and core competencies. This study explores English teaching methods in junior high school based on project-based learning. It details an English class adopting this approach, focusing on student participation and teacher-student interaction. A comprehensive evaluation of the case is made considering teaching objectives, content, student engagement, and effectiveness. It shows that project-based learning can enhance students' comprehensive English abilities, arouse learning enthusiasm, and cultivate collaborative and problem-solving skills. However, there are issues like insufficient teaching resources and poor time management. Suggestions are provided to promote the wider and more effective application of project-based learning in junior high school English teaching, thus improving the overall English teaching efficiency.

Keywords: project-based learning, junior high school, English teaching, teaching methods

1. Introduction

In China, traditional English teaching has long been characterized by a knowledge-centric approach. In this paradigm, students are often relegated to the role of passive recipients of information. While this approach can facilitate knowledge accumulation to some degree, it falls short in truly igniting students' passion for learning and fostering their initiative. Classroom interactions are frequently one-sided, with teachers doing most of the talking, and students having limited opportunities to actively engage with the language. This not only dampens students' enthusiasm but also fails to develop their practical language-using skills in real-world scenarios.

Project-based learning, however, represents a radical shift towards a student-centered pedagogy. It posits that students learn most effectively when they are immersed in real-life situations and tasked with meaningful projects. By engaging in project-based activities, students are empowered to take ownership of their learning, collaborate with peers, and apply theoretical knowledge to practical problems. In the context of junior high school English teaching, project-based learning can transform the learning experience. It can turn the often-mundane language-learning process into an exciting exploration, where students are motivated to learn English not just for the sake of exams but for its practical utility. For instance, students can create English-language podcasts about local cultural heritage, which not only sharpens their language skills but also deepens their understanding of their own roots. Thus, investigating English teaching methods grounded in project-based learning holds both theoretical and practical value that cannot be overstated.

The primary objective of this study is to conduct an in-depth exploration of how project-based learning can be effectively integrated into junior high school English classrooms. Through the meticulous analysis of specific teaching cases, it aims to comprehensively assess the merits and demerits of project-based learning. By doing so, it endeavors to offer targeted and actionable suggestions for improvement. These suggestions are intended to serve as a compass for junior high school English teachers, equipping them with more effective teaching strategies.

2. Literature Review

Project-based learning traces its roots back to the late 19th and early 20th centuries in the United States, originating

from the idea of “learning by doing” of John Dewey. Dewey (1916) emphasized the importance of experiential learning and argued that students learn best when they are actively involved in the learning process, rather than passively absorbing knowledge. This laid the ideological foundation for project-based learning.

In the mid-20th century, William Heard Kilpatrick further expanded on Dewey’s ideas. Kilpatrick (1918) introduced the “project method,” which formalized the concept of project-based learning. It is pointed out that project-based learning is a learner-centered purposeful activity. This definition reflects the learner-centered concept of the project-based teaching method, emphasizing the participation and importance of learners in learning activities. In other words, Project-based learning is a project-centered teaching approach that applies knowledge and skills to solving practical problems, emphasizing students’ exploration, discovery, learning and innovation in specific projects. Kilpatrick (1918) points out that in the project method, students’ purposes, interest, and social experiences are the necessary conditions for success, which coincide with the concept of project-based instruction. His work provided a more structured approach to implementing project-based learning in educational settings. Later, Beckett (2002) held that project-based teaching makes up for the deficiencies of the Krashen’s input hypothesis. On this basis, Cocco (2006) pointed out three constructivist principles: learning occurs in specific situations and contexts; students are motivated during the learning process; students complete their projects through social interaction and the sharing of knowledge and understanding. In project-based instruction, students need to form a final product, which can take many forms. The most important thing is that the product must reflect students mastery of knowledge.

Since then, project-based learning has been widely embraced and studied in the international education community. In 1989, American educator Katz and Chard systematically expounded on the basic educational concepts and other aspects of project-based teaching, and successfully applied it in the field of preschool education. This move soon received a positive response from North American child educators (Hu & Cheng, 2003). In 1999, Germany adopted the curriculum plan of applying behavior-oriented teaching methods to the learning field. Subsequently, “action-oriented project-based teaching” has been widely praised in the field of vocational education in Germany (Rudolf & Fu, 2007). In the K-12 education sector, numerous schools have successfully integrated project-based learning into their curricula. High Tech High in the United States is a good example. Their curriculum is centered around project-based learning, where students work on long-term projects that span multiple disciplines. Through these projects, students can master knowledge and develop crucial 21st-century skills. For example, in a project on urban planning, students need to conduct research, analyze data, and communicate their ideas effectively. Besides, they need to collaborate with team members. During this, they cultivate critical thinking and communicative and collaborative skills (Thomas, 2000).

In the mid-1970s, project-based teaching began to emerge in the field of foreign language teaching (Hedge, 1993), and it has gradually attracted extensive attention and research from scholars in this field. Eslava and Lawson (1979) organized students to carry out learning activities around the dubbing of British silent TV series, making an early attempt to solve the contextual problem of oral English learning. Haines (1989) found in project-based learning classrooms that when students participated in purposeful English communication activities, they had more opportunities to use the language in a relatively natural context. A real problem is the best teacher. In the process of solving problems, students’ critical thinking is cultivated more natural around the designed real activities. Subsequently, Ribe and Vidal (1993) dedicated themselves to exploring and demonstrating the necessity and applicability of project-based teaching in the field of foreign language instruction.

In China, the research on project-based learning began relatively late but has witnessed remarkable progress in recent years. In the late 1990s, project-based teaching was introduced to China and first applied in the fields of adult education and vocational education (Yang, 2000). Until the end of the 20th century, Liu and Zhong (2002) were the first to introduce project-based teaching into the field of foreign language teaching and initiated the exploration and research of project-based teaching in language learning. With the implementation of the new curriculum reform in the early 21st century, scholars have been actively involved in introducing foreign theories and adapting them to the Chinese educational context. Yang (2012) found that project-based teaching is conducive to developing students’ core subject literacy, and thus advocated constructing project-based teaching based on core literacy. Later, some well-known Chinese scholars have also made new understandings of the concept of project-based learning based on China’s cultural background and curriculum standards. For instance, Mei and Wang (2017) pointed out that project-based learning is an effective teaching method, which is student-centered and topic-focused to maximize the creation of authentic language environments and communication scenarios. However, there are not many studies on the combination of project-based teaching and English teaching in primary and secondary schools. Li and Dai (2021) pointed out, project-based language teaching can effectively promote the development of students’ comprehensive qualities such as cooperative learning and problem-solving abilities. Yang and Li (2021) explored the impact of “project-based teaching” on junior high school students’ writing. The research results indicated that under this teaching model, students are easier to identify writing errors by their own and their overall writing proficiency improved to some degree.

All in all, domestic research on project-based teaching mainly focuses on vocational education and higher education. In recent years, project-based teaching has been promoted and applied to a certain extent in the field of compulsory education. But most of it is concentrated on the construction and value analysis of related teaching models. There are few empirical studies on its application in junior high school English.

3. Theoretical Basis of Project-based Learning

3.1 Constructivist Learning Theory

The learning theory of Constructivist was originally proposed by Piaget (1981). Piaget believes that knowledge comes neither from the learner nor from the objective world, but is constructed in the process of interaction between the learner and the objective world. Each learner takes the initiative to choose the learning process and to deal with some external information according to his original knowledge and experience, so as to become an active constructor of meaning. Under the constructivism theory, teaching activities respect students' subjective initiative, make full use of the situation, cooperation, communication and other learning environment elements, and mobilize students to learn consciously and actively. The social constructivism proposed by Vygotsky (1978) held that the historical and cultural background in which children live is very important for them to construct knowledge meaningfully.

Under the guidance of constructivist learning theory, project-based teaching fully embodies the four elements of "context", "collaboration", "conversation" and "meaning". As what Liu and Zhong (2002) indicated that "project-based learning is an innovative model for teaching and learning based on constructivist learning theory". It starts from students' real life and requires students to achieve the meaningful construction of their own knowledge system in the process of completing projects in collaboration with others. For example, when students are engaged in a project on environmental protection, they are not just learning about environmental concepts from textbooks. Instead, they are actively involved in the process of gathering information, analyzing problems, and formulating solutions with their partners. They might conduct field research, interview experts, and collaborate with classmates to create an English-language environmental awareness campaign. Through this process, they construct their own understanding of environmental protection and the related English language expressions.

3.2 Discovery Learning Theory

In the middle of the 20th century, reception learning theory was criticized by scholars, and under these circumstances, Bruner proposed discovery learning theory. Bruner (1990) proposed that discovery not only refers to the exploration of those unknown phenomena of mankind, but also all the behaviors of personally seeking and obtaining knowledge with one's own mind. He also pointed that learning is the organization and reorganization of students' cognitive structures. Under the guidance of teachers, students can independently discover and acquire new knowledge. It emphasizes the learning process of students.

Project-based learning is not learning by acceptance, but learning by discovery. It attaches great importance to cultivating students' abilities to acquire, analyze and apply in practice. To be specific, in the teaching process, first of all, the teacher raises driving questions and creates problem scenarios. Then students conduct project exploration around these driving questions. Finally, after repeated collection and modification, they develop the final project plan for solving the problems.

4. Description of the Junior High School English Teaching Case Based on Project-based Learning

4.1 Case Background

The case studied is from a class of grade two students in China. The English proficiency level of the students in this class is medium. The students know basic English grammar, vocabulary and simple language expressions. The teaching experience of this teacher is very deep. She has spent a lot of time researching and practicing project-based learning in English class. The prior experience of this teacher includes attending the workshop on project-based learning and participating in the practice of developing project-based teaching materials with other teacher.

4.2 Teaching Objectives

4.2.1 Knowledge Objectives

The main knowledge objective is that students will learn a review of English vocabulary and phrases, and sentence patterns such as "scenic spot", "places of interest", "It is famous for...", "historical site", and "local cuisine". In addition to recognizing the expressions, students should be able to use the expressions in context.

4.2.2 Ability Objectives

The ability developing aims are twofold. On the one hand, students are expected to improve their overall English skills, i.e. listening, speaking, reading and writing. They should be able to listen to the English description about tourist

attractions and talk about the tourist attractions. Besides, they should be able to read some related contents and introduce the tourist attractions in detailed and accurate English. Students are expected to improve their collaborative skills. In the project-based learning, they should work in groups. They will learn to divide the tasks, communicate and solve the conflict. Students should learn some skills for collecting and collecting information, such as searching reliable information from library, Internet and interviews with local people, then organizing and presenting it logically. Students should learn problem-solving skills. They will meet with many problems in the project, such as English problem, conflicting ideas in the group, time problem, etc. And they should learn to solve the problems.

4.2.3 Emotional Objectives

Through the research and introduction of the scenic spots of the hometown, students can enhance their pride in culture, love their hometown more and improve their confidence of culture. Meanwhile, through the teaching and learning in the project in English and the possible comparisons of different cultures, students can broaden their international horizons. So they can view their hometowns with a global perspective, and identify the position of their hometowns in world culture.

4.3 Teaching Process

4.3.1 Project Introduction

The teacher begins the project by showing a very interesting video about famous tourist places all over the world. It is an English video. The students will see different places all over the world, starting from the Eiffel Tower in Paris to the beaches in Bali. They will also see the people of these places and how they celebrate their festivals, what kind of music they like, what they eat and so on. After watching the video, the teacher asks, "Do you want to introduce the beauty of our hometown to the world? Now, let's begin our project-making an English travel brochure about the scenic spots in our hometown".

4.3.2 Grouping and Task Allocation

The students are allowed to create groups of 5-6 students. They can work with the classmates they feel comfortable with and complement each other. Afterwards, the groups choose a leader who takes care of the coordination of the group, makes sure that no one is left behind and shares the tasks, as well as communicates the other members with the teacher. Students get the task list from the teacher.

The information-collection part asks students to introduce at least three well-known scenic spots in their hometown. They should know something about these scenic spots, including how they were formed? Any special incident happened there? What are the special features of these scenic spots? Natural features? The architectural style? The cultural traditions? The ways of transportation to these scenic spots?

The writing part asks students to use the English they have learned to introduce these scenic spots in a more detailed and interesting way. They should use the vocabulary, sentence patterns they have learned. Of course, the cultural knowledge is also needed. The design of the travel brochure, including the cover, table of contents, the interior, the layout, the illustration, the colour etc.

4.3.3 Group Cooperative Learning

After the teacher assigns the tasks, the groups start working. Some groups go to the school library. There they consult books about local history, travelling, culture studies, etc. They pick up the desired information and English expressions and copy them down in their work sheets.

Some other groups search information on the Internet. They use official web sites of the two cities as well as archive websites as credible sources. They also have first-hand information from their on-line discussion with local historians and tourism professionals.

Some groups interview local residents, especially those who have stayed in the two cities for a long time and could provide first-hand information and interesting stories about the beautiful spots.

During the group discussions, students actively communicate in English. For example, when discussing the introduction of "Yueyang Tower", they have in-depth discussions on the most accurate and vivid English translation of the famous saying "Be the first to worry about state affairs and the last to enjoy oneself". They consider different translations proposed by group members, analyze the cultural connotations behind each option, and learn to each other and finally reach a consensus.

4.3.4 Result Presentation

Each group appoints a delegate for the presentation of their finished English travel brochure. The instructor stands at the head of the classroom, presenting the brochure via a projector. The introductory segment of the brochure introduces its

thematic and conceptual essence, detailing the reasons for the title “Discover Our Hometown’s Hidden Gems”. The instructor leads the class through the brochure’s sections, underlining the essential attributes of each attraction. The group has designated “Charming Hometown” as the title of their travel brochure. The cover features a picture of the sunset over Dongting Lake, showcasing the tranquility and beauty of our hometown. In the introductory segment, Yueyang Tower is introduced, a structure famous for its link to Fan Zhongyan’s “Memorial to Yueyang Tower”. The comprehensive history, architectural features and cultural significance to the local community of this tower have all been elaborated in detail.

4.3.5 Evaluation and Feedback

The assessment process is actively participated in by teachers and group members. The teacher first pointed out the advantages of the presentation group to start the discussion. The English expression of the group members is very fluent, and their introduction to the scenic spots is comprehensive and detailed. We have conducted in-depth academic research and gained profound insights into the cultural background. The teacher also gave constructive feedback. Some pages in the design of the brochure are overly crowded. Adjust the spacing and font size to improve readability. In addition, English expressions can be more colloquial. The literal translation should be changed to a more idiomatic expression.

Group members also contribute to the evaluation. They might say, “We really liked the way you incorporated local stories into the introductions. It made the content more interesting. But we think you could have included more pictures to make the brochure more visually appealing. Maybe some pictures of tourists enjoying the attractions would give readers a better sense of the experience.”

After the presentation and evaluation, the teacher summarized the common strengths and weaknesses in each project. This teaching document for students points out their strengths and areas that need improvement. The teacher observed that most groups possessed a solid foundation in basic English vocabulary for tourist attractions, yet encountered obstacles in constructing complex sentences when describing historical events or cultural significance.

5. Case Analysis and Evaluation

5.1 Achievement of Teaching Objectives

5.1.1 Knowledge and Skills

Students have developed a robust command of English vocabulary, phrases, and sentence structures related to tourist attractions via project tasks. In presenting results, they effectively utilize this knowledge for introduction like “Junshan Island, positioned amidst Dongting Lake, is distinguished by its singular natural vistas and abundant cultural patrimony.”, which demonstrates students’ proficient mastery of relevant English knowledge. Students’ writing abilities have shown a substantial increase. Students are capable of using detailed and well-organized English introductions to describe the physical attributes of the scenic spots while integrating historical and cultural elements. Besides, students’ descriptions of ancient temples are marked by the use of religious architectural language to discuss the relevance of the festivals celebrated there.

5.1.2 Comprehensive Ability Cultivation

Students’ comprehensive English listening, speaking, reading, and writing abilities have been exercised. In the process of group cooperation, their teamwork and problem-solving abilities have also been effectively improved. When facing problems such as inconsistent writing styles within the group, they can communicate and coordinate to solve them.

For example, in one group, there was a conflict between two members regarding the writing style of the scenic spot introduction. One preferred a more formal and academic style, while the other wanted a more conversational tone. Through several rounds of discussion, they were able to find a middle ground by combining elements of both styles. Finally, a more engaging and accessible introduction is produced. This process can resolved the conflict and enhanced their communication and negotiation skills.

5.2 Organization of Teaching Content

The teaching content is closely centered around the project theme of “making an English travel brochure to introduce hometown scenic spots”. It covers rich English language knowledge and hometown cultural content, which is in line with students’ cognitive levels and interests.

In the process of information collection and writing English introductions, students not only learn English knowledge but also deeply understand the history and culture of their hometown. For example, when learning about the historical background of Zhang Guying Village, students also learn relevant English expressions about ancient architecture and traditional culture, such as “quadrangle courtyard”, “ancestral hall,” and “traditional handicrafts”.

The integration of language learning and cultural participation enriches the learning process. Students go beyond rote

learning and use language to investigate and convey their cultural identities, thereby enhancing the depth and appeal of the educational experience.

5.3 Student Engagement

Throughout the teaching process, students show high enthusiasm for participation. In group cooperation, students actively undertake tasks, communicate and discuss actively, and give full play to their own advantages. In the result-presentation session, students show their works with confidence, demonstrating a strong sense of achievement.

Through observation, it is found that there is a positive correlation between students' participation and learning effects. Students with high participation levels have more significant improvements in English abilities and comprehensive qualities. For example, some students who were originally shy in English speaking became more confident and active after participating in group discussions and presentations.

Moreover, the project-based learning environment encourages students to take risks and be creative. They are not afraid to make mistakes in their English expressions because the focus is on the overall process of project completion and learning, rather than on getting every answer "right" in a traditional test-oriented sense.

5.4 Effectiveness of Teaching Methods

Compared with traditional English teaching methods, project-based learning has obvious advantages. It stimulates students' interest in learning, transforming students from passive learners to active learners. In the implementation of the project, students' self-exploration and cooperative learning improve learning efficiency and cultivate their autonomous learning abilities.

However, project-based learning also has some disadvantages. For example, it requires a large amount of teaching resources. Some schools may not be able to meet the needs, such as insufficient library books and limited network equipment. In addition, it is difficult to control the teaching time, and there is a tendency for delays. For example, in this class, some groups spent too much time on information collection, resulting in a tight schedule for the subsequent writing and design tasks.

Furthermore, the success of project-based learning highly depends on the teacher's guiding ability. If the teacher fails to provide timely and effective guidance, students may get lost in the process, especially when they are facing complex problems.

6. Conclusions

6.1 Major Findings

The application of project-based learning in junior high school English teaching has achieved remarkable results. Students' comprehensive English application abilities have been effectively improved, and their learning attitudes have changed from passive to active. Their cooperation and problem-solving abilities have also been cultivated.

However, in the implementation process, there are still some problems. The existing teaching materials and reference books may lack the breadth required to support students' profound exploration of project themes. The scarcity of English-language texts dedicated to local cultural heritage hinders students' acquisition of precise and detailed information.

Balancing time across project links is difficult, with the risk of delays in task completion by certain teams. The predominant factor stems from the project's intricacy and the unforeseen difficulties encountered by students during the execution phase.

6.2 Implications and Suggestions

Firstly, schools should increase investment in hardware facilities such as libraries and multimedia classrooms. They can purchase more English-language books about local culture and tourist attractions, as well as subscribe to relevant international magazines and online databases. At the same time, teachers and students should be encouraged to jointly develop teaching resources, such as establishing an English learning resource library. For example, students can contribute their own research findings, translated texts, and cultural stories to the library. Teachers can organize these resources in a systematic way, making them easily accessible to all students.

In addition, before the project is initiated, teachers must offer comprehensive direction, including the project's procedural steps, information collection approaches, and language learning strategies. A pre-project workshop can be conducted by teachers to instruct students on the effective use of search engines, the assessment of source reliability, and the organization of research notes. Teachers should closely monitor the development of the project and provide timely assistance and guidance to each group. When students encounter difficulties in expressing themselves in English when writing about scenic spots, teachers can offer relevant grammar clarification and vocabulary suggestions.

Besides, teachers are tasked with formulating a comprehensive project schedule, allocating time wisely at each stage, and supervising the progress of the group to ensure the project is completed on time. Set strict time limits for the information collection and manuscript drafting and design stages. And conduct intermittent progress evaluations every two weeks.

Moreover, time-management skills are also very important in completing projects. So teachers can teach students some time-management skills, such as creating a to-do list, setting priorities, and avoiding procrastination. This will help students better manage their time and complete the project tasks more efficiently.

The application of project-based teaching methods in English teaching can free teachers from the classroom and shift their main focus from “how to teach” to “how to learn” for students. Project-based teaching methods can help students acquire more practical knowledge and the learning process is more targeted. During the process, students can better develop their strengths and improve their abilities. They can also study freely and happily, further promoting the improvement of students’ comprehensive qualities and creative abilities. Project-based learning in junior high school English is bound to become a major highlight of the English curriculum reform.

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Authors’ contributions

Yang Yang was responsible for study design and revising. Lanlan Wang drafted the manuscript and Yang Yang revised it. All authors read and approved the final manuscript.

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References

- Beckett, G. (2002). Teacher and student evaluations of project-based instruction. *TESL Canada Journal*, 19(2), 52-66. <https://doi.org/10.18806/tesl.v19i2.929>
- Bruner, J. (1990). *Acts of Meaning*. Cambridge, MA: Harvard University Press.
- Cocco, S. (2006). *Student leadership development: The contribution of project-based learning*. Victoria, BC: Royal Roads University.

- Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York: Macmillan.
- Eslava, R., & Lawson, P. O. (1979). A project course in spoken English. *TESOL Quarterly*, 1, 65-72.
<https://doi.org/10.2307/3585976>
- Haines, S. (1989). *Projects for the EFL classroom: Resource material for teachers*. Walton-on-Thames, UK: Nelson Press.
- Hedge, T. (1993). Key concepts in ELT. *ELT Journal*, 47(3), 275-277. <https://doi.org/10.1093/elt/47.3.275>
- Hu, Q., & Cheng, K. (2003). An introduction to the learning model of project research in the United States. *Foreign Education Research*, 30, 18-21.
- Kilpatrick, W. H. (1918). The project method: The use of the purposeful act in the educative process. *Teachers College Record*, 19(4), 319-335. <https://doi.org/10.1177/016146811801900404>
- Li, H., & Dai, J. (2021). Research on English project-based learning oriented to higher-order thinking. *Basic Education Curriculum*, 6, 48-53.
- Liu, J., & Zhong, Z. (2002). Research on project-based learning (PBL) model. *Foreign Education Research*, 11, 18-22.
- Mei, D., & Wang, Q. (2017). *Curriculum standards for senior high school English*. Beijing: Higher Education Press.
- Piaget, J. (1980). *The Principles of Genetic Epistemology*. New York: Basic Books.
- Ribe, R., & Vidal, N. (1993). *Project work step by step*. Oxford: Heinemann.
- Rudolf, P., & Fu, X. (2007). *The theory and practice of project-based teaching*. Nanjing: Jiangxi Education Press.
- Thomas, J. W. (2000). *A review of research on project-based learning*. San Rafael, CA: Autodesk Foundation.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Yang, K., & Li, Y. (2021). Teaching design of junior high school English writing based on project-based learning. *Overseas English*, 7, 46-47.
- Yang, Q. (2012). Rebuilding the connotation and value of project-based learning in the era of core literacy. *Curriculum. Textbooks and Teaching Methods*, 41(2), 57-63.
- Yang, Y. (2000). Teaching methods of foreign vocational education. *Vocational Education Forum*, 10, 61-62.