

Construction of a Population Adaptability-Oriented Chinese Culture Teaching Model for Thai Junior High Schools

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Abstract: Chinese culture teaching is an important component of foreign Chinese language teaching. Understanding the essence of Chinese culture helps students improve their Chinese language proficiency. This paper takes 122 junior high school students in Thailand as the research subjects, based on theories such as PBL teaching and constructivism, and combined with the characteristics of cultural teaching, constructs a Chinese culture teaching model for Thai junior high school students based on the PBL teaching method. The research shows that there are significant differences in students' Chinese culture course scores before and after the experiment, indicating that the PBL teaching method has a significant improvement effect on Chinese culture courses. In terms of population adaptability, the PBL teaching model has a better improvement effect on boys than girls, effectively narrowing the performance gap between genders; in terms of age, the intervention effect of the PBL teaching method on Chinese culture teaching for Thai junior high school students is 9th grade ($T = 3.775$) > 8th grade ($T = 3.283$) > 7th grade ($T = 1.856$), that is, the higher the learning accumulation, the better the adaptability to the high-level tasks of PBL teaching, and the better the teaching effect.

Keywords: Chinese culture teaching; PBL teaching method; Thai junior high school; Teaching model

1. Introduction

In Thailand, as the economic and cultural exchanges between China and Thailand continue to deepen, more and more Thai students have developed a strong interest in learning Chinese [1-2]. Currently, many schools in Thailand offer Chinese language courses, and most of these schools adopt traditional language teaching methods, focusing on grammar and vocabulary, and emphasizing the cultivation of reading and writing skills [3-5]. Additionally, some schools place greater emphasis on the cultivation of communicative skills and adopt modern teaching methods such as situational teaching and task-based teaching, allowing students to learn and apply Chinese in real contexts [6-8].

The junior high school stage is an important period for students to learn languages. How to enhance middle school students' interest in learning Chinese and promote their understanding and study of Chinese culture has become an urgent issue to be addressed [9-10]. Population adaptation orientation, as a teaching method, provides us with an innovative classroom teaching approach. Population adaptation orientation is based on the changes in population results within Thailand, such as ethnic distribution and regional mobility, and in accordance with the demands of social and economic development, to dynamically adjust the goals and contents of Chinese culture teaching. Its aim is to achieve the rational allocation of teaching resources and precise talent cultivation in Chinese culture education. By constructing a population adaptation-oriented Chinese culture teaching model for Thai junior high school students, it plays a significant role in promoting the quality of Chinese culture teaching in Thai junior high schools.



This article is an important part of the research on the nationalization of PBL teaching method in second language teaching. Although some scholars have explored the application of PBL teaching method in second language teaching, these studies mainly focus on the teaching of language basic knowledge in second language teaching and are relatively scarce regarding the application of PBL teaching method in cultural content teaching. This research, however, takes Thai junior high school students as the teaching objects, combines the characteristics of Thai junior high school students, and conducts practical research on the application of PBL teaching method in Chinese culture teaching, thereby summarizing the specific effects of PBL teaching method in cultural teaching and the differences in demographics. The research contribution lies in breaking the pure teaching method perspective and clarifying the adaptability of demographics to the teaching model.

2. Theoretical Foundation

In 1960, Barrows, a medical professor at McMaster University in Ontario, Canada, proposed the first PBL (Problem Based Learning) program as an alternative to the existing teaching methods, which were considered unrealistic and impractical. This laid the foundation for the theory of PBL. Subsequently, it was discovered that PBL was consistent with the goals pursued by constructivist theory, thus establishing one of the learning models in constructivism [11].

The first task of PBL is to define the problem in a problem situation. Once the problem is defined, a cycle process begins, which involves setting the necessary assumptions for learning and identifying specific learning problems. When students encounter bottlenecks in solving the problem, they will reorganize their problem-solving plan, and with appropriate intervention from the teacher, choose different solutions and make decisions within a limited time. Therefore, PBL is directly related to the teaching purpose and content, is the content that needs to be learned, and is a form of the curriculum, and is also a process of transmitting and teaching the curriculum. Therefore, PBL is based on constructivist theory [12], centered on real-life problem events, structures the curriculum and teaching into teaching methods, identifies problems and defines them from unstructured and practical contexts, sets learning themes, conducts individual learning, group learning, and cooperative learning, solves problems through the entire learning activity, and enables students to master the learning content.

This study aims to develop a contemporary Chinese culture teaching plan for Thai junior high school students and propose a teaching guidance plan to help Chinese language learners learn and understand the values contained in contemporary Chinese culture. The conception of the course refers to the PBL model. The reasons for choosing the PBL teaching mode are as follows:

(1) PBL starts learning from problems, and this problem is an unstructured one. By using the PBL model for the design of contemporary Chinese culture teaching, this study can inspire learners to solve unstructured problems themselves, approach and understand the culture from multiple perspectives, and meet the needs of different learners.

(2) PBL emphasizes authenticity. In PBL teaching, specific situations that may occur in real life are used as problems and proposed, and learning is conducted through projects. The Chinese culture teaching using the PBL model actually allows learners to directly experience the situation they will encounter, thereby enhancing their interest.

(3) Improve learners' reading, writing, listening, speaking, and cooperative learning abilities. In PBL teaching, learners can learn to express opinions and adjust them through the process of solving problems with group members, and cultivate a reflective spirit through self-reflection. Moreover, PBL has achieved significant teaching effects in aspects such as learners' interest and learning motivation, knowledge acquisition, problem-solving ability, creative thinking, autonomous learning ability, and cooperative learning ability [13]. This model can meet the needs of Chinese culture learners.

This study constructs a Chinese culture teaching model for Thai junior high school students based on the PBL teaching method. Based on the research purpose, the following research questions are proposed:

(1) What is the teaching effect of the Chinese culture teaching model based on the PBL teaching method?

(2) How does different age, gender, and other demographic characteristics adapt to the teaching model?

3. Research Design

3.1. Research Subjects

Through a 16-week intervention program consisting of 48 class hours, an intervention teaching was conducted for Thai junior high school students who were taking Chinese culture courses. The study aimed to explore the impact of the PBL-based Chinese culture teaching model on the teaching outcomes and to analyze its adaptability to students of different grades and genders in the Chinese courses.

The experimental subjects were students from a public junior high school in Bangkok, Thailand. The school was established in 1986 and had a total of 3,000 students in 2018. The majority of the students were children from nearby residents. Since 2012, the school has offered a Chinese department and hired Chinese teachers from the Chinese teaching center in China. In 2018, it began to collaborate with the Confucius Institute to establish a Confucius Institute teaching point. Chinese compulsory courses were offered to all three grades of junior high school, and there were also specialized Chinese culture courses. Chinese culture activities were frequently held. Each class had about 40 students, and there were over 600 students taking Chinese culture courses. The school's teaching resources were relatively scarce, but the students' learning attitudes were good. The experimental subjects were the classes of the three grades of junior high school. Specific information is shown in Table 1. The teaching teachers for the Chinese culture courses in the three classes were the same teacher. The teaching process was divided into five steps of PBL: "Initiate the problem; Organize new groups; Solve the problem; Present the results; Evaluate". After the teaching experiment, the school's test papers on Chinese culture courses were used to test the students' learning outcomes.

Table 1. Basic Information of the Measured Class

Grade	Number of people	Male	Female	Age (M±SD)
Grade 7	42	24	18	12.51 ± 0.72
Grade 8	39	17	22	13.46 ± 0.94
Grade 9	41	18	23	14.37 ± 0.51

3.2. Construction of Teaching Model

In this round of teaching, the main teaching method adopted was PBL (Problem-Based Learning) with cooperative learning (CL) as a supplement. Students were only required to complete one task throughout the thematic teaching, which was to independently choose one or more relevant research topics based on their interests, design a research plan, conduct the research, visualize and present the research results, and make a report. During this process, the teacher did not explain the knowledge. The main responsibility of the teacher was to set the teaching requirements at the beginning of the course, provide assistance to students during the teaching process, and after students selected the research topic and formulated the research plan, the teacher would provide mobile guidance to prevent some groups from completely deviating from the topic and research direction. The Chinese culture teaching model is shown in Figure 1.

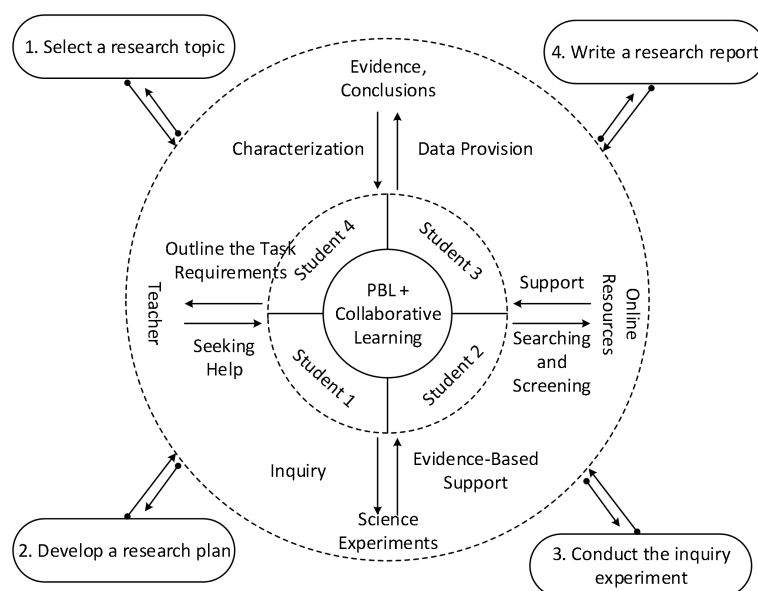


Figure 1. Teaching Model of Chinese Culture

The teaching is mainly based on PBL and CL. The teacher first presents the tasks and requirements, "Choose a research topic to explore Chinese culture", and asks students to first complete the research record sheet. Students independently select the research topic based on the relevant content of "Chinese culture" (such as traditional festivals, classic literature, food culture, etc.), and assess the feasibility of the topic. After determining the research plan, the teacher guides each group on the research topic and

plan to ensure the implementability and standardization of the research. Students revise the research plan based on the teacher's guidance and complete the experimental exploration. The exploration process is entirely carried out by the students, and they can choose any reasonable learning methods, scientific tools, and application software. During the learning process, students can explore the topic through various methods such as scenario simulation, and at the stage of representing the results, they can produce videos and other ways to present the results. This teaching aims to provide students with an open and autonomous exploration environment, using self-designed questions as the driving force, and using students' autonomous collaborative exploration as the means, creating a learning environment where students are the main body.

This research integrates the five teaching steps of the PBL teaching method: initiating new problems, organizing new groups, solving problems, presenting results and evaluation, combined with the ADDIE model's analysis, design, development, implementation and evaluation structure, the elements of the Kemp model such as determining learning needs and learning objectives, analyzing learner characteristics, clarifying teaching objectives, implementing teaching activities, utilizing teaching resources, providing tutoring services and conducting teaching evaluation, as well as the three steps of the 3C3R model of exploration, explanation and reflection. Based on the practical characteristics of Chinese culture course teaching, the overall design of the model is carried out, and the implementation steps of the Chinese culture course teaching model based on the PBL teaching method are shown in Figure 2. This model emphasizes problem orientation, starting from the problem, and students acquire knowledge and apply it by solving real problems in real-life situations.

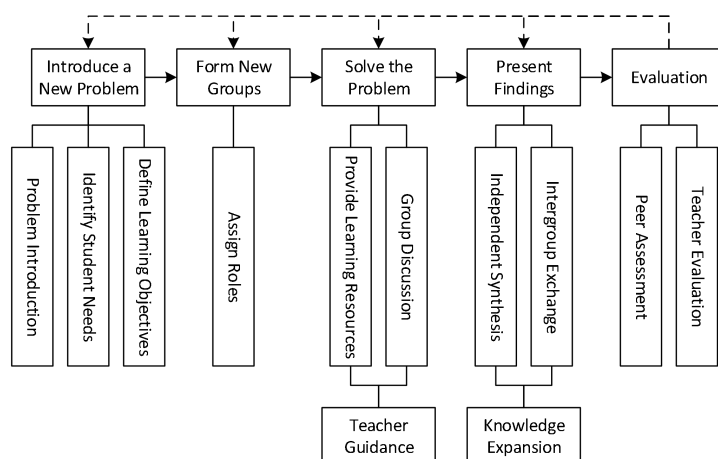


Figure 2. Implementation Steps of the Teaching Model

The Chinese culture teaching model based on the PBL teaching method combines the core steps of the PBL teaching method with the characteristics of the Chinese culture course. It specifically consists of 5 stages and 12 elements. Firstly, this teaching experiment will design the teaching based on five stages: initiating new problems, organizing new groups, solving problems, presenting results and evaluating. Initiating new problems serves as the starting point of the entire teaching process and is mainly used in the course introduction stage. Organizing new cooperative groups is another course preparation stage after initiating new problems. At this stage, teachers divide students into groups based on their different backgrounds and skills to facilitate the achievement of learning goals in the later stage. The core stage is problem-solving, which emphasizes problem orientation in the PBL teaching method and requires students to acquire knowledge during the process of analyzing and solving problems. The fourth stage is the presentation of results, which mainly tests whether students have mastered the knowledge. The last teaching stage is evaluation, including mutual evaluation among students and evaluation by the teacher for the students.

3.3. Mathematical Statistics

By organizing the experimental data, the collected data and materials were statistically processed using the computer statistical analysis software SPSS 23.0. The data obtained from the survey were statistically analyzed to obtain valid data information for verifying the experimental hypotheses, and to observe whether there were significant differences in the Chinese culture course scores of the three classes before and after the experiment.

4. Results and Discussion

4.1. Comparison of Measurement Results Before and After

(1) Pre-test results of the experiments

The pre-test results of the Chinese culture courses for the three classes are shown in Table 2. The scores of the Chinese culture courses for the male students were lower than those for the female students, and the overall score was about 5 points lower than that of the female students. At the same time, it can be seen that the scores of the Chinese culture courses for male students in each grade were generally lower than those of female students. From the mean values, it can be seen that the male students in the seventh grade scored 6.13 points lower than the female students, the male students in the eighth grade scored about 4.27 points lower than the female students, and the male students in the ninth grade scored 4.35 points lower than the female students. This indicates that the scores of the Chinese culture courses for the female students were higher than those for the male students. This is related to the fact that the physical and mental development of female students is earlier than that of male students. Female students have better adaptability to tasks in the Chinese culture courses such as language perception, phonetic imitation, memory of Chinese characters, and pitch discrimination, so the Chinese culture course scores of female students were better than those of male students before the intervention.

Table 2. Pre-Test Results of Chinese Culture Teaching

Class	Category	Number of people	Score (M±SD)
Grade 7	Male	24	42.34±10.72
	Female	18	48.47±13.74
	Total	42	44.98±15.06
Grade 8	Male	17	45.88±12.65
	Female	22	50.15±14.24
	Total	39	48.29±17.57
Grade 9	Male	18	48.08±13.18
	Female	23	52.43±15.90
	Total	41	50.52±18.19
Overall	Male	59	45.11±17.21
	Female	63	50.50±16.24
	Total	122	47.90±20.33

(2) Post-experiment results

The post-experiment scores of the Chinese culture courses for the experimental group are shown in Table 3. By comparing the results, it can be seen that after 16 weeks of PBL teaching intervention, the scores of the Chinese culture courses for all grades have improved; from the gender variable perspective, compared with the situation before the experiment where girls' scores were always higher than those of boys, there is a difference after 16 weeks of PBL teaching. After the experiment, for each grade, the scores of girls and boys showed a situation of alternating superiority. Analyzing from the grade variable, the scores of all grades have increased.

Table 3. Post-test Results of Chinese Cultural Course Scores

Class	Category	Number of people	Score (M±SD)
Grade 7	Male	24	56.87±13.50
	Female	18	60.78±14.33
	Total	42	58.55±10.82
Grade 8	Male	17	61.58±14.43
	Female	22	58.37±17.81
	Total	39	60.18±11.19
Grade 9	Male	18	63.15±12.23
	Female	23	65.52±12.80
	Total	41	64.48±10.63
Overall	Male	59	60.14±15.75
	Female	63	61.67±16.60
	Total	122	60.93±11.18

4.2. Analysis of Demographic Differences

The paired t-test was conducted on the pre- and post-survey scores of the demographic characteristics variables (grade, gender) of the experimental group of Thai junior high school students in the Chinese culture course. The results are shown in Table 4. It can be seen that there were significant differences in the students' Chinese culture course scores before and after the experiment, indicating that the PBL teaching method has a remarkable effect on improving the Chinese culture course.

Table 4. Comparison Results of Scale Scores Before and After the Experiment (M±SD)

Variable	Category	Pre-test	Post-test	T	P
Gender	Male	45.11±17.21	60.14±15.75	3.151	0.000***
	Female	50.50±16.24	61.67±16.60	3.738	0.000***
Grade	Grade 7	44.98±15.06	58.55±10.82	1.856	0.021*
	Grade 8	48.29±17.57	60.18±11.19	3.283	0.007**
	Grade 9	50.52±18.19	64.48±10.63	3.775	0.000***

Note: ***, **, and * respectively indicate significance at 0.001, 0.01, and 0.05.

The demographic characteristic variables were compared horizontally to identify the differences among them. The results are shown in Table 5. It can be observed that there was a significant difference in the academic performance of male and female students before the experiment. After the experiment, although the female students' performance was still lower than that of the male students, the difference was not obvious. This indicates that the PBL teaching model has a more effective improvement effect on male students than female students, effectively narrowing the academic gap between genders. The reason is that the introduction of the PBL teaching model focuses on project tasks, scenario discussions, subject exploration, and group collaboration, no longer relying on rote memorization, and is more in line with the learning preferences of male students, who tend to prefer practical operations and problem-driven learning.

Table 5. Differences among Demographic Characteristic Variables

Variable	Category	Pre-test	T	P	Post-test	T	P
Gender	Male	45.11±17.21	4.284	0.000***	60.14±15.75	1.183	0.167
	Female	50.50±16.24			61.67±16.60		
	Grade 7	44.98±15.06			58.55±10.82		
Grade	Grade 8	48.29±17.57	2.273	0.003**	60.18±11.19	3.723	0.001**
	Grade 9	50.52±18.19			64.48±10.63		

4.3. Discussion

The PBL teaching method is positioned as an effective teaching approach, emphasizing that all teaching activities are designed based on the model of solving a certain topic, and strengthening teachers' connection of different knowledge sections for comprehensive teaching. Although there is no fixed teaching method, through teaching practice, it has been proven that the PBL teaching method is an effective and simple teaching method in Chinese culture classes in Thai junior high schools. Compared with traditional Chinese culture teaching, the PBL teaching method integrates various teaching resources, assists with the use of multiple teaching methods, and integrates more rich Chinese culture elements into cultural teaching, enabling theme-based skill activities based on experiences or tasks to greatly enhance students' learning interest. Before the class, students will conduct group discussions and exchanges based on the assigned theme tasks, consult relevant cultural materials, and during the teaching process, students will consciously practice cultural communication skills according to the theme scenarios set by the teacher.

Students and teachers interact around the theme as the axis, improving the dull and boring learning atmosphere in traditional Chinese culture teaching classes, motivating students' participation in the class, helping students reduce the fear of learning Chinese culture, and enabling them to re-understand Chinese culture in a targeted and systematic way, enhancing the internalization of Chinese culture. Additionally, most cultural vocabulary and their expressions are scattered in the word lists of comprehensive course textbooks. Students mainly mechanically memorize them following the teacher, and the cultural vocabulary learned in class is easily forgotten, which causes a negative impact of a memory cycle break. For example, students often encounter vocabulary related to diet in various class types, and the dynamic development of the vocabulary makes the students' memory effect not ideal [14]. The PBL teaching method advocates that students conduct word network associations within the theme framework based on the theme, guide the construction of a theme diagram system, and periodically update and review the theme vocabulary library, which is conducive to students' systematic associative memory of language

points, promoting their understanding of cultural knowledge, clarifying the key points of theme teaching, strengthening students' language and cultural memory, and enhancing their confidence in learning Chinese culture.

This study found that the PBL teaching method can stimulate students' interest in Chinese culture to the greatest extent, significantly improving students' scores in Chinese culture. At the same time, it can also enhance students' ability to expand their learning of Chinese culture knowledge, allowing them to effectively guide students to recognize the differences between Chinese and foreign cultures through some simulated real communication scenarios, and improve their cross-cultural communication skills during the learning process. Therefore, compared with traditional teaching methods, the application of the PBL teaching method in Chinese culture courses can enable students to absorb knowledge efficiently and think actively, draw parallels, and have better learning effects.

The application of the PBL teaching method in Chinese culture classes has certain particularities. Chinese culture is a very broad concept, including multiple aspects such as history, art, society, economy, communication, and etiquette, and each cultural theme under each domain can be infinitely extended. This puts forward higher requirements for the application of the PBL teaching method in Chinese culture teaching. On the one hand, teachers need to select specific themes within the grand Chinese culture, form specific projects, and complete the teaching plan. On the other hand, the PBL teaching method emphasizes a student-centered teaching approach, and in terms of teaching content, it needs to take into account students' interests. Therefore, it is necessary to discuss with students and extend the existing cultural themes, and then in this process, cultivate students' ability to identify and solve problems, helping them better master relevant knowledge points. And this can also avoid some defects of the PBL teaching method itself, such as the problem of inconsistent student interests with the teaching syllabus. In Chinese culture teaching, since culture is a very broad topic, even in the subdivided cultural categories, it can be approached from different angles to make it more relevant to students. Furthermore, based on our research results, there was a significant difference in the academic performance between male and female students before the experiment. After the experiment, although the female students' performance still lagged behind that of the male students, the difference was not as obvious. This provides evidence that the PBL teaching model has a more effective improvement effect on male students than female students, effectively narrowing the academic gap between genders. The reason lies in the introduction of the PBL teaching model, which mainly focuses on project tasks, scenario discussions, subject exploration, and group collaboration, instead of relying on rote memorization, and is more in line with the learning preferences of male students, who tend to prefer practical operations and problem-driven learning. The difference in grade levels reflects the difference in age. From the perspective of the demographic variable of age, the results before and after the experiment were the same. That is, the higher the grade level, the higher the academic performance, and there was a significant difference between grades. The reason is that Chinese is a second language, and with the increase in grade level, the continuous accumulation of vocabulary, Chinese characters, grammar, and cultural knowledge leads to a larger language knowledge base and direct driving of test scores improvement.

From the perspective of the improvement effect before and after the experiment, the T values for the three grades were 1.856, 3.283, and 3.775, indicating that the intervention effect of the PBL teaching method on Chinese culture teaching in Thai junior high schools is as follows: 9th grade > 8th grade > 7th grade. The reason is that PBL tasks require students to understand task requirements, group discussions, and scenario simulation applications, which have certain thresholds for Chinese vocabulary, grammar, and character reserves; compared to the 9th grade, the Chinese foundation of 7th grade students is relatively weak, many students have difficulties even in simple expressions, and it is difficult for them to focus on high-order tasks such as exploration and collaboration. The advantages of PBL teaching cannot be fully released.

The application of PBL teaching theory in the teaching of Chinese culture in China emerged relatively late, and the related applied research is still in the stage of need for improvement. The PBL teaching method, as a teaching path that can improve the effectiveness of Chinese culture teaching, also has its limitations. Mainly manifested in the following aspects:

(1) Limitations in the deep interpretation of Chinese culture concepts. The teaching objectives of Chinese culture teaching itself are not clearly defined. Most teachers focus on cultural knowledge and cultural skills, while the thematic teaching method focuses on the knowledge and culture of thematic vocabulary as the teaching key point, and the language project's communicative culture as the teaching difficulty point. The interpretation of Chinese culture concepts is rarely involved in the construction of the thematic system, and students' deep understanding of cultural concepts still needs to explore specific practical methods.

(2) Limitations in the understanding of cultural differences from a cross-cultural perspective. In the context of the Belt and Road Initiative, the main purpose of international Chinese culture teaching is to

disseminate Chinese culture and achieve cross-cultural communication between China and foreign countries. In the process of constructing the PBL teaching theme system, teachers should pay attention to the differences between Chinese and Thai cultures. The understanding of cultural differences is a major difficulty in the thematic teaching process, and how to enable students to understand the cultural differences that occur in the teaching process and handle cultural conflicts in cross-cultural perspectives is also a problem that PBL teaching needs to consider.

5. Conclusion

This paper summarizes the relevant theories of the PBL teaching method, summarizes its characteristics, and, in combination with the characteristics of cultural teaching, designs and constructs a Chinese culture teaching model based on the PBL teaching method. It also explores the practical application of the PBL teaching method in Chinese culture teaching. However, due to time constraints and the school's curriculum arrangement, the author cannot use the comparative research method to explore the advantages of the PBL teaching method over other teaching methods in Chinese culture teaching. The author's analysis of the effect of the PBL teaching method in Chinese culture courses is mainly conducted through subjective assessment, which limits the research results of this paper. In future research, through comparative research methods and by setting up experimental groups and control groups to arrange relevant Chinese culture test questions, an objective comparative analysis of the effect of the PBL teaching method in Chinese culture teaching can be conducted.

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