

Application of PBL Mode in Bilingual Teaching Reform

A Case study of "International Trade" Course

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ABSTRACT

Bilingual teaching, as an important aspect of teaching reform in recent years, plays an important role in cultivating innovative talents with international perspectives and comprehensive qualities. Teaching mode design is one of the key factors affecting teaching quality. Applying PBL teaching mode to bilingual teaching, taking "International Trade" course as a case study to carry out teaching practice, and constructing a reasonable teaching design and course design, will not only help cultivate students' self-learning ability, collaboration ability, analysis and problem-solving ability, stimulate their learning initiative, but also can promote the transformation of the teacher's role, and let teachers play a guiding role, making students more independent in thinking, thereby improving teaching effectiveness.

Keywords: PBL teaching mode, Bilingual teaching, "International Trade" course, Teaching practice, Curriculum design.

1. INTRODUCTION

In the context of educational globalization, how to ensure and improve the quality of student training and how to enhance students' scientific research literacy has become an important issue faced by higher education, and has gradually become a focus of higher education work in recent years. Bilingual teaching, as an important aspect of teaching reform in recent years, plays an extremely important role in cultivating innovative talents with international perspectives and comprehensive qualities [1].

The PBL teaching mode is a project-based or problem oriented, student-centred teaching mode. In the past decade, the PBL teaching mode has been applied in the field of medical research, continuously spilling over to science and engineering. With the support of Ministry of Education for higher education teaching reform, economics, management and other related majors have also been continuously attempted and explored. In view of this, this study applies PBL teaching mode to "International Trade" bilingual course, in order to break through the traditional

teaching model, change the role of students in the classroom, and enable students to truly participate in teaching. By analysing the feasibility of implementing this mode, we aim to facilitate high-quality interaction between teaching and learning in university teaching reform, and provide a path reference for enhancing the effectiveness of bilingual teaching.

2. PBL TEACHING MODE AND OPERATING MECHANISM

2.1 Connotation and Advantages of PBL Teaching Mode

The PBL teaching mode originated from medical education in the 1950s and is an innovative teaching mode that focuses on students as the main body and questions or projects as the core [2]. According to existing research, comparing PBL teaching mode with traditional teaching mode (see "Table 1"), the advantages of PBL teaching mode can be seen.

Table 1. Comparison between traditional teaching mode and PBL mode

	Traditional Teaching Mode	PBL Mode
Learning Objectives	Mastering knowledge and skills	Cultivating students' comprehensive abilities in various aspects
Role and status	Teacher centered, students passively learning the content taught by the teacher	Students centered, teachers as cognitive coaches driving student learning
Learning content	Learning professional and systematic theoretical knowledge	Investigating, researching and solving problems in problematic situations
Learning process	Teachers teaching knowledge and assigning learning tasks; students passively completing learning tasks and acquiring knowledge	Teachers setting problem scenarios; students actively exploring, analyzing, and solving problems
Learning evaluation	Evaluation based on academic performance, scores, and other learning outcomes	Developmental evaluation obtained by balancing process and outcome

Firstly, the PBL teaching mode can cultivate students' initiative in learning. The PBL teaching model is mainly student-centred, guiding by questions, students can find solutions to problems through group discussions, literature review, and other ways. This process enables students to actively explore problems, thereby improving their ability to solve problems independently.

Secondly, the PBL teaching mode can enhance students' sense of participation. The PBL teaching mode organizes the learning process of students by setting questions, requiring them to engage in self-directed learning around the problems. Under this learning method, students can not only master knowledge well, but also learn problem-solving ideas and methods. This teaching mode is conducive to developing students' initiative and cultivating their diverse abilities.

Finally, the PBL teaching mode can stimulate students' interest in learning. The PBL teaching mode proposes relevant questions from the beginning of teaching, allowing students to learn

around the questions, arousing their curiosity, and enabling them to explore problems with interest, which will change the way students learn. To solve problems, students must diverge their thinking and learn various methods. This process is to cultivate their collaborative thinking and improve their comprehensive thinking ability.

2.2 Operation of PBL Teaching Mode

With the continuous development of PBL teaching mode in practice, its forms and modes have gradually diversified [3]. Not only does PBL apply to the teaching of a single course (as shown in "Figure 1"), but also it combines multiple traditional courses (as shown in "Figure 2") to achieve interdisciplinary integration, large-scale promotion, and coexistence of multiple levels. The effectiveness of PBL depends on its level of implementation, but it can also effectively promote the development of students' learning motivation and comprehensive abilities by only adopting it in a single course.

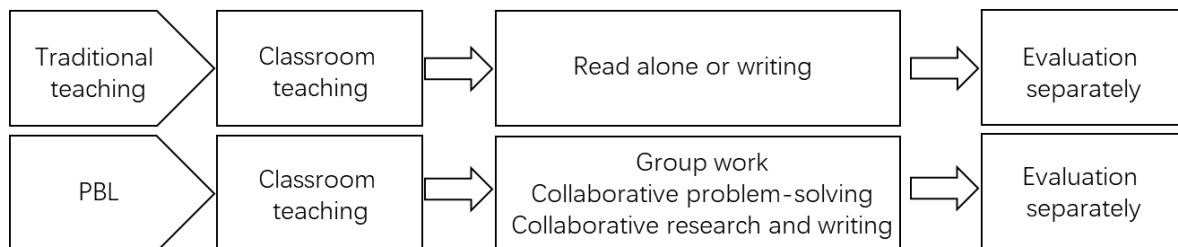


Figure 1 PBL teaching mode for single course in traditional teaching.

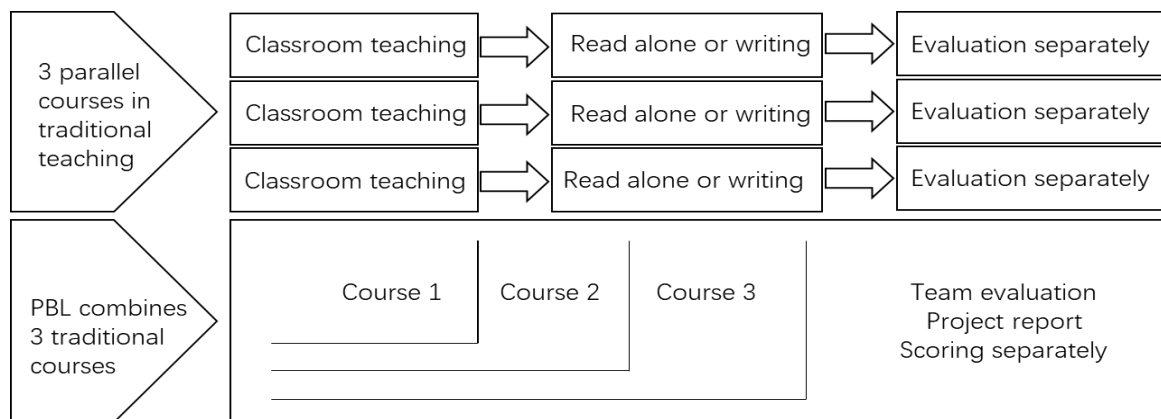


Figure 2 PBL teaching mode for cross courses in traditional teaching.

From the perspective of implementation, the PBL teaching mode mainly integrates classroom teaching with group cooperative learning organically [4]. The PBL teaching mode does not completely rely on teacher lectures, but is also not opposed to traditional classroom teaching. Instead, it integrates teacher lectures with diverse learning methods such as reading, audio-visual,

demonstration, and discussion. This approach can fully reflect the subjectivity of students and facilitate project services. There is no mutually exclusive binary opposition between PBL teaching and teacher lectures. There are mainly three types of relationships between the two, as shown in “Figure 3”.

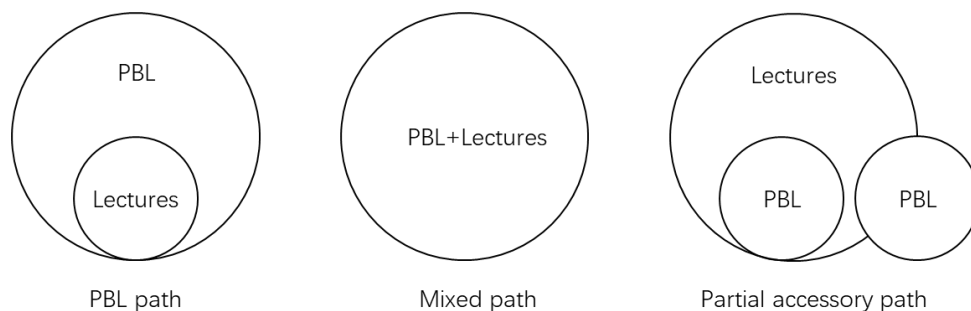


Figure 3 Relationship between PBL and traditional teaching.

2.3 Value of PBL Teaching Mode

Overall, the value of applying the PBL teaching model to the field of education and teaching is significant, which is reflected in the following aspects.

From the perspective of implementation purposes, the PBL teaching mode is student-centred and problem oriented, guiding students to actively learn and explore, achieving learning through thinking, and comprehensively improving students' comprehensive abilities.

From the perspective of learning methods, the PBL teaching mode plays a leading role for students, using various learning methods such as

reading, audio-visual, demonstration, and discussion, which can enrich the methods for students to obtain information and ways of learning.

From the perspective of cultivation effect, the main result of teaching is to achieve the improvement of learning ability, but the methods for improving the ability of students are different, and the score-based evaluation method is too one-sided [5]. The evaluation system of PBL teaching mode breaks the shackles of only-score-theory and adopts a diversified evaluation method that combines process and results.

In summary, the application of PBL teaching mode in education and teaching can promote the

development and progress of students, and enhance their abilities.

3. APPLICATION OF PBL MODEL IN BILINGUAL TEACHING OF “INTERNATIONAL TRADE” COURSE

3.1 Feasibility of Applying PBL Mode in Bilingual Teaching

3.1.1 Comprehensiveness

"International Trade" is a course that integrates disciplines such as microeconomics, macroeconomics, international economics, and econometrics. During the learning process, students need to master not only the theoretical knowledge, but also the hot topics in the field of international economy and trade. They need to read a large amount of English materials and literature, which requires students to have stronger English abilities. Therefore, it is necessary to apply bilingual teaching to the "International Trade" course.

The PBL teaching mode is student-centered and project driven, requiring students to consult a large amount of information during teaching process. It can not only learn theoretical knowledge through group discussions, but also apply a project to practical problems through group collaboration. This is very consistent with the teaching objectives of "International Trade" bilingual course.

3.1.2 Practicality

"International trade" is a course that closely combines theory with practice. This course emphasizes that students should integrate social issues with classroom learning, and cultivate their ability to combine theory with practice. In the context of bilingual teaching, the PBL teaching mode runs through the entire learning process with specific problems in real life. It requires students not only to master the theoretical knowledge set by the course objectives, but also to cultivate their practical abilities. Therefore, applying the PBL teaching mode to the "International Trade" bilingual course has strong feasibility.

3.1.3 Openness

The openness of "International Trade" bilingual course is reflected that after mastering the theoretical knowledge of international trade,

students can apply it to various fields. The PBL teaching mode is not limited to the content of course materials. Teachers and students collect and utilize popular teaching resources abroad to expand the core content of the course, and combine it with students' learning interests and professional foundations, thus having openness. So the PBL teaching mode perfectly caters to the "International Trade" bilingual course.

Based on the above explanation of "International Trade" bilingual course and PBL teaching mode, it can be concluded that both have comprehensiveness, practicality, and openness, indicating that they are very compatible. Therefore, it is necessary and feasible to implement PBL teaching mode in "International Trade" bilingual course.

3.2 Application Design of PBL Teaching Mode in “International Trade” Bilingual Course

"International Trade" bilingual course, as an important foundational course in the majors of economics and management, must cover six elements: teaching objectives, teaching content, teaching methods, evaluation methods, teachers, and students.

The PBL teaching mode embodies a new curriculum concept. In terms of teaching objectives, it is advocated to help students establish a broad and flexible knowledge base, improve their problem-solving ability, and enhance their self-learning ability [6]. In terms of teaching process, around the three-dimensional combination of "teacher + classroom + textbook", teachers create an open teaching environment, mobilize students' initiative and enthusiasm, and enable them to participate in the teaching and learning process; In terms of teaching methods, take students as the main body and take real-life problems as the background, students find ways to solve problems through various means such as materials consulting and group discussions, so as to change their learning methods from passive to active, and gain knowledge by exploring the answers to problems; In terms of evaluation methods, emphasis should be placed on creating an evaluation system that is conducive to the comprehensive development of students.

3.3 Implementation Process of PBL Teaching Mode in “International Trade” Bilingual Course

Based on the characteristics of PBL teaching model, as well as curriculum design and teaching design, a one semester "International Trade" bilingual course was conducted. Based on the teaching objectives, the specific implementation process is as follows.

3.3.1 Group Formation

A total of 70 students participated in this course, and they were divided into 10 study groups with 7 students in each group. To facilitate diverse communication among students, group members should eliminate the tendency of single gender and concentrated dormitory members, take into account the different levels of students, make appropriate adjustments, and minimize the differences in the levels of each group member. The group members elect a student with strong coordination ability, high English proficiency, and serious responsibility as the team leader, who is responsible for assigning tasks, organizing materials, recording discussion situations and other work.

3.3.2 Theory Carding

One of the core contents of "International Trade" course is the free trade theory. Therefore, before starting the course, first ask a question: Why do different countries trade with each other? Regarding this issue, each group will have a ten-minute discussion, using their learned professional knowledge and their own understanding to provide explanations in English. Ten minutes later, each group takes turns speaking out their own answers, and then the teacher guides the students to reach a consensus.

One important content of free trade theory is the theory of comparative advantage. So ask the second question: What are the reasons for the emergence of free trade? For the next twenty minutes, guide students in each group to learn the content of the theory of comparative advantage and summarize the reasons for the emergence of free trade.

Labor productivity is not the only reason for the emergence of free trade, which leads to the third question: what other reasons can bring about the emergence of free trade? As above, each group will reach a consensus through a twenty-minute discussion and guidance from the teacher.

Finally, the teacher will summarize the conceptual connotations and basic theories involved in free trade theory.

3.3.3 Problem Posing

The PBL teaching mode requires students to acquire knowledge by solving real-life problems. During this stage, each group of students will engage in brainstorming to select a topic. Each group member presents several real-life issues that they are interested in, such as China US trade friction, the relocation of China's manufacturing industry, and so on. Each group selects 2-3 topics through discussion. The teacher analyses the existing knowledge structure of students based on teaching objectives, taking into account the difficulty of collecting English materials, evaluates the operability of the questions raised by students, and ultimately guides each group to choose a main topic.

After selecting the topic, the teacher will send teaching objectives, Chinese and English course materials to students, assign learning and goal tasks, and require students in each group to engage in learning and discussions. They will discuss and summarize the topics of each group, and make the results into an English PPT for classroom presentation one week later, and finally generate an English course report.

3.3.4 Autonomous Learning

After obtaining the learning task, students will engage in self-directed and collaborative learning based on the problem, make full use of Internet information to collect data and understand relevant knowledge of trade theory. After gaining a certain understanding of theoretical knowledge, each group will refer to relevant Chinese and English literature and search for data based on the selected questions.

The group first discusses and learns the content of the theory, organizes the framework, and then the team leader assigns each member of the group their own tasks. Members share information, discuss, complement each other's strengths and weaknesses, and continuously improve their answers to questions, ultimately forming a complete report and creating an English PPT for the report.

During students problem-solving, when encountering difficulties, teachers will provide timely advisory guidance, such as what are the

channels literature review and data collection? How to choose and reject the literature searched? All of these, teachers will not directly provide specific methods, but will encourage students to face difficulties, unite and cooperate, humbly learn from others, learn to discover problems independently, and then collaborate with others to solve problems.

3.3.5 Classroom Communication

At this stage, students return to the classroom and each group reports their learning outcomes. The group members (not less than half of the group members) will report their research results through a PPT, and the entire presentation will be in English. After the presentation, leave 5-7 minutes for students from other groups to ask questions. Each reporting group answers questions raised by other groups and teachers, and discusses relevant issues. Teachers summarize relevant knowledge, and fill in any gaps. Finally, each group summarizes the problems encountered during the learning process and the ways to solve them, reflects on the shortcomings in the learning process, and generates and submits a summary report.

3.3.6 Summary and Evaluation

This stage is a crucial aspect of implementing PBL teaching mode. In the end of the course, students will conduct self-evaluation; each group member will give their scores to each other based on their literature retrieval and group discussion; other groups will give their scores to the reporting group; the teacher will give scores based on the comprehensiveness, accuracy, proficiency, and English expression of student's report.

The scores of students' self-evaluation, peer evaluations among group members, peer evaluations within groups, group summary reports, and teacher evaluations, each of them accounts for a certain proportion, and the score of each student is calculated comprehensively.

4. APPLICATION EFFECT AND REFLECTION OF PBL TEACHING MODE IN BILINGUAL TEACHING

4.1 Teaching Effect

Based on the curriculum and teaching design constructed in the previous text, after implementing the bilingual teaching reform of "International Trade" under the PBL teaching mode, it was found

that applying the PBL teaching mode to the teaching of this course can improve the learning effectiveness of students.

4.1.1 Motivating Students to Learn Actively

The application of PBL teaching mode helps students to preview and consult materials before class, acquire knowledge in the process of seeking answers to practical problems and group collaboration, and mobilize their initiative in self-directed learning.

A survey shows that 81.46% of students believe that the PBL teaching model can improve their interest in learning, and 88.76% of students have effectively improved their self-learning ability and teamwork ability.

4.1.2 Improving Students' Professional Abilities and Comprehensive Qualities

Through the pre teaching test and post teaching test conducted during the course implementation, students conducted self-evaluation of their professional competence, and the results showed that their professional competence, especially their professional abilities, had been greatly improved.

In addition, based on students' on-site performance in their semester defense, a defense evaluation table was formed. According to the evaluation table, students' communication and expression abilities, English proficiency, and the ability to combine theory and practice have all reached a high level, and their comprehensive quality has been significantly improved.

4.1.3 Promoting the Transformation of Teacher's Role

Under the PBL teaching mode, teachers are no longer the traditional role of imparting knowledge to students in the classroom, but have transformed into partners who drive student learning, promote knowledge construction, host and participate in activities, and guide students to obtain information. The task of the teacher is to guide students in selecting topics, distribute learning materials to students, and allow them to discuss and find answers to questions on their own. Teachers participate, organize and guide the learning process, assist students in learning, but do not teach directly.

4.2 Teaching Reflection

Applying PBL teaching mode to bilingual teaching has reversed the traditional roles of teachers and students, changed the learning methods of students, and significantly improved teaching effectiveness. However, some problems have also been identified, mainly reflected in the following aspects.

One aspect is the role transformation between teaching and learning. The PBL teaching model emphasizes that students are the main body of teaching process, but some students still have a traditional way of thinking, passively accepting the content output by the teacher, and not accustomed to autonomous thinking and group cooperation. The role of the teacher is to participate in discussions appropriately, guide students to pose questions, assist groups in setting goals, selecting key points, drawing up plans, identifying and helping to solve existing problems, and manage classroom discussion time.

The other aspect is PBL oriented teacher training. An excellent teaching team is the key to PBL teaching mode. The PBL teaching mode requires teachers not only to systematically grasp the curriculum system and cutting-edge professional development trends, but also to change their leading role and become auxiliary roles in the classroom. However, domestic universities have not yet formed a mature teacher training environment. Universities should select backbone teachers to participate in domestic and international observation and training, establish PBL teaching concepts, learn case studies, and enable them to effectively implement PBL teaching.

5. CONCLUSION

The attempt and exploration of applying PBL teaching mode to "International Trade" bilingual teaching can significantly improve students' skills, knowledge, emotions, and contribute to bilingual acquisition. In addition, this study can also provide useful references for the bilingual teaching reform of other courses in economics and management.

AUTHORS' CONTRIBUTIONS

Dan Liu was responsible for teaching design and implementation, Haitao Wen was responsible for survey questionnaire design, Xing Wang was responsible for questionnaire collection and data analysis.

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