



Discussion on the Teaching Reform of the Bilingual Course “Architectural Performance” Under the Background of “One Belt and One Road” Initiative

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Abstract. This paper aims to explore the reforming methods of the bilingual teaching mode in the “Architectural Performance” course of the civil engineering. By discussing the “One Belt and One Road” Initiative (BRI) background and the current status of the “Architectural Performance” course, with combination of the case-based teaching mode, the problem-based teaching mode and the ideological education content, the author tries to provide specific designs of the course in order to better serve the requirements of talents for the BRI.

Keywords: BRI · “Architectural Performance” course · Bilingual teaching

1 Introduction

The proposal and implementation of the “One Belt and One Road” Initiative generate higher requirements for internationalization of the engineering education in China. Bilingual teaching is getting more attention and playing a more and more important role in the new engineering education. As an optional course for the civil engineering major students, the course of “Architectural Performance” is very suitable for the attempt of bilingual teaching for the freshman students. It can not only supplement and inspire professional knowledge, but also better cultivate and exercise students’ English communication skills in the professional field. Exploring the reform plan of bilingual teaching of “Architectural Performance” course can better meet the national demand for the export of civil engineering professionals and better serve the “Belt and Road” Initiative.

2 The Background of Bilingual Teaching Course Reform

The implementation of the “One Belt and One Road” Initiative has brought great opportunities and challenges to China’s engineering education. As more and more Chinese construction enterprises enter the international market, the rapidly growing overseas

projects have higher requirements for technical personnel in the construction industry. For civil engineering majors, having international communication ability, especially English communication ability in the professional field, has become an important goal in the current professional training. The reform of Chinese-English bilingual teaching in professional optional courses, such as the course “Architectural Performance”, is conducive to the use of optional courses to cultivate civil engineering students’ professional communication skills in the international context, so as to better serve the “One Belt and One Road” initiative to export civil engineering professionals.

3 Current Situation of “Architectural Performance” Course

Taking the “Architectural Performance” course for the civil engineering students in Tangshan College, this course can basically help to supplement students’ professional knowledge and skills in architectural aesthetics and architectural expression techniques, mobilize students’ interest in the architectural industry and architectural projects, cultivate students’ aesthetic sentiment, and establish students’ correct architectural concept and professional accomplishment. However, there are still some problems in the current course, such as that the content of the textbook is not extended enough, and the teaching content is not updated. At the same time, students’ learning initiative is not strong under the cramming teaching mode. If the bilingual teaching can be added through a traditional mode, it may further weaken students’ attraction of the course, which is not conducive to mobilizing students’ initiative to learn (Fig. 1).

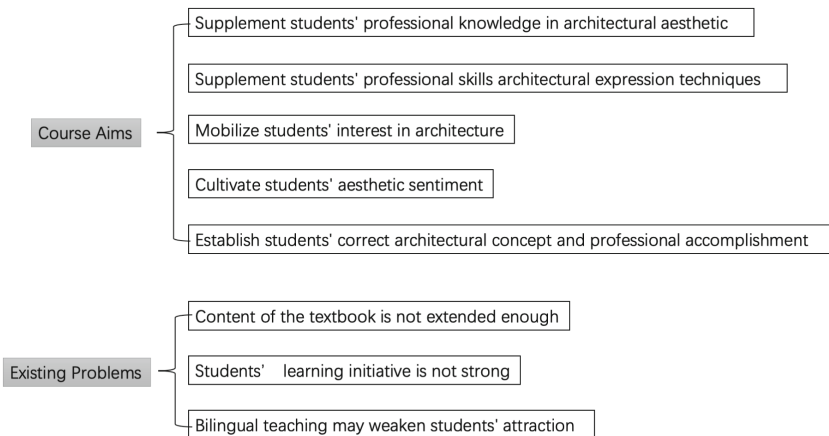


Fig. 1. Current Situation of “Architectural Performance” Course (source: drawn by the authors)

4 Teaching Design of the Bilingual Course “Architectural Performance”

Based on the training needs of the new civil engineering professionals in colleges and universities under the “Belt and Road” initiative and the current status of the course “Architectural Performance”, the authors try to integrate new teaching methods into the bilingual course, and carries out the teaching design of the bilingual course of “Architectural Performance” from the following aspects.

4.1 Refinement of the Teaching Content

According to the teaching syllabus of the “Architectural Performance” course, the teaching content is re-designed in detail, and the teaching content is refined and classified to various categories which are specifically suitable for all-English, Chinese-English and Chinese teaching. The bilingual teaching courseware is also optimized with more English multimedia parts added. The teaching of professional vocabulary and expression is highlighted in the teaching courseware, and it is reproduced in the in-class teaching combined with various contexts, so that students can master it unconsciously. Combined with students’ English mastery level, bilingual questioning sessions are designed to fit in class teaching to mobilize students’ enthusiasm for answering questions in English and so as to cultivate their English communication skills. Reasonably assignment will be set up in class, which restricts students to complete in English in order to improve students’ ability to consult English materials and write English reports.

4.2 Combination of Problem-Based Teaching Method (PBL)

PBL (Problem-based Learning) is a problem-oriented teaching model. It emphasizes students’ active learning, associates learning with tasks or problems, and sets learning into complex and meaningful problem situations, and solves problems through learners’ independent exploration and cooperation. In order to learn the scientific knowledge behind the problem [1]. In the teaching process of the “Architectural Performance” course, the problem orientation is properly combined with the teaching content and the corresponding problem task is set as a guide. Firstly, the teacher shows the architectural performance drawings that students need to complete independently in this lesson (mainly including hand-drawing, sketching, modeling, etc., which are set according to different contents of the class) as the problem tasks to guide students to learn and practice the professional skills.

Secondly, students discuss in the form of group discussion, including which techniques and tools to use, what steps are needed, etc. Finally, group practice is carried out according to the discussion results, and the task of the performance map is completed together to solve the problem. At the same time, the whole completion process is summarized, and the summary report in English is completed. The whole teaching process is carried out in bilingual. Through these steps of teaching activities, students’ teamwork capability, independent thinking ability, problem-solving skills and autonomous learning ability are cultivated.

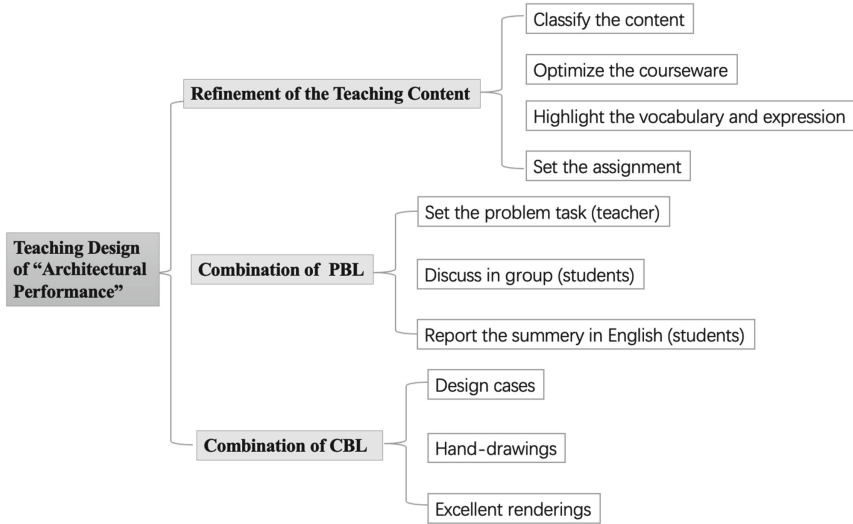


Fig. 2. Teaching Design of “Architectural Performance” Course (source: drawn by the authors)

4.3 Combination of Case Teaching Method (CBL)

CBL (Case-Based Learning) refers to the case-based teaching mode, which makes students familiar with and master knowledge and theory through cases, and significantly improves students’ comprehensive analysis ability [1]. In the bilingual teaching of the “Architectural Performance” course, the case teaching method is organically combined, and the design cases of master architects that fit the teaching content and teaching objectives are added to explain in each class, so as to cultivate students’ architectural aesthetic sentiments.

At the same time, the architectural performance drawings (or models) of the cases are selected for display, especially the hand-drawings of the master architects and the excellent renderings of the well-known architectural design institutes (architectural design firms), so that students can feel the classic works of architectural design performance in the case and understand the mainstream expression trend of current architectural performance. With the help of CBL, the bilingual class can be more vivid and rich, and the enthusiasm of students can be effectively improved while keeping pace with the times (Fig. 2).

5 Conclusion

This research starts from the talent demand characteristics for the BRI as the basis and reference, explores the new teaching mode of the bilingual course “Architectural Performance” through the integration of perfecting and upgrading of the teaching content and methods such as the CBL and PBL. It can provide support for the talent training of the BRI, realize the effective integration of the industry, education and research, and contribute to the theoretical and practical research about China’s new engineering education.

Acknowledgement. This research is supported by the Humanities and Social Science Research Project of Colleges and Universities in Hebei Province (BJS2022039), the 2022 Annual Project of Education Science Research 14th “Five-Year” Plan in Hebei Province (2203094), the Doctoral Fund of Tangshan Normal University (2022A04) and the 2017 New Engineering Research and Practice Project of Hebei Colleges and Universities (2017GJXGK041).

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