

An Analysis of the Application Practice of Flipped Classroom in the Course of "Chinese and Foreign Architectural History"

Jing Wen*, Feng Wang

Hankou University, Wuhan, Hubei, 430073, China

**Corresponding author*

Keywords: History of Chinese and Foreign Architecture, Courses, Flipped Classroom, Practice

Abstract: The course of the history of Chinese and foreign architecture involves a certain variety of fields, including art, philosophy, architecture and history teaching knowledge, in the course of teaching need to pay attention to the actual practice and technology. The traditional teaching classroom is relatively simple, so it needs to improve the teaching mode constantly. In order to improve the teaching effect of "History of Chinese and Foreign Architecture", this paper first analyzes the teaching status of "History of Chinese and Foreign architecture", proposes to apply flipped classroom in the teaching of "History of Chinese and foreign architecture", and narrates it from three aspects: mixed teaching, practical teaching and assessment, hoping to provide reference for the improvement of teaching effect of Chinese and foreign architecture history.

1. Introduction

For students majoring in architecture and environmental design, the history of Chinese and foreign architecture is a basic compulsory course. How to innovate the teaching methods of Chinese and foreign architectural history and impart the knowledge of Chinese and foreign architectural history to students in the limited class time is an important topic for teachers to think about. Flipped classroom teaching mode specifically refers to that teachers provide students with their own teaching videos or teaching videos from other colleges and universities, so that students can carry out independent learning in extracurricular time. The application of flipped classroom teaching mode in Chinese and foreign architectural history courses can not only extend the theoretical learning time, but also help students to comprehensively comb out the logical and contextual relations of architecture. In addition, it can improve the shortcomings of traditional teaching and form a good interaction between teachers and students, so as to achieve the purpose of improving the teaching effect and teaching quality of architectural history courses at home and abroad.

2. Apply Flipped Classroom Teaching to Add Practical Modules

In the course teaching of architectural history in China and abroad, if teachers only let students master the knowledge of typical architectural styles by rote memorization, it will be very

unfavorable to stimulate students' subjective initiative. In the course of class, in order to make students have a correct understanding of self-worth, we must attach great importance to the stimulation of the vitality of the teaching field. For students in the primary learning stage, their professional foundation is not strong, and it is difficult to preview the classroom content in advance, so there is a certain difficulty in classroom interaction. Flipped classroom is a teaching mode that emphasizes the combination of practice and theory. Therefore, Chinese and foreign architectural history teachers can distribute learning materials to students through corresponding media when teaching courses, so that students can preliminarily learn knowledge points in advance. In addition, teachers should add practical modules to the curriculum. First of all, teachers can collect statistics on the existing ancient buildings in the local area, select some typical buildings, and lead students to carry out field mapping. After the surveying and mapping session, students were instructed to use CAD to draw the observed building [1], and use relevant software to conduct 3D modeling, so as to restore the building prototype as much as possible. In addition, teachers can also set questions for students, let students combine the characteristics of ancient architecture, carry out an ancient architecture innovative design competition, through this way to strengthen students' design ability, while laying a solid foundation for future postgraduate entrance examination. Finally, since students cannot feel foreign architecture intuitively, students can form different groups to collect foreign architectural drawings together, and collect all the materials needed for corresponding model making. In the course of classroom teaching, they can make architectural models together with their team members. Through the addition of practical modules, students' sense of scale and proportion can be enhanced, and a good concept of teamwork can be formed in this process, and their perception of places can also be practically exercised.

3. Combine Online and Offline Teaching to Increase Teaching Hours

In the case that the teaching content of architectural history courses at home and abroad is large, but the class time arrangement is small, teachers should improve the teaching objectives, let students first understand, then analyze and interpret, and finally design [2]. At the same time, teachers can make full use of modern network technology and divide the curriculum system into two parts, that is, online teaching and offline teaching, combined with the actual teaching situation. When students are in the cognitive stage, teachers can use the online platform to create a curriculum theory learning guideline for students, so that students can preview relevant basic theoretical knowledge before class, have a certain understanding of the cultural characteristics of architecture in different periods, learn some typical historical buildings, and get to know relevant representative figures and architectural style characteristics in this process. Under the guidance of teachers, the logical relations existing in architectural history are sorted out, so as to ensure that students can form basic theoretical cognition of architectural history in the gradual process. After students finish learning online courses, teachers can appropriately reduce the part involving theoretical knowledge in offline teaching, so as to effectively extend the offline class hours. When students enter the analysis and interpretation stage, teachers can carry out task allocation activities according to the characteristics of typical historical buildings, and ask students to automatically divide into groups to analyze the allocated historical buildings; the main analysis content is the internal causes and development laws of the buildings. In the whole course structure, analysis and interpretation is the important and difficult content of Chinese and foreign architectural history [3]. Therefore, teachers can ask students to query and collect relevant materials in their spare time in advance, and then show the collected materials in the class, and the teacher will evaluate and guide their data collection and explanation. Finally, there is the redesign stage, which mainly allows students to redesign and create buildings. Teachers can share some classic design cases so that students can

master relevant design methods and skills. Then, teachers can organize students to set up a design project and guide students to combine the knowledge points learned in previous courses, fully apply relevant architectural design methods, and carry out reconstruction design activities for the selected buildings. In this process, how to transform the learned knowledge into practical skills and achieve the goal of re-creation is the core issue that students pay more attention to. Students can solve this problem through practical operation, and at the same time help students gradually form good design thinking [7-9].

4. Increase Process Assessment to Improve Classroom Attention

At present, the teaching assessment of "History of Chinese and Foreign Architecture" in most colleges and universities mainly focuses on the evaluation of theory, lack of practice, and few questions about field surveying and mapping. At the same time, the content of homework evaluation is relatively simple, so teachers must attach great importance to the process assessment. When teaching architectural history courses in a famous university, the teacher will ask students to preview the teaching content designed in the bibliography in advance, and form a corresponding book report based on the preview results [10-12]. In the class explanation, the teacher will first explain the historical background as the main content, and at the same time intersperse corresponding classic case buildings. After students have a certain understanding of the architecture, the teacher will make the students learn more about it. Students are led to carry out case investigation activities in the field, required to make corresponding records in the investigation process, and finally submit a research report. The total score consists of the usual score + two research reports [4]. This assessment method emphasizes the process assessment. Therefore, in the assessment of teaching results, Chinese and foreign architectural history teachers should not only pay attention to students' attendance and daily work, but also pay attention to innovation in practice, and add modules such as architectural modeling, surveying and mapping, hand-drawn quick questions, CAD drawing and ancient architectural design to this link [5-6]. At the same time, teachers can also carry out assessment in combination with model making and video animation effects, which can improve the shortcomings of traditional final assessment methods. This flipped classroom form can not only enhance the interest of daily teaching courses, but also increase students' attention to this course. While changing the single assessment method, it can also enhance students' enthusiasm for learning architectural history to a certain extent, and ultimately effectively improve the teaching quality and teaching effect of architectural history at home and abroad. Provide high-end composite talents for the society [13-14].

5. Conclusions

Offering Chinese and foreign architectural history courses to students can not only effectively improve their comprehensive design level, but also enable students to form good multi-component architectural analysis ability in the continuous study. The flipped classroom concept should be applied in the classroom of architectural history at home and abroad, and the practical modules should be added appropriately according to the actual situation, focusing on the interaction between teachers and students and between students. At the same time, the combination of online and offline teaching should be carried out to increase the teaching hours. In addition, the process assessment can be added to further enhance students' attention to the classroom, make up for the shortcomings of traditional teaching assessment, and finally improve the teaching effect.

References

- [1] Gong Yilin. *Practical Research on aesthetic Education Courses in colleges and universities from the perspective of Large heritage sites: A case study of "History of Chinese and Foreign Architecture" course*. *Sichuan Architecture*, 2019, 43(04):318-320.
- [2] Ou Linzhi, Ou Zhiwen, Zhang Yawei. *An analysis on the teaching reform strategy of the History of Architecture in China and Abroad based on the training of applied talents*. *Architecture and culture*, 2023 (7): 101-103. The DOI: 10.19875 / j.carol carroll nki jzywh. 2023.07.033.
- [3] Chai Yangbo. *How to Do a good job in curriculum ideological and political construction in the teaching of architectural history at Home and abroad*. *Architecture and culture*, 2023 (02): 194-195. The DOI: 10.19875 / j.carol carroll nki jzywh. 2023.02.062.
- [4] Wu Min. *Discussion on the course teaching of History Theory in architecture colleges under the spirit of "Foundation Based" education -- A case study of "History of Architecture at Home and Abroad" in School of Architecture and Planning, Anhui Jianzhu University*. *Anhui building*, 2022, 29 (3): 94-96. The DOI: 10.16330 / j.carol carroll nki. 1007-7359.2022.03.042.
- [5] Wang Limei. *Research on the application of Flipped classroom in the course of "Chinese and Foreign Architectural History"*. *Hunan packaging*, 2021, 4 (3): 165-166 + 169. DOI: 10.19686 / j.carol carroll nki issn1671-4997. 2021.03.049.
- [6] Chen Dan. *Flipped Classroom Application of Chinese and foreign architectural history in Environmental design major*. *Art Education Research*, 2021 (08):120-121+124.
- [7] Z. Lv, X. Li, H. Lv and W. Xiu, "BIM Big Data Storage in WebVRGIS", in *IEEE Transactions on Industrial Informatics*, 2019, 16(4), pp. 2566-2573.
- [8] Hafsa Muzammal. *Ecological Architectural Design in Nature Conservation Environment Relying on Support Vector Machines*. *Nature Environmental Protection* (2020), Vol. 1, Issue 3: 10-18. <https://doi.org/10.38007/NEP.2020.010302>.
- [9] Macias Estevas. *Design and Implementation of Intelligent Fault Diagnosis System for Construction Machinery Supporting Wireless Communication Network*. *Kinetic Mechanical Engineering* (2020), Vol. 1, Issue 3: 17-24. <https://doi.org/10.38007/KME.2020.010303>.
- [10] Pecka Katrin. *Network Teaching System of Power Machinery Based on Computer Science*. *Kinetic Mechanical Engineering* (2021), Vol. 2, Issue 4: 21-30. <https://doi.org/10.38007/KME.2021.020403>.
- [11] Yawen Su, Guofu Chen, Moyan Li, "Comprehensive Evaluation of Teaching Ability Based on Network Communication Environment", *Wireless Communications and Mobile Computing*, vol. 2021, Article ID 5841822, 12 pages, 2021. <https://doi.org/10.1155/2021/5841822>
- [12] Culver Joseph. *Interactive Environmental Microbiology Teaching Based on Multimedia Technology*. *Academic Journal of Environmental Biology* (2020), Vol. 1, Issue 3: 28-35. <https://doi.org/10.38007/AJEB.2020.010304>.
- [13] James Y L. *Teaching Methods of Power Mechanical Engineering Based on Artificial Intelligence*. *Kinetic Mechanical Engineering* (2022), Vol. 3, Issue 3: 54-61. <https://doi.org/10.38007/KME.2022.030307>.
- [14] Zhao, Y., Moayed H., Bahiraei M. & Kok Foong, L. *Employing TLBO and SCE for optimal prediction of the compressive strength of concrete*. *Smart Structures and Systems*, 2020, 26(6):753-763.