

Research on the Online Teaching Model during Covid-19 Epidemic Prevention and Control- a Case Study of Interior Design Foundation Course

Wang Lili, Gong Jiping

Jiangsu Maritime Institute, Nanjing 211170, China

Keywords: Online teaching, Colleges and universities, Interior design

Abstract: The epidemic of infectious pneumonia caused by new coronavirus has caused the opening of the 2020 spring semester to be postponed in China. In order to implement the requirements of the Ministry of Education of “Suspending Classes Without Suspending Teaching and Learning”, we adopt the online teaching plan of “the ICVE Platform + Tencent Meeting Live Streaming” and put it into the online teaching practice of Interior Design Foundation course. Students can do preview before class, discussion in class, test, review after class and submit homework through the ICVE platform. Teachers can teach students through Tencent Meeting Live Streaming as a virtual classroom. This scheme can ensure the teaching progress and teaching quality during the period of epidemic prevention and control, basically achieve the substantive equivalence of teaching quality between online learning and offline classroom, and it can also accumulate relevant experience for the subsequent online and offline teaching.

1. Introduction

At the end of 2019, the new crown pneumonia virus suddenly raged across the country. In order to prevent the further spread of this epidemic, the Ministry of Education held several special meetings and issued notices requesting that schools across the country postpone the start of the spring semester, and issued an initiative on January 29: taking advantage of network platforms, ensure the teaching progress and quality during the epidemic prevention and control period, and achieve “Suspending Classes Without Suspending Teaching and Learning”. On January 30th, Jiangsu Maritime Institute actively responded to the call of the Ministry of Education and issued the “Teaching Plan and Related Work Arrangements for the Second Semester of the 2019-2020 School Year in Response to the Pneumonia Epidemic”, postponed the start of school and organized teachers to teach online. With the organization of academic affairs office and the active cooperation of various schools, the teachers and students of Jiangsu Maritime Institute have tried various online teaching programs. In this paper, we introduce the online teaching scheme based on “the ICVE Platform + Tencent Meeting Live Streaming”, and take the online teaching of Interior Design Foundation course as an example to implement the scheme.

2. The Application Strategy of “the Icve and Live Streaming Platforms” in Professional Courses

2.1 Optimize the Teaching Design of Traditional Courses and Improve the Teaching Quality Though the Information Model

When teach the professional courses of Interior Design, teachers in higher vocational colleges need to take the real job tasks of the interior design industry as their goal orientation and formulate a complete and reasonable curriculum knowledge framework. Teachers should pay full attention to the individual differences of students, design different levels of teaching tasks, upload the content that is not convenient for display and teaching in the traditional teaching model to the ICVE platform, and use multiple elements such as text, pictures and videos to visualize the knowledge to create relevant teaching situations for students. At the same time, teachers should transform the relevant key and difficult knowledge of the course into online learning task points to guide students to strengthen their learning and mastery.

2.2 Encourage Students to Learn Autonomously and Stimulate Their Interest in Learning with the Help of the Icve Platform

In the pre-class preparation stage, teachers upload the content of textbooks, teaching videos and the latest development trends of relevant industries to the ICVE platform, to let students have a clearer understanding of the teaching content and encourage them to carry out autonomous learning. Teachers can use the ICVE platform to release preview content. Students can directly feed back the preview results to teachers through comments in the discussion area, and they can also interact effectively with teachers and classmates to discuss the preview content together.

The ICVE platform provides a variety of teaching activities, including sign-in, selection, answer, discussion, voting questionnaires, scoring tests and so on. Teachers can score students' classroom performance, and students' effective learning behaviors can earn corresponding points. The interaction of traditional teaching is mostly one-to-one questioning, discussion and so on, which show the small scope of teacher-student interaction. Compared with traditional teaching, online teaching has significant interactive advantages, which can realize one-to-one, one-to-many, and many-to-many interactions, which is more conducive for each student to express, communicate, and share their opinions.

2.3 Supplement the Online Courses Content and Enhance the Online Teaching Interactivity through the Live Streaming Platforms

As a direct, convenient and efficient teaching method, live streaming teaching has a good supporting effect on the online teaching of online courses. It can be used as a supplement of online courses content, which is conducive to improving the interactivity of teacher-student and learning performance of online courses. Compared with online courses, live streaming teaching is synchronized with teachers and students, has a strong sense of presence and is highly interactive, especially the development of mobile Internet and the prevalence of live streaming, which are more attractive to young people nowadays^[1]; at the same time, studies have shown that as a direct, convenient and efficient teaching method, live streaming teaching has a good supporting effect on online teaching based on online courses such as MOOC, SPOC and so on, which is conducive to improving the teacher-student interaction level and learning performance^[2-3]. On the other hand, live streaming teaching is flexible and innovative. It requires teachers to directly organize the teaching and learning process to students on the Internet through video or audio, which requires

teachers to have higher control capabilities.

3. Overall Design of Online Teaching Practice

Traditional classroom teaching is mainly composed of three parts: pre-class preview, classroom teaching and after-class review^[4]. The traditional face-to-face classroom teaching method has direct communication between teachers and students, but the interactive methods of teaching activities are limited, and the teaching process is difficult to record. It is also difficult for teachers and educational administrators to track and review the teaching process in real time. For students, learning based on online courses is not simply watching course videos, reading materials and so on, which needs to urge students to study online through some learning tasks with time nodes and test the learning effect.

3.1 Previous Preparations

Interior Design Foundation is the core course of the environmental art design major. This course construction takes the form of team building, sharing online collective lesson preparation and co-constructing curriculum resources. The teaching team is composed of main teachers and assistant teachers. The teaching objects are 69 freshmen from two classes of interior design major in grade 2019. Students are established according to the original class, and each teacher can manage their own class separately.

3.2 Pre-Class Preparations

Teachers need to design and prepare each teaching content in advance, prepare and perfect the teaching resources, which should not be simply pieced together. Before class, the teacher compiles the study task book and distributes to the student in advance. Teachers can release courseware, related reading materials and pre-class exercises through the ICVE platform and require students to complete the pre-class learning tasks ahead of time. Pre-class exercises are relatively simple topics such as choice, right and wrong, filling in the blanks or discussion. Classroom discussion topics also need to be designed in advance. These topics should be developed around the teaching, which should be released in the group in advance, so that students can find relevant materials in advance to make the class discussion be heated. The main teachers can know the effect of students' preview and their mastery of knowledge before class.

3.3 Classroom Teaching

Teachers use Tencent Meeting Live Streaming to teach online. In order to avoid conflicts with other courses, it is best to arrange the live streaming time in the original class schedule. Students can enter text in the dialogue for real-time questions and feedback. Teachers can use the voice function to ask questions to designated students, or let designated students act as the speaker to achieve a flipped classroom. Teachers can use screen recording software to record the whole teaching process during the live streaming, and then upload the recorded video to the ICVE platform after class to facilitate students who have poor internet conditions at home to study themselves. Students can also record the live streaming process using their smartphone's own recording tools. During the online teaching, teachers can also interact with students through the ICVE platform, for example, taking a roll call, class testing, voting, etc. Students complete the quiz in a given time, and the ICVE platform can automatically review and publish answers and the analysis, so teachers can grasp the students' classroom learning effect in real time.

3.4 After-Class Review

After class, the teacher release after-class tasks and assign homework which can be slightly more difficult, and can provide relevant reference materials. Students can find answers to questions, which improves their ability to obtain information and solve problems. After finishing their homework and thinking questions, students upload them to the ICVE platform. The grading process can be evaluated by teachers or teaching assistants. At the same time, a fixed online Q&A time is designated every week. If students have any questions, they can ask questions in the QQ group, and teachers can answer them online.

4. The Practice Case

Take a chapter “Layout Plans of Living Space Plan” in the course of Interior Design Foundation as an example to introduce the process of teaching activities in detail.

4.1 Pre-Class Materials

Teacher activities: Teachers introduce “the enclosure and separation of indoor space “;” the relationship between traffic flow and space arrangement” and other learning materials; release relevant discussion activities, set up situations for online communication and guide students to make preliminary optimization and functional area planning for a particular house type; remind students who have not completed their pre-class studies in time; summarize students’ feedback and adjust teaching content.

Student activities: Students combine the study task list to watch the online learning resources on the ICVE platform; complete pre-class discussions independently; communicate with the teacher timely for problems encountered in the autonomous learning.

4.2 Guidance in Class

Teacher activities: According to the main line “living space functional subareas - traffic flow organization - layout optimization of common defective house types”, teachers summarize the online teaching content and use centralized teaching for targeted instruction; teachers lead brainstorming, Q&A and discussions activities: What are the main points of the functional subareas of the living space? What are the traffic flow? What are the separation ways of space? Case introduction: What defects have you seen or encountered? Through the Lianjia platform, lead students to view the floor plans and VR effects of common defective units, and guide students to discuss how to optimize for different defective units.

Student activities: students listen carefully to the teacher's summary of the theoretical content of this section, and grasp the important and difficult points; actively participate in the classroom activities to strengthen the memory of knowledge points; think about the negligence and omissions in completing the previous pre-class tasks.

Case discussion: Students share the pre-class living space optimization plan, and discuss with the teachers about their advantages and disadvantages of each plan. According to the results of the discussion and integrating the advantages of different plans, students use the Kujiale online platform to optimize and simulate the case house to reflect the discussion results intuitively.

4.3 After-Class Outreach

Teacher activities: Teachers assign development training tasks for students: complete the house

optimization in the specified situation (the house type is more complicated than the classroom discussion one); watch the “Dream Home” program and complete the program summary as required; Teachers conduct a teaching reflection summary based on the students’ performance.

Student activities: students complete development training tasks and deepen the absorption and internalization of knowledge; learn new online resources autonomously and broaden knowledge.

5. Conclusion

Using “the ICVE Platform + Tencent Meeting Live Streaming” for online teaching, and the online teaching practice of the Interior Design Foundation course has achieved good results and received the positive feedback from students. Compared with traditional classroom teaching, the new teaching method can effectively break the shackles of traditional teaching model on students' thinking, realize the open of higher vocational classroom and promote the more balanced development of educational resources. Under the guidance of the mobile teaching model, students can also learn and acquire knowledge anytime, anywhere, and take full advantage of fragmented time for learning, which can guarantee the teaching progress and quality during the epidemic prevention and control period, and basically achieve the substantive equivalence of teaching quality between online learning and offline classroom. Moreover, after the epidemic, it can still be used as an online teaching or a mixed online and offline teaching program. After the epidemic, we will also face the organization and development of on-site teaching after students return to school. Some students may not be able to return to school as scheduled. Therefore, how to carry out online and offline teaching work, how to organize the adjustment of teaching content and knowledge points, and how to effectively connect the lagging practical teaching and theoretical course content also need to be carefully discussed and planned in advance.

References

- [1] Fu Weidong, Zhou Hongyu. *Challenges Brought by 2019-nCoV Epidemic to Online Education in China and Coping Strategies*[J]. *Journal of Hebei Normal University(Educational Science)*, 2020, 22(02):14-18.
- [2] Zhu Zhiting, Guo Shaoqing, Wu Di, Liu San (Nv ya). *Interpretation, Key Issues and Countermeasures of the Policy of “Suspending Classes Without Suspending Learning”*[J/OL]. *China Educational Technology: 1-7*[2020-03-20]. <http://kns.cnki.net/kcms/detail/11.3792.g4.20200317.1105.002.html>.
- [3] Yang Jinyong, Pei Wenyun, Liu Shengfeng, Zhang Dongshu, Zhang Xiang, Jiang Hui, Jiang Lijie, Yu Ruili. *Practice and Experience of Online Teaching During the Epidemic*[J/OL]. *China Educational Technology: 1-13*[2020-03-20]. <http://kns.cnki.net/kcms/detail/11.3792.G4.20200317.1105.004.html>.
- [4] Wang Hongling, Deng Xiaojuan. *The Practical Exploration of Mixed Teaching Model Based on Flip Classroom--Take Construction Engineering Course as an Example*[J]. *Educational and Teaching Forum*, 2020(12): 233-234.