

Research on Online Teaching Method and Practice Based on Internet Platform

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Abstract

The application of information-based teaching methods in higher education has been more and more extensive. In the special year of 2020, the Ministry of Education actively called on teachers to teach online during the epidemic, In order to actively respond to the guiding ideology of "no suspension of classes", Combined with the practice of higher education, this paper expounds in detail the teaching strategies of three links, including pre-class, in-class and after-class, and summarizes some teaching methods in the course of online teaching by optimizing the network teaching platform and resources, optimizing the teaching organization and management process and high-quality recording and broadcasting teaching.

Keywords

Epidemic; Online teaching; Higher education.

1. Introduction

At the beginning of 2020, the country entered a war without smoke of gunpowder, from now on is destined to 2020 is not an ordinary year. In order to effectively prevent the spread of novel coronavirus pneumonia, the whole country has actively cooperated with local epidemic prevention and control policies and actively quarantined at home. In the wake of COVID-19, it is no longer possible and should not be possible for higher education to return to the state of teaching and learning as it was before the outbreak, because online teaching mode, which integrates "Internet plus" and "intelligent plus" technologies, has become an important development direction of Higher education in China. As a full-time teacher who has been exposed to online teaching for the first time, I actively responded to the call of the school and started to explore the way of teaching online courses. After the online practical teaching of "Civil Engineering Materials" and "Mechanics of Materials" in recent months, The author have some experience to share.

2. The Impact of Online Teaching Quality

2.1. The Impact of Students' Self-regulation Ability

In the online teaching mode, most students rely too much on teachers, and have poor self-learning awareness and ability. It is mainly manifested in three aspects: Firstly, the ability to effectively use learning time is poor; Secondly, the ability to effectively use quality teaching resources is poor; Finally, the ability to consciously adapt to the network learning method is poor. The traditional way of thinking leads to low learning efficiency, incomplete and systematic knowledge acquisition, poor recognition of the complete theoretical system of the course, and difficulty in improving the learning quality.

2.2. The Impact of Teacher Instructional Design

As the course organizer, teachers play the most important role in online course teaching. Their functions include optimizing the online teaching platform and teaching mode, organizing classes according to the teaching calendar, and establishing wechat and QQ groups to maintain communication with students. The key to ensure the quality of online teaching is the high-quality online course platform and the allocation of teaching resources, the appropriate organization and time allocation, the reasonable assessment method and the setting of content, and the real-time and synchronous monitoring of online learning effect and process.

2.3. The Impact of Technical Services and Maturity of Network Environment

Online education depends on the maturity of the network environment, especially live teaching, which has higher requirements for the network environment. Network quality directly determines the basis of online education. After more than a decade of vigorous construction, Chinese education informatization has delivered a more qualified response in the form of online education in the face of the sudden epidemic.

3. Strategy and Design of Online Teaching

3.1. Selection of Teaching Tools

In the face of the epidemic, relevant education authorities have prepared a large number of online classes for students to learn in the shortest possible time, including live streaming, video broadcasting, Chinese MOOC and PPT text. In order to achieve a good teaching effect, it is particularly important to choose the right teaching tools. From the beginning, I came into contact with QQ Group Class, Tencent Conference, Dingding and CC Talk, see Figure 1.



Figure 1. Network teaching

In contrast, QQ Cloud class was noisy, and Tencent Conference had no group function. After using them in class time, students reported that CC Talk is more convenient to use and has the following advantages:

- (1) There is a microphone control mode and a dialogue mode. In the microphone control mode, the teacher teaches alone without interference, while in the dialogue mode, the student department can freely interact with the teacher with the microphone.
- (2) The courseware uploaded to the lecture library can be downloaded by students according to their own needs, without the teacher to send another courseware to students;
- (3) There is an automatic screen recording function, students can click after school to replay the knowledge points not understood in class to review, easy to check after class, without the use of KK video recorder and other software to record screen.

(4) There is a whiteboard function for teachers to use the appropriate board, especially the exercise course needs a lot of drawing.

For work outside the teaching process, I choose to use the cloud class, such as releasing pre-review questions, checking in five minutes before class, assigning homework after class and so on.

3.2. Design of Teaching Process

Online teaching requires more pre-class preparation to ensure smooth class progress. Basic materials such as the syllabus, lesson plan and teaching calendar should be prepared and sent to students through blue ink cloud in advance so that they can preview the main content of this course.

3.2.1. Preparation

The plan to deal with class faults must be preset in the preparation work before online teaching. First of all, for teachers, online teaching needs to pay attention to more details than traditional offline teaching, such as whether the microphone is set up in advance, whether the power will be cut off in the community during class time, whether their laptops will break down and so on. In the past, all kinds of problems could not be repaired or temporarily replaced as offline teaching, such as equipment failure, classroom teaching, microphone failure can walk down the platform to teach in close distance, power failure can be taught on the board, etc. Therefore, it is necessary for teachers to make emergency plans in advance in addition to fully preparing lessons, and timely communicate with students.

3.2.2. Teaching

The classroom teaching design of online course is mainly divided into two modules: "prior review" and "intensive improvement". Five minutes before the start of each class, the sign-in gesture will be issued to organize students to sign in, and at the same time, it means that the class is about to start, and students will enter the live room or video conference in an orderly manner.

In the first ten minutes of the class, I will review the important knowledge points of the last class to strengthen students' memory of the knowledge points. Then, I will introduce the content of this course, and point out the key and difficult points of this course, so that students can understand the teaching process and be alert to the key and difficult points in the course content. The course combines different forms of "class performance" in cloud class, in-class sample testing in cloud class, continuous mic and speech in CC Talk live broadcast, etc., to establish instant contact with students in class and understand their classroom dynamics. In the teaching content, I will timely add brainstorming, case explanation, short video play, group report, concentrated discussion and other interactive links to enhance students' interest in the course content.

In the classroom where theoretical knowledge is mainly explained, I will use nail live to share the screen and synchronize the PPT content, so that each student can see the teaching content clearly. In classes with more interaction, I will use the nail video conference to share the screen. During the interaction, I can switch between the screens of different speakers at any time, so as to achieve the purpose of efficient classroom interaction.

3.2.3. Consolidate

At the end of the course, I adopted two modules of "after-class explanation and clarification of doubts" and "knowledge consolidation", and uploaded the PPT of this course to the cloud class platform for students to repeatedly check and strengthen their understanding of the knowledge points. At the same time, the pre-set homework in the cloud class will be opened, and students will complete the homework within the prescribed time, so as to strengthen students' consolidation of classroom knowledge. For students who have questions about the knowledge

taught in class, I will encourage them to actively inquire after class and timely dispel their doubts and doubts. I think the learning effect of online class is also a part of the teaching teacher should understand, so after class, the cloud class class will be used to randomly check the class notes of students to ensure the quality of students' learning.

4. Reflection and Solution

4.1. Students' Feedback

According to the overall feedback from students, my online teaching method is considered to be supportive and cooperative, and the effect of answering questions via QQ after class is also good. The content and method of online teaching have also been tested in practice. But at the same time, the effectiveness of classroom interaction is still limited in the course's online delivery. In offline teaching, teachers can judge the teaching effect by the on-site reaction of students, and the interaction is more direct and efficient. However, online teaching is limited by equipment, software technology and network conditions, so the interactive effect cannot be guaranteed to be stable.

4.2. Supervisor's Suggestion

In the process of online teaching I carried out, many leaders of the school quality control office, Teaching Affairs Office, real education center, college supervisors and so on took time out of their busy schedule. Entered my CCTalk live class in advance, listened to several of my online classes carefully and carefully, and gave important evaluation and guidance. After class, I was reminded to pay attention to the effect of online interaction with students, which inspired me and timely adjusted the content and duration of online teaching.

5. Conclusion

Traditional teaching models don't work online. Online learning requires a conscious effort to reintegrate materials and put them into the online platform according to a rational design. In this process, teachers will reflect on their teaching methods, which is a kind of improvement to the level of teachers themselves. Through optimizing the network teaching platform and resources, optimizing the teaching organization and management process, high-quality recording and broadcasting teaching, in-depth theoretical discussion, sharp questions of professional doubts and other links, the online and offline integration has been realized, and the practical implementation of "non-stop teaching, non-stop learning, online teaching wins the epidemic".

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