

Thoughts on Online Teaching Reform in the Post-pandemic

Yiling Dai^{1,*}, Mingji Luo²

¹Dean's office, Southwest Petroleum University, Sichuan,610500, China

²Department of Student Affairs, Southwest Petroleum University, Sichuan,610500, China

Abstract: Online teaching is not only a challenge to the information construction of higher education in China, but also an opportunity to promote educational reform in the information age. The decision was taken by the education authorities as they had no choice but to reopen schools due to the COVID-19 pandemic. This article will focus on summarizing online universities' experience and effectiveness during the period of "classes suspended but learning continues" development courses, analyze online teaching quality and feedback, think the post-pandemic online teaching reform, discuss how to keep the advantage of online teaching, and use information technology to promote teaching methods innovation and teaching model change and to improve the quality and effectiveness of teaching constantly.

Keywords: Online teaching, Classes suspended but learning continues, Teaching management, Teaching effect.

1. Quality Analysis of Online Teaching

1.1. Analysis of Teaching Hardware

As a kind of network teaching method in colleges and universities in China, online teaching is in the exploratory stage for many years. In the face of the sudden impact of the epidemic, schools mainly rely on network platforms, PC, mobile terminals, digital TV and other media as intermediaries to achieve online teaching or distance teaching during the epidemic. Using Internet technology to break through the limitation of time and space, relying on network learning resources, tools, platforms, space to achieve a new teaching form of teacher-student teaching. Most of them use the following typical schemes: online courses, online live teaching, and students' independent learning. Teachers also need to use QQ group, Wechat group, Dingding and other software tools to conduct student attendance assessment, after-class answering questions and interactive discussion. Teachers should fully mobilize students' autonomy and enthusiasm, take the initiative to participate in online teaching through teaching platforms and software tools, so as to ensure the quality of online teaching [1].

1.2. Breakthroughs in Teaching Resources

Traditional classroom teaching resources mainly rely on textbooks, PPT and audio and video files, while online teaching methods and teaching resources are more diverse and abundant. Teachers' teaching methods mainly include live broadcasting + online interaction, recording and broadcasting + online interaction and students' independent learning + online interaction. Teachers reorganize and sort out existing teaching resources, analyze and compare the advantages and disadvantages of e-teaching resources, and develop online teaching plans and programs suitable for their courses. Learning resources are learner-centered entities that organically integrate content, activities, tools and interpersonal wisdom with meaningful learning as the ultimate goal [2]. The integration of learning resources and learning activities can reconstruct the relationship between online teaching and learning. The rich online teaching resources have laid a solid foundation for new teaching

models in the post-epidemic.

The selection of online learning resources should first of all depend on whether the educational nature of resources itself conforms to the rules of education and teaching, whether learning activities are the main line and can assist students in cognitive processing [3]. Secondly, whether the learning resources are personalized according to the analysis of learning situation. For example, the teaching resources for pre-class preparation can achieve the consistency of the starting point of teaching, the differentiated development of the teaching resources during the break, and the personalized use of the teaching resources after class can shorten the gap between students. Finally, the generation of teaching resources can generate new ideas and concepts in the process of learning interaction, so that teaching resources can be further improved and optimized to enrich teaching activity resources.

1.3. Characteristics of Teaching Model

Compared with traditional teaching methods, online teaching provides a brand new teaching and learning experience for teachers and students, and also provides the support of big data for teaching managers to make accurate policies. Teachers' online teaching experience not only enriches teaching resources but also improves their teaching and research ability. Compared with traditional teaching methods, teachers pay more time and energy in lesson preparation stage, their harvest will be greater.

In online teaching, students can break the limitation of time and space and improve and cultivate their ability of independent learning and inquiry [4]. In online learning activities, students can share the best teaching resources, or arrange learning courses according to their own actual situation, and enjoy personalized learning experience. Students' online interaction and learning results can get timely feedback and attention, and learners can also be encouraged to plan the learning process reasonably and become the master of their own learning. Finally, teaching managers can accurately analyze the big data of online teaching formed in the process of online teaching. Through data mining and analysis, they can explore and manage the number of visits to

online platforms, the total number of learning courses, teacher-student activities and students' learning, so as to improve the quality of education and teaching.

2. Challenges of Online Teaching

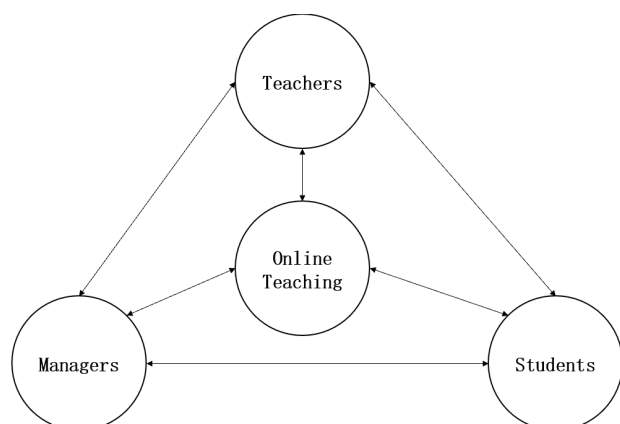


Figure 1. Online teaching model

2.1. Educational Manager

"Internet + education" in Chinese universities is still in the initial stage of development. Due to the epidemic, tens of millions of teachers and students in universities have flooded the Internet, causing great pressure on the servers of online teaching platforms, thus affecting the teaching quality of online teaching to some extent. Colleges and universities should establish online teaching assistant teams to help teachers carry out online teaching smoothly. The problems revealed in these special periods require education administrators to further strengthen the construction and management of network teaching platform.

Secondly, teaching discipline, learning behavior and learning quality in online learning should be essentially equal to traditional teaching [5], and teaching managers should carry out the scientific supervision and support. Teaching managers also should check online teaching attendance rate and maintain normal teaching order, organize special personnel to sort out and summarize online teaching materials, and do a good job in the technical service of online teaching resources to ensure the adequacy of teaching resources. Colleges and universities should also encourage teachers to actively explore the role of "online and offline" double teachers, including the results of online teaching into the workload calculation, and further improve the assessment of teaching quality.

2.2. Front-Line Teachers

Front-line teachers are the core element of online teaching. Online teaching poses new challenges to teachers' information literacy, which requires teaching reform based on information technology and effective integration of subject knowledge and new teaching methods. In the early stage of online teaching, many front-line teachers are not familiar with the operation of online teaching, which will produce a certain sense of anxiety, which will have a certain impact on the quality of online teaching. Therefore, teachers need to constantly explore and become proficient in the operation of online teaching platform.

Secondly, the teaching process of online teaching is different from that of traditional teaching. Teachers should make good use of network resources and pay attention to the design of online teaching activities. In the face of new

teaching methods in the post-epidemic, teachers should actively carry out innovation in course teaching methods, timely adjust the teaching content and rewrite the course teaching plan according to the teaching characteristics of the new mode, so as to ensure the smooth progress of online and offline teaching. Teachers need to redesign teaching design in the selection of teaching materials, course progress, discussion and teaching time allocation. Based on the status quo of online teaching during the pandemic, the research was conducted to understand and analyze the progress and quality of online teaching. The survey results show that from the perspective of teaching design and organization, the course effect of directly recording and uploading PPT materials is not as good as that of live streaming. Because the vast majority of teachers' tasks can have a good teaching interaction with students in the live courses, so as to achieve the basic teaching objectives of the course. However, due to online reasons, it is still unable to effectively communicate and feedback with students and timely test students' learning results, thus affecting the quality of online teaching. Teachers can rely on class community to increase the sense of presence, and strengthen teaching guidance and communication.

Most teachers think that the current online teaching effect cannot fully achieve the offline teaching effect, and they will continue to explore and practice the online and offline mixed teaching in the future teaching life, explore online teaching methods, innovate classroom teaching mode, and continuously improve the quality of course teaching.

2.3. College Students

Different from traditional offline teaching methods, brand new online learning brings new learning experience and challenges to students, and students' self-management and educational differences in online learning become major problems. First of all, students' personal conditions differ greatly, which makes the issue of educational equity focus again. Online learning requires students to have a good learning environment and learning equipment to ensure the quality of online teaching. Secondly, students need to be well prepared for online teaching, familiar with all kinds of online teaching platforms in advance, actively communicate with teachers before, during and after class, and participate in teaching activities organized by teachers on time as required to ensure the quality of teaching. But in reality, due to the coverage of students' family regional network and family economic situation, some students can not get the equal quality education.

Online teaching can not make teachers and students face to face communication and supervision, test students' self-learning and self-restraint ability. Students should equate online learning with formal courses and need to learn to manage their time and increase their initiative and enthusiasm for learning. For example, students should participate in online teaching on time, take the initiative to answer teachers' questions or ask teachers' questions, and finish homework by consulting teachers and classmates. According to the survey results, students have a high attendance rate in online learning, are satisfied with the learning effect of online teaching, and can quickly adapt to the new teaching method.

3. Thoughts and Suggestions for Online Teaching

3.1. Comprehensive Summary and Set Up A Model

The school selects courses with good online teaching quality and high evaluation by students through teachers' self-recommendation, student selection and school recommendation, and sets up typical cases to encourage teachers to learn teaching design, curriculum resources and evaluation of excellent cases. The university will encourage qualified majors and disciplines to continue to offer courses combining online and offline, so that students can use online teaching to solve problems encountered in offline practice and fundamentally master knowledge. We will coordinate the online and offline curriculum systems, constantly enrich and expand the contents and methods of education and teaching reform, and cultivate students' all-round knowledge and abilities.

3.2. Improve Resources and Build Paradigms

The school should continue to strengthen teachers' online teaching skills training, improve teachers' information technology level, and realize the innovation of classroom teaching. In the post-epidemic, it is necessary to strengthen the evaluation of students' learning process, make full use of modern information technology to effectively manage and standardize students' learning process, and make it adapt to the characteristics of online teaching as soon as possible. Teachers should make full use of the teaching platform to carry out teaching process management, deepen the reform of teaching methods and stimulate students' enthusiasm for learning. This paper explores the big data of online teaching and uses data mining to help the quality of online teaching. By analyzing the behavioral data and performance data generated by online learning, it is beneficial for teachers to diagnose teaching and improve teaching, thus improving students' learning efficiency [6].

3.3. Policy Incentive and Innovate Evaluation

The school will give full play to the incentive role of evaluation, research and formulate supportive and encouraging online teaching policies and measures, and encourage and support teachers to carry out the reform of online and offline mixed teaching. We will further improve the methods of classroom teaching quality assessment and teaching quality award selection, and guide and encourage

more teachers to transition to the role of "online and offline" double teachers. In the evaluation of teachers' professional titles and job appointment, as well as the selection of famous teachers and classroom teaching quality awards, priority will be given to the course leaders and team members of excellent new teaching modes. This is a full affirmation and practical incentive for teachers to participate in this highly difficult and highly invested online teaching, and can also attract more teachers to truly participate in accurate online teaching.

4. Conclusion

The large-scale online teaching during the epidemic is not only a challenge but also an opportunity for colleges and universities, making them more determined to advance knowledge and change, actively respond to changes and actively seek changes in education strategy layout. Colleges and universities should make sufficient ideological preparation and capacity reserve, adhere to the concept of student development as the center, treat the sudden epidemic as a catalyst, take the new teaching mode as an important measure of education and teaching reform in the post-epidemic, and promote the organic integration of online teaching and traditional classroom teaching.

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