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# Exploring Online education for Universities in the Post-Epidemic of COVID-19

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**Abstract:** The model of online teaching in universities the result with in the development of Internet Plus education. The outbreak of coronavirus Disease 2019 (COVID-19) is an opportunity to promote the development of online teaching. In the later stage when the Covid-19 epidemic is gradually controlled, the hybrid teaching mode with offline teaching as the main mode and online teaching as the supplement will become the future development trend. Through analyzing the current situation and problems of online teaching during the epidemic, this paper puts forward targeted suggestions and strategies to provide reference for the development of teaching reform.

**Keywords:** COVID-19; Online teaching; Teaching reform.

## 1. Introduction

The sudden Covid-19 epidemic disaster in the spring semester of the 2019-2020 academic year dealt a heavy blow to the education system across the China even the world. In order to maintain the normal operation of teaching in universities, the Ministry of Education (MOE) issued the "Guideline on the Organization and Management of Online Teaching in General Higher Education Institutions during the Epidemic Prevention and Control Period", which requires "suspension of classes and non-stop learning". During the Covid-19 epidemic, students attended classes at home, teachers worked online, and teaching management was controlled by advancSed technology. The educational ecology of universities has changed dramatically. In the post-epidemic period, the Covid-19 situation was gradually controlled in China, and the education department adopted a combination of online and offline teaching models to maintain normal teaching order in universities according to different regions and phases of the Covid-19 epidemic. The new teaching mode has been practiced and optimized in many universities in these years. Today, with the rapid development of information technology, the form of higher education in China is also being further explored and reformed. The future teaching philosophy and the direction of education reform have always been topics worth exploring. In this paper, we will discuss the development direction of the combined online and offline teaching mode by combining the basic situation of online teaching in several universities during the Covid-19 period, and aim to promote the reform of higher education to a new level through experience and summary.

## 2. Analysis of online teaching in universities during the Covid-19 epidemic

In early April 2020, the survey report of online teaching of university teachers during the epidemic period jointly released by the National Consortium of Quality Assurance Agencies in Higher Education (CIQA) and the Teacher Development Center of Xiamen University, with 187 university teachers and students (5433 valid questionnaires for teachers) as the respondents, showed that 5290 teachers (97.19%) conducted online teaching during the Coivd-19 epidemic period. This shows that despite the limited preparation time for universities to cope with this emergency under the impact of the Coivd-19 epidemic, they still successfully carried out online teaching, and more than ninety percent of the instructors successfully transferred their offline teaching to online. Relying on 22 online course teaching platforms organized by the Ministry of Education, more than 24,000 online courses covering 12 major subject categories of undergraduate and 18 major categories of specialized higher vocational courses and more than 2,000 virtual simulation experimental course resources, universities have formulated online teaching work plans during the epidemic period in accordance with the actual situation of their universities, reflecting the purpose of "teaching and learning without stopping classes".

At the early stage of the epidemic, most universities had difficulties in selecting platforms and switching multiple learning platforms at will. Due to the sudden outbreak of the epidemic, teachers and students were not familiar with the operation of the online platform, which led to large trial and error costs and communication costs in the early stage and also brought troubles to the school teaching management. However, at this stage, most universities have long explored the most suitable teaching platform for their own teachers and students, and it is beneficial for the management and technical departments to monitor and assist online.

Our university, Guangdong University of Finance, also adopted online teaching in the early stage of the Covid-19 epidemic, using a variety of online platforms and supporting information technology for lectures and online tutorials. And after the epidemic stabilized, a combination of online and offline teaching format was conducted according to the actual situation to prepare for the emergency. Students who have returned to school can be taught in offline classrooms, while students who cannot go back school are on hold can be given online academic guidance in a flexible manner. The teachers can teach in classrooms while simultaneously live-streaming online through Tencent meetings and QQ group classes in classrooms to guide students who are on hold to participate in online learning. With the development of online teaching in the past three years, our teachers already have a variety of teaching resources in major teaching platforms (such as

StudyTalk, MOOC, SuperStar, etc.) and can guide students who have to study at hone because of Covid-19 and help them maintain their academic progress through online guidance.

In November 2022, due to the severe epidemic situation in Guangzhou, the subsequent course teaching will be switched to online teaching methods according to the needs of epidemic prevention and control in our school. All management departments of the university highly cooperated to achieve "no reduction in teaching content and teaching standard", real-time monitoring of teachers' teaching plan execution and teaching order operation during online teaching, real-time monitoring of students' learning effectiveness, and guaranteeing the smooth and orderly implementation of online teaching.

# 3. The characteristics and problems presented by online teaching

In the past three years of the Covid-19 epidemic, this practice of online teaching is the new experiences to teachers and students. The Internet platform has shown students a wealth of course resources and enhanced the networked teaching techniques and means of the teacher in charge of the course. It has also provided school administrators with a wealth of data that facilitates their precise policy making. However, some teaching and management problems have been exposed in the process of teaching transformation.

## 3.1. Characteristics presented by online teaching

Online teaching mode provides teachers and students with a new teaching and learning experience. Compared with traditional offline teaching, teachers and students can carry out teaching activities online at any time without the influence of spatial boundaries. Teachers can use internet platform to better engage students in discussions, mutual cooperation and real-time feedback. At the same time, teachers can efficiently collect students' questions and homeworks for conducting data analysis. And for students, the a variety of resources and features of online platform helps them better grasp their knowledge. Through the survey, online teaching has improved students' independent learning ability, and they are more willing to participate in the interaction of online classes. In the past, some students in offline classrooms were shy and did not like to interact. When the classroom migrated to the Internet, they interacted more frequently and various learning outcomes could be seen by their peers. With the attention and supervision of their classmates. In terms of university management level, the big data analysis of online teaching can accurately summarize the teaching situation, and collect online data of teachers and students, the total number of running courses, student learning details and other data to understand the learning situation of each college and even each class, so that it can reflect real study results to college leaders and teachers.

## 3.2. Problems of online teaching

### 3.2.1. Problems of online teaching platform

Online teaching can be affected by uncertainties such as network, equipment and platform. During the pre-outbreak of the epidemic, a large number of teachers and students flock to the teaching platform at the same time, which often causes network congestion, interface lag, and the appearance of noise. This instability caused some trouble for the teachers in charge of the classes and had to bounce around different platforms, which also caused inconvenience to the students. At the same time, the platforms have different resource allocations and cannot fully match the orientation and course content of each school, which affects the teaching effect to a certain extent. For the online teaching platform, information security is also a great concern for teachers and students. How to ensure that private classroom information is not leaked and that no one can enter the online classroom are further concerns and technical support are needed. In recent years, there have been many news reports about unrelated people joining online meetings and disrupting classroom order, affecting teachers' classes.

### 3.2.2. Lack of atmosphere and weak self-control of students

Online teaching is a huge challenge for students' self-control. During the Covid-19 situation, most students attended classes at home or in the dormitory. Without the atmosphere of group classes and teacher supervision, it is difficult for them to control themselves. In addition to the different equipment conditions, network factors and environmental factors, there is a certain degree of variability in the acceptance of classroom results. According to the survey,more than half of the students reported that traditional classroom teaching is more effective. At the beginning, students feel convenient and relaxed about the online teaching format, but gradually they pay more attention to the learning experience and gains brought by comparing teaching formats. Although the traditional "indoctrination" education in universities is not conducive to cultivating students' ability of self-exploration and active thinking, it is also an evolutionary process of the current educational reform in Chinese universities. Because of the short time from the traditional teaching form to the new teaching form, some students who cannot adapt to it feel burdened.

### 3.2.3. Lack of technical personnel and effective monitoring

The current status quo of many Chinese universities is to focus on training full-time teachers, ignoring the attention to cultivate technicians. The university administrators usually do not pay attention to the care and training of management posts and technical posts. For teaching support positions, there are requirements for education, professional and technical, but the salary subsidy is large gap with other teaching positions, so it is difficult to attract more excellent talents to join. This is the reason why the team does not have enough personnel reserve and the technical level is not mature enough. In such a context, the difficulty of monitoring the quality of online teaching is also greatly increased. A perfect teaching system can operate efficiently, in addition to the dedication of teachers who teach at the front line, it is also inseparable from the support of teaching management . When traditional teaching is transferred to online teaching, the problems that insufficient backup of technical staff and difficulties in monitoring teaching management are more exposed.

## 3.3. Strategies to promote online teaching reform

### 3.3.1. Reshape the concept of teachers' teaching reform

Teachers are the main force of the education industry and play an important role in this teaching reform. Schools should pay attention to the reshaping of teachers' concepts of online

teaching through advanced training, group lesson preparation, and construction of demonstration classrooms, so as to help them complete the change of roles and responsibilities in time . Only when teachers recognize online teaching in their minds and take the initiative to learn new teaching modes can they avoid the situation of "relying on online resources" or "copying old methods". This reshaping of educational philosophy is obviously not an overnight process, but a gradual one. This change is not only in the direction of education in China, but also in many countries where the situation is the same. For example, the Horizon Report (Higher Education Edition) released by the New Media Consortium of the United States in 2019 suggests that changing the status of teachers' roles should be viewed as a medium-term difficulty rather than a problem that can be solved in the short term . In terms of helping teachers to improve their online teaching, major universities need to form a professional research team for online courses with the goal of providing scientific, cutting-edge and clear directions for school teachers. First, it needs to evaluate the effectiveness of emerging teaching models and study hybrid teaching design strategies according to the actual situation of the school. Next, the curriculum research team should continuously conduct teacher skills training to help teachers adapt to the online teaching model and improve their information technology skill. In the future, blended teaching will become mainstream, but most teachers are still stuck in the traditional teaching output method. Universities need to guide and mobilize teachers' enthusiasm in many aspects and encourage them to explore new forms of teaching reform.

#### 3.3.2. Focus on students' self-learning ability

Online teaching is "student-centered" as the education concept, which needs to play the main character of students' learning. In the traditional teaching mode, students are used to be push to study, and few of them can do active learning and self-management. In contrast to offline teaching, the online teaching atmosphere lacks face-to-face supervision by teachers and peers,so learners tend to lack self-awareness of learning and often divert their attention. In order to solve these problems, teachers should change their roles from a "communicator" to a "guide". They can combine the characteristics of online teaching, take advantage of the online platform, design more interactive sessions, and let students actively participate in them. As Zhou Yue of China University of Political Science and Law suggested (2020), teachers should improve students' learning efficiency with more scientific teaching organization and help students build connections between online classes and offline learning with more appropriate learning tasks, include guiding students' learning behavior with more flexible evaluation mechanisms. In other words, in the process of teaching and education, schools should guide students to change from knowledge receivers to knowledge creators, improve students' awareness of active exploration, and enhance their ability of self-monitoring in order to better adapt to online teaching and gain rewards.

#### 3.3.3. Strengthen technical support for online teaching

Since Internet Plus education is still immature at this stage, there is no deeper integration of information technology and teaching needs. Schools need to further optimize course resources and platforms, and establish a perfect online teaching monitoring system to guarantee the quality of teaching. They can focus on these several aspects, such as the functions, resources, and security of the online platform. According to the actual teaching situation of the school and the characteristics of blended teaching, the university should explore the functions of the online platform, improve the diversity and ease of use of the functions. In addition, school need to solve the problems caused by the instability of the operation of the online platform to teachers and students. Integrating the school resources and network resources is also important. University manager should make full use of the advantages of advanced technology, and provide a richer resource base for teachers and students. Finally, considering the safety of online teaching, universities need to pay attention to the training and development of teaching managers, regularly carry out technical training, introduce technical talents, and provide professional technical support to teaching. Meanwhile, the establishment of a perfect online teaching monitoring system is also the key to improve the quality of online teaching. This requires the school management and supervisors to establish a good online teaching system through scientific evaluation, establish a direction that helps to regulate teaching reform, and supervise the teachers' teaching in a comprehensive manner in multiple links to ensure the orderly development of online teaching through a proven "four-in-one" teaching quality monitoring system.

## 4. Conclusion

The new trend of Internet Plus education is bound to promote the rapid development of higher education and create more possibilities for teaching. Online teaching is not only the mainstream form in the post-epidemic era, but also will be the key mode in the future. As "MOOC (2013), flipped classroom (2014 and 2015), mobile learning (2017 and 2019) and makerspace (2015 and 2016) described in the recent Horizon reports" , universities will continue to explore hybrid teaching models, and the form of Internet Plus education will drive the progress of teaching reform. the progress of teaching reform.

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