

# Research on Policies to Improve Online Teaching Capability for Higher Education

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**Abstract:** The online teaching method has broken through the current tertiary education model, and the teaching method has been expanded in time and space through the application of educational technology. This paper reviews the current status of online teaching in higher education, discusses on how to optimize teaching resources in colleges and universities with the help of modern education technology, and explores online-offline hybrid teaching model.

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With the application of Internet+, big data, artificial intelligence and other technologies in the field of modern education, digital and information education have become the endogenous driving force of educational reform. Online teaching has broken the limitations of traditional teaching methods and expanded the time and space of teaching, fully demonstrating the concept of "students as the main body with teachers leading". Teachers pay more attention to teaching design and feedback, while also highlighting the autonomy of students. Compared with the traditional education model, online teaching has undergone great changes in teaching concepts, teaching methods, and teaching organization. In practice, online teaching not only brings challenges to

teaching activities and management, but also provides new attempts and opportunities for education and teaching reform.

This paper takes higher education as the research object, comparing online education with traditional education, analyzes the problems of online education, and discusses on optimizing online education methods, in hope of establishing a new normal for online and offline teaching through the application of modern education technology. Carrying out online education is not only an expedient measure to deal with emergencies and ensure the orderly progress of education and teaching, but also a broad practice and development trend of modern education.

## 1 The Advantages of Online Teaching

Online education has been widely practiced across the country, which is of great significance for promoting the development of online education in China and promoting universities to serve the society. Compared with traditional teaching methods, its advantages are mainly reflected in the following aspects.

### 1.1 Breaking the time and space limitations of traditional educational and improving the utilization of educational resources

From the perspective of time and space of learning, traditional education methods have fixed learning time and limited learning space. Students study in designated classrooms and libraries, and the learning method is specific; while online teaching has greater flexibility, where students can not only listen to the

live broadcast but also watch the course replays repeatedly, which can easily solve the students' individualized problems. Secondly, in terms of access to educational resources, the traditional education mode consumes more paper resources, and physical resources, etc.; while for online teaching, teachers can more easily obtain digital resources, simulation resources and other available text, audio network teaching resources, which improves the utilization of educational resources.

### **1.2 Diversified selection of online teaching platforms and socialized course audience**

In the process of online teaching, colleges and universities can choose different teaching platforms according to actual needs and teaching resources available. The PRC Ministry of Education also recommends 22 online teaching platforms for colleges and universities, including live broadcasting, conferences, classrooms, MOOCs and other forms, which are more convenient for teachers to make a reasonable choice based on their own usage habits, course characteristics, and academic analysis. At the same time, teachers can also integrate resources from different platforms to enrich the curriculum design. Secondly, in terms of facing audiences, traditional teachers have to face a class or several classes to teach a course, not only is the number of lectures limited by space, but it also increases the teacher's repetitive workload; while with online teaching teachers can face course students simultaneously, reducing the teacher's teaching time and repetitive work to a certain extent. If MOOC resources are shared within a geographical range, it can also attract a wider audience, and better reflect the function of higher education in serving the society.

### **1.3 Online education is conducive to the sharing of educational resources**

The uneven economic development in various regions of China has led to uneven distribution of educational resources. From the perspective of school operating conditions, online teaching is not subjected to geographical restrictions with adequate internet access compared with traditional education, while traditional education requires corresponding support in terms of human, material and financial resources. Therefore, the popularization of online education, especially in remote areas, enables students in underdeveloped areas to access and share the superior

educational resources of developed areas at a lower cost. In this way, the educational gap is narrowed down to a certain extent through the internet, which is conducive to the even sharing of national educational resources, thereby promoting educational equality.

Currently, online teaching has been widely adopted nationwide, showing certain advantages and has a huge impact on traditional classrooms, but there are also some problems worth considering in practice.

## **2 Problems and their causes in online teaching**

### **2.1 Unreasonable teaching organization arrangement, little interaction between teachers and students**

Online teaching puts forward higher requirements for teachers in terms of preparing teaching materials, designing teaching sections, and handling classroom management. Through the online teaching practice in this semester, it is found that some teachers simply use online teaching live broadcast tools or meeting formats, but still imitating the traditional offline classroom mode to teach, instilling knowledge one-way, with "full classroom" reappears in online teaching. This has not only increased the amount of information in the classroom, but also lead to teachers having no time to take care of students' grasp on acquired knowledge. Moreover, in the process of offline teaching, the visual and vocal interaction between teachers and students' are restricted by online mode and network quality. The limited information exchange in the interactive window, with the characteristics of hysteresis and text monotonicity, is also a great obstacle. This obstructs the communication between students and teachers, as students can't give feedback to teachers in time when they encounter problems. Secondly, some teachers have misunderstandings on "playing video" and "recording" in the process of online teaching. With MOOC and video play occupying a lot of lesson time and the lack of class discussion, guidance and concluding sections, this results in poor teaching design and insufficient teaching hours.

### **2.2 Low awareness of teaching platform and insufficient use of teaching resources**

In the process of online teaching, teachers use educational resources and rely on teaching platforms to teach. Choosing teaching platforms reasonably

and using online teaching resources scientifically is a major struggle for online education and teaching. There are many types of online teaching platforms, including live broadcasts, conferences, classrooms, and MOOCs etc. The functional stability of each platform is obviously different, and schools lack relevant platform training and understanding. Teachers generally have no awareness of the functional differences of each platform, leading to difficulties in choosing a platform suitable for related courses. Moreover, various platforms generally lack practical courses, have low software compatibility, inadequate network stability, and a large proportion of students use mobile phones to go online, making practical courses unable to be carried out smoothly online. Secondly, due to the insufficient allocation of school self-built curriculum resources and the limited teaching resources on the online platform, teachers cannot make full use of online curriculum resources to build courses. In the use of online teaching resources, problems such as excessive theorization of professional knowledge in the classroom, relatively vague cases, less cutting-edge knowledge, and poorly designed course content have also emerged.

### **2.3 Lack of Self-Learning Capabilities in Students**

Online teaching requires high level of students' self-discipline and initiative. As the exoticness fades, students are prone to burnout. As there is no fixed venue for online teaching, teachers and students are separated by computer or mobile phone screens in class communication and learning. Most students study at home or even outdoors, and the lack of face-to-face supervision by teachers makes online teaching lacking a sense of learning ritual compared to traditional mode. This makes it difficult to manage the learning status of students, greatly affecting the learning effects.

## **3 Policies to improve online teaching ability**

### **3.1 Changing perceptions and normalizing online teaching**

In the process of education reform in colleges and universities, teachers must first change their traditional teaching perceptions, explore innovative teaching models, and make talent nurturing a goal. On one hand, they must fully recognize the value of online teaching. On the other hand, they must

learn to use advanced tools such as internet and big data to promote education reform and innovation in colleges and universities. Teachers should increase investment in lesson preparation, sort out teaching materials, integrate teaching resources, and make full use of high-quality resources on the internet according to the professional learning conditions of students in different majors and grades, and enrich teaching content to combine knowledge and interest. Online teaching is not an expedient measure for teaching work. We should make full use of practical experience to explore and build a new model of integration of offline and online education.

### **3.2 Strengthening teacher training and improving platform operating capabilities**

Compared with traditional classroom-based teaching, teachers not only need to have excellent teaching capability, but also need to master the ability of online teaching sections design, online teaching resource application, teaching model innovation, student online interactions, online course assessment and feedback. Online teaching puts forward higher requirements on college teachers both theoretically and technically. First of all, college teachers need to update their own ideas, invest more time and energy to master more skills, and actively participate in relevant training. Secondly, colleges and departments should regularly organize online classroom application seminars, share experiences, compare and integrate teaching platform resources, motivate teachers' enthusiasm in using online resources, learn from established online teaching cases, and combine the actual characteristics of particular course and major to promote online teaching curriculum reform and innovation. Thirdly, schools should increase the informatization construction of smart classrooms, organize teachers to actively participate in training on the use of smart classrooms, actively build high-quality online courses in schools, enrich teaching resources, and provide guarantee for the full use of online educational resources.

### **3.3 Strengthening student learning management and establishing an effective course evaluation feedback mechanism**

The online teaching process highlights the prominent position of students in classroom teaching. This teaching mode further changes the roles of teachers and students, and highlights the importance of

students' self-learning in teaching. Therefore, teachers should adapt to the transformation of roles as soon as possible and be part of the classroom. Teachers should be "guiding people" rather than "being leaders", and use scientific and reasonable methods to strengthen the guidance of students' self-learning and be the "supervisor" of the learning process. Establishing an effective course evaluation feedback mechanism is conducive to grasping the learning situation of students and the effect of teachers' course implementation, and further optimizing teaching management. In order to break the barriers of teacher-student online interaction and improve students' self-learning ability and efficiency, teachers should establish an effective course evaluation feedback mechanism for online teaching and make full use of the advantages of online teaching. For example, teachers should sort out and summarize the teaching materials before lessons. They can publish the pre-class preview content to students in the form of small videos, PPT, etc., and use the interactive space of the platform to initiate inspiring pre-class thought process. In the process of using the online platform to teach, it is recommended for teachers to use live broadcast to deliver teaching contents, and organize online discussions and Q&A in real time. In the course of practice, teachers should further explore the teaching functions of the platform. The platform should also further simplify the operation steps and develop new functions to enhance the experience of online teaching and increase student participation and

interest. After class, teachers could use the platform's online assessment function to publish homework and tests to consolidate learnt content. In this section, it is hoped that the platform can optimize the quiz function so that teachers can import exercises and simplify the tedious workload of importing questions. The platform developed a special after-class evaluation segment so that teachers can understand the teaching effect of a lesson through real-time data while big data intelligent analysis of students' learning achievements is conducted to meet the needs of real-time teaching evaluation feedback.

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