

# Existing Problems and Strategy on Online Teaching in Universities in the Era of Artificial Intelligence Education

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**Abstract:** The advent of artificial intelligence education provides a new platform for the development of higher education. The application of artificial intelligence education enriches and expands the mode and connotation of traditional education, and plays a positive role in the supply of learning resources and the innovation of teaching mode. Online teaching is the high integration of modern information technology and education, and is an important path of education informatization. This paper analyzes the problems of online teaching in colleges and universities from two aspects of teaching subject and object, and puts forward corresponding countermeasures and suggestions, in order to provide useful reference for the reform of online teaching in universities.

**Keywords:** Artificial Intelligence; Online Teaching; Strategy

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## 1. Introduction

In the age of information, artificial intelligence provides both opportunities and challenges to higher education. Artificial intelligence in data-based learning, prediction and automation ability has attracted wide attention in the field of educational technology.<sup>[1]</sup> Artificial intelligence technology is widely used in the field of personnel training, which has a huge impact on the professional personnel training of various disciplines in higher education. The era of artificial intelligence education provides a broad space for the innovation and reform of the training mode of professional talents in higher education.

By analyzing the problems existing in online teaching in colleges and universities, this paper puts forward corresponding strategies and suggestions in order to provide reference for online teaching practice in colleges and universities.

## 2. Analysis of the current situation of online teaching

Artificial intelligence technology provides a possibility for the realization of large-scale personalized learning from the aspects of environment, resources and paths.<sup>[2]</sup> Online teaching emphasizes learner-centered, expands the learning time and space, and realizes the sharing and opening of high-quality learning resources. Since 2014, colleges and universities nationwide have successively tried online teaching, and some problems have been exposed in the long-term teaching practice.

### 2.1 Teaching subject level

In the age of artificial intelligence, the role of teachers has changed. Teachers are no longer the only source of knowledge or the authority of knowledge. Therefore, in addition to imparting knowledge, the core value of teachers lies in "educating people", and their important responsibility is to guide students to learn to learn, which also puts forward higher requirements for teachers. Teachers are the main body of teaching activities, and most of them are inexperienced in online teaching. The main problems are as follows:

How does teaching philosophy change? Online teaching is different from simply moving the offline classroom to "online". In traditional teaching, the teaching mode is unitary and emphasizes "teacher as the center". The teacher is the leader of the classroom. Online teaching emphasizes "learner-centered", which has the characteristics and advantages of breaking through time and space restrictions, meeting personalized learning needs, diversity of learning resources and repeatability of process.

How to adjust the teaching design and teaching program? Online teaching is prone to problems such as limited communication between teachers and students and lack of emotional experience. How to give full play to the advantages of online teaching and avoid the above problems, we need to redesign the teaching activities from the three dimensions of pre-class, in-class and after-class to improve the teaching quality.

## 2.2 Teaching object level

Online learning on such a large scale is also new and a new challenge for students. In online learning, apart from the cooperation with teachers, how can students exert their subjective initiative and change their learning habits? How to improve independent learning ability?

In the network environment where teachers' management is weakened, students cannot resist the temptation of electronic products. Students and teachers cannot face to face, and the "sense of presence" experience in class is missing, and the self-control ability is poor. Due to the "dual subjectivity" of online teaching, students are both the subject and object of online teaching. The new teaching mode must require students to adjust their learning mode, enhance their psychological adjustment ability and change from passive to active.

## 3. Countermeasures and suggestions of online teaching

Artificial intelligence profoundly affects learning, teaching, resources, the environment, teachers and students in the education system, as well as education.<sup>[3]</sup>

First, Change teaching philosophy. Under the background of online teaching, teachers and students cannot face to face. No matter what kind of teaching mode, students still rely on independent learning to a large extent. Therefore, we should change the teaching concept and insist on "student-oriented and teacher-oriented". Cultivate students' independent learning ability based on the Internet, fully mobilize students' enthusiasm and initiative in learning, and promote students to explore and think more independently.

Second, use various teaching modes flexibly. At present, the typical online teaching mode, mainly includes online courses, online live teaching, recorded courses, open learning these several. Teachers can flexibly adopt the combination of various teaching methods according to the nature of the course and the characteristics of the students, rather than using a single method. For example, the combination of recorded and broadcast courses and live teaching should be used to release teaching resources for students to preview before the class, teach the key and difficult points of the course in live teaching, and release teaching videos for students to learn repeatedly after class. Fully meet the personalized learning needs of students, and increase the sense of on-site experience.

Third, optimize instructional design. For online teaching, students cannot keep their attention for a long time. Therefore, online courses need to be "fragmented". It is recommended to split the teaching time and limit each time to about 20 minutes. In each period of time, learning objectives and tasks should be the focus and difficulty of teaching, and rich interactive means, such as increase the question answering, comment on students' opinions, etc., can increase students' participation and fully attract students' attention.

## 4. Conclusion

Education is the human capital engine to promote social development. As a high-end form of education informatization, intelligent education plays an important role in guiding the direction of higher education reform and improving the quality of talent training. It is necessary for educators to rethink the trend of education in the era of artificial intelligence, and how to make full use of the advantages of artificial intelligence technology, reshape the future education ecology and other key issues, deepen the reform of teaching, and improve the quality and level of teaching.

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