Research on Information-Based Teaching Reform in the New Era Based on the Concept of "Internet + Education"

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Abstract: In recent years, colleges and universities have begun to explore and research on teaching based on internet. The construction of the mobile teaching platform and the research on the mobile teaching mode provide reference for the colleges and universities to carry out mobile teaching. This paper starts with the concept of "Internet + Education", expounds the connotation of "Internet + Education", and analyzes several typical models of "Internet + Education" that have appeared in recent years. This new teaching mode is conducive to colleges and universities to carry out information-based education, teaching reform and innovation.

1. Introduction

The Internet has brought major changes to the production and life of human beings, and it has also brought a huge impact on education. With the further development of information technology, new models such as digital campus, online classroom, smart learning and big data evaluation are pushing education into the Internet+ era. "Internet + Education" is considered to be one of the most potential development areas in the future [1].

Fragment teaching and mobile learning have a certain foundation in domestic colleges and universities. However, because of its lack of systematisms, it is only used as an auxiliary means for college teachers to teach on-site and students to study after class. The vigorous development of internet and social networks has made the students desire to acquire knowledge and self-learning more urgent. At the same time, it also helps college teachers and students to realize the ubiquitous interaction of knowledge and information. It provides an entry point for colleges and universities to carry out mobile teaching.

The new generation of communication technology has promoted the universal application of the mobile Internet and promoted the vigorous development of social media. Students in traditional art and design colleges are no longer satisfied with learning and absorbing knowledge in traditional classrooms, and will be more attention to social networks and even the internet [2]. This way of taking students as the main body and using intelligent terminals to automatically acquire knowledge automatically is called "Internet + learning", and classify it as informal learning. However, because this mobile learning mode is out of the guidance and supervision of teachers, the content of learning is too fragmented, lack of systematisms, and often deviates from the scope of professional syllabus. Therefore, it is difficult to be accepted, assessed and certified by the school.

We put forward the idea of developing mobile teaching in colleges and universities through various investigations and analysis. In the teaching based on mobile, teachers are introduced into mobile learning of the students. By providing relevant materials purposefully, teachers conduct discussions and exchanges around the important and difficult points of teaching [3]. Combined with corresponding practice, guide students to learn relevant knowledge and expand knowledge in a planned way. It makes students to learning complete and systematic, and it is more convenient for teachers to comprehensively evaluate and certify learning achievements of the students.

2. The Connotation of "Internet + Education"

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Mobile teaching is a teaching mode that uses intelligent mobile devices to carry out teaching activities. The “Internet + Education” mentioned in this article refers to the use of mobile teaching platforms by teachers to carry out teaching activities systematically and purposefully. The activity is based on the course syllabus and combined with the teacher's lesson plan. Both teachers and students use smart mobile devices to exchange teaching-related information on the mobile teaching platform. There are no time and place restrictions on the development of teaching activities.

In addition, through the open sharing of educational and technological resources, it provides support for innovative activities. And provides educational public services for national learning and lifelong learning. It is necessary to promote the construction of management information systems for students, faculty, and educational institutions, and find a nationwide and interconnected cloud service system with deepen reforms, innovate mechanisms, and improved educational governance capabilities. Make full use of information technology to promote the reform of management mode, and put the reform in the context of “Internet +”. It is necessary to use education information to support innovation and entrepreneurship education and talent training.

3. Typical Model of Internet + Education

3.1 The Model of Learning Anytime and Anywhere (U-Learning)

In 1988, Mark Weiser of Fuji Xerox Company of the United States first proposed the concept of ubiquitous computing. In 2006, developed countries took the pan-network era as an important part of the strategy of scientific and technological development. Japan has launched the “U-Japan” program. The US government has proposed “Vision 2020”. Europe has proposed the LEONIE project. In China, on December 2, 2004, the “China Pan-Net Forum” was held, and a famous Academician of the Chinese Academy of Engineering proposed the concept of Ubiquitous Network in 2005. U-Learning is a new way of learning, which means that with the support of ubiquitous computing technology, students can learn at any time, any place, and using any information technology tool [4].

3.2 Flipped Classroom

“Flipped Classroom” was rated as “A Major Technological Change Affecting Classroom Teaching” by The Globe and Mail of Canada. Originated in the United States in 2007, Jon Bergmann and Aaron Sams, two chemistry teachers. The main feature of “flipped classroom” is to reverse the traditional teaching habits and teaching mode [5]. Once the students listened to the teacher's explanation in class and went home to do their homework after class. It has become the teaching model of today such as learn at home through video before class, and completing homework under guidance in class.

3.3 O2o Hybrid Teaching

O2O means online to offline. It is a new business model in which consumers place orders on the internet, and the physical store is responsible for the delivery and installation of the goods. O2O hybrid teaching is to learn from this business model and apply e-commerce to teaching. Use the internet to integrate various online and offline high-quality teaching resources to build a new interactive teaching model [6].

4. The Trend of Teaching Reform in Colleges and Universities under the Background of “Internet + Education”

The vigorous development of the internet and technological changes have brought the world into the “Internet +” era. College students can easily obtain various learning resources through smart terminals. This method is based on personal interests, using fragmented time, and self-learning. Most of the mobile teaching in colleges and universities in my country belongs to informal learning. Although informal learning is a useful supplement to college teaching, the content of learning is often beyond the scope of teaching [7]. The whole process is not carried out around the syllabus, and

it lacks systematisms and comprehensive. To this end, colleges and universities still need further teaching reform and improvement as follows.

4.1 Improve Information-Based Teaching Infrastructure

Ensuring capital is invested in the construction of information facilities. Improve the information-based teaching environment. Build teaching resource bases, high-quality online courses, simulation training bases and other information-based teaching facilities. Build a management information system for business practice and training, in order to expanding the coverage of the campus network, improving the operating load of the campus network. Build fully functional multimedia classrooms, so as to ensure the smooth progress of information-based teaching.

4.2 Establish and Improve the Information Security Mechanism

In the new era of “Internet + Education”, it is necessary to make information-based teaching widely used, and to reform the current management system and establish a sound information security mechanism. Schools should clarify the tasks and management responsibilities of information development, and establish an educational information management system and an efficient and practical operating mechanism that meet the needs of school education information development. In this way, the responsibility for information-based teaching can be assigned to people and management is in place.

4.3 Colleges and Universities Should Innovate Information Teaching Methods

In the “Internet+” era, teachers and students can obtain resources from the internet. Surprisingly, there are far more information resources than the classroom. The popularity from the internet is accompanied by the improvement of video production technology. Video transmission on the internet has become the norm, and the granulation of teaching knowledge points has become a reality. Therefore, we must conduct further in-depth research on granular learning in the “Internet +” era. Combined with the characteristics of higher vocational education and modern teaching concepts, innovative teaching models to promote the reform of school teaching and improve the quality of personnel training.

5. Conclusion

In the “Internet+” era, the modern teaching model that has lasted for hundreds of years has been greatly challenged and is undergoing a profound change. However, the primary task of colleges and universities is still to cultivate high-quality technical and skilled talents. For the new era of “Internet + Education”, it is necessary to analyze the specific situation of schools and students and meet the challenges. Therefore, colleges and universities should change the traditional teaching concept in time. Through the mobile teaching platform, a harmonious, comfortable, convenient, efficient and diversified learning environment is created for students. In order to promote the comprehensive development of students.

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