

Research on English Education online Learning Platform based on Big Data of Education

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Abstract. In the modern social economy and technological innovation and development, education big data technology research is the main issue of scientific research. According to the accumulated experience of education innovation in recent years, the construction and promotion of big data network information platform can provide more convenient conditions for English education, but most colleges and universities have not realized the importance of network teaching mode, nor have they strengthened the research on network teaching technology in the era of big data. Therefore, on the basis of understanding the development trend of big data of education, this article discusses the design structure of network learning platform of English education deeply, and puts forward effective educational reform measures according to the problems faced by Chinese colleges English education.

Keywords: Big data for education; English education; Online learning platform; Level of informatization

1. Introduction

Nowadays, the rapid development of big data technology has become the focus of attention of all countries in the world, and the application effect of relevant theoretical equipment has become an important index to evaluate the comprehensive national strength, triggering an unprecedented information revolution worldwide. Under the influence of big data technology theory, the innovation and development of education informatization has become the main direction of modern higher education, which has made important contributions to the integration and application of educational resources. Under the guidance of big data, English teaching in Chinese colleges and universities has gradually expanded the application scope of network teaching. Not only presents the development trend of open network teaching, but also a large number of online learning platforms and teaching materials are provided convenient conditions for different English lovers and learners, which further accelerates the pace of the innovative development of English education in our country. Big data, also known as massive data, is composed of multiple data with complex structures and diverse types. After effective processing by cloud computing technology, it can further process and share data information. In the construction and development of modern society, big data is a cutting-edge technological means, which can deeply dig the unique value contained in information and fully show its own characteristics: First, it can use data mining and data processing technology to study and explore massive data resources; Secondly, big data has a rich variety of objects and can correctly process different types of data information. Third, the speed of big data is relatively fast, which is essentially different from the traditional data mining technology. Finally, the commercial value of big data is relatively high, and more deep content can be mined from it. For the innovation and development of education, big data technology is mainly reflected in teaching content, teaching form, teaching evaluation and other aspects, and the final positive impact is reflected in teaching concept, teaching method, teaching model, teaching technology and other aspects. For example, big data technology gets rid of the restrictions of traditional teaching concepts, and helps teachers and students to analyze and apply massive data with big data thinking, so as to judge the groups receiving education more objectively and truly. Big data technology also plays an important role in the construction and development of smart campus. It can not only provide a new way for the innovation of higher education, but also effectively change students' learning concepts

and encourage and support students to form self-learning and continuous innovation of learning consciousness.[1-3]

However, from the perspective of overall education development, the development of big data in education also faces many problems, which are reflected in the following aspects: On the one hand, the traditional teaching concept has a deep influence. As a language subject, English teachers pay more attention to the cultivation of students' language communication ability in the process of teaching guidance. However, the actual educational guidance may be affected by subjective or objective factors, so they continue to follow the traditional educational concepts and directly transfer relevant theoretical knowledge and communication skills to students, and do not set up diversified educational activities to encourage and support students to apply what they have learned to practical problems. Although this teaching method can achieve teaching results in the short term, it is difficult to stimulate students' interest in learning continuously. In the long run, it will make students bored and directly affect the overall quality of English teaching. Therefore, teachers must change traditional teaching concepts, adhere to advanced and scientific teaching concepts, and actively mobilize students' principal position in educational guidance. Make them learn to make reasonable use of educational big data technology to complete the expected teaching tasks; On the other hand, the development level of educational informatization is too low. Now, although the computer technology has been applied to practice teaching, the practice teaching system is still in the traditional mode because the teacher-led teaching status has not been changed. The multimedia technology is the foundation support of the education guidance. Therefore, the development level of education informationization is limited and the comprehensive quality of professional teachers needs to be improved. On the basis of understanding the development trend of big data in education, this paper deeply discusses the system architecture of English education network learning platform, and puts forward some educational management measures that meet the development requirements of the new era, so as to provide an effective basis for college English education reform.[4-6]

2. Methods

2.1 Construction Ideas

Under the background of big data in education, the construction and promotion of English education online learning platform must abide by the correct concept of learning support service and pay attention to the following three contents: first, students should be regarded as the subject of education and their subjective initiative should be fully activated; Secondly, we should regard the quality as the goal of education, pay attention to the construction of high-quality educational resources and provide high-quality educational services. Finally, we should show the characteristics of independent learning and continuously optimize the education management system based on the essential relationship between students' all-round development and distance and open education.[7-9]

According to the analysis of the education network architecture diagram shown in Figure 1 below, platform construction should have the following characteristics: First, integration. To innovate the construction of the network information platform, it is necessary to combine all kinds of education and teaching resources and learning links at all levels together and operate in the same technical environment. It can not only avoid the repeated operation of students in different support service systems, but also continuously enrich the resources of the education management system and provide teachers and students with different types of learning ways. Second, openness. The openness of the overall platform design is mainly reflected in the teaching content, teaching form, teaching means, information feedback and other aspects. Professional teachers can build a communication bridge between different forms of education on this basis, so as to facilitate students to understand and apply the knowledge they have learned more quickly. Third, comprehensive. The e-learning platform not only reflects the support services for learning, but also strengthens the basic functions of teaching management and control. It can effectively deal with various problems during

teaching, scientifically adjust various elements and interrelationships of support services, and quickly find the best nodes. Finally, scalability. As the design of the overall platform mode is an open system, it should not only meet the needs of various educational development, but also pay attention to the construction of a learning social environment to fully meet the needs of different groups for learning support services.

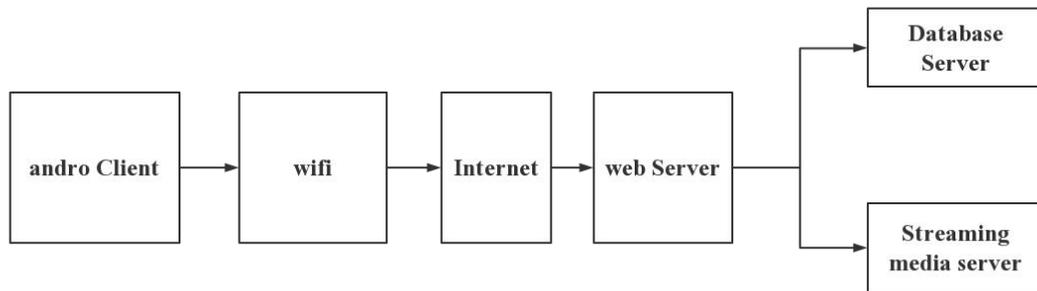


Figure 1. Structure diagram of education network system

2.2 Platform Functions

The e-learning platform should make full use of modern technological means and a number of educational resources to provide students with an independent learning environment. This environment should be oriented to the whole process of education and pay attention to providing quality services for different teaching, including teaching by teachers, communication between teachers and students, and independent learning by students, so as to ensure that different teaching links can be managed and implemented in the same network application platform. The specific functional structure is shown in Figure 2 below:[10-12]

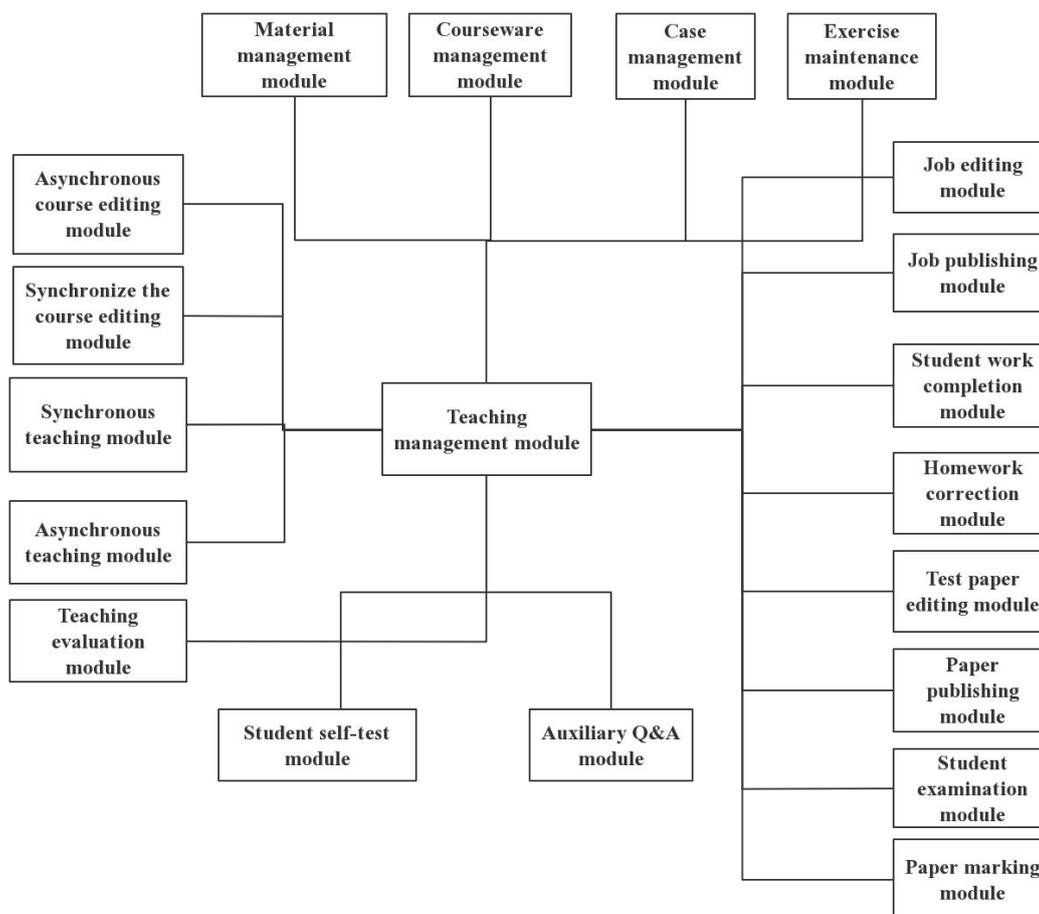


Figure 2 shows the structure of the platform functionality

Based on the above analysis, it can be seen that the overall design of the network learning platform includes several modules, such as educational resources, teaching assistance, teaching implementation and teaching evaluation, among which the teaching assistance link supports teachers' teaching, Q&A, homework assignment, after-class correction, paper maintenance, data analysis and other functions. Teachers can make and upload multimedia courseware on the platform. To answer questions raised by students remotely, to quickly analyze students' learning status, and to formulate effective educational reform measures.

2.3 Overall Design

The software system of the network learning platform uses B/S mode. Users only need to input the IP address of the system through the web browser to directly access the server and carry out various functions. In specific practice, the use of Dreamweaver, Photoshop and other design and implementation of education network pages, the use of dynamic web page production technology Java, JSP and other dynamic web programming, system function realization needs the database system as the support, the database is SQL Server 2000, Using Resin2.0 as the JSP engine, the overall structure is shown in Figure 3 below:[13-15]

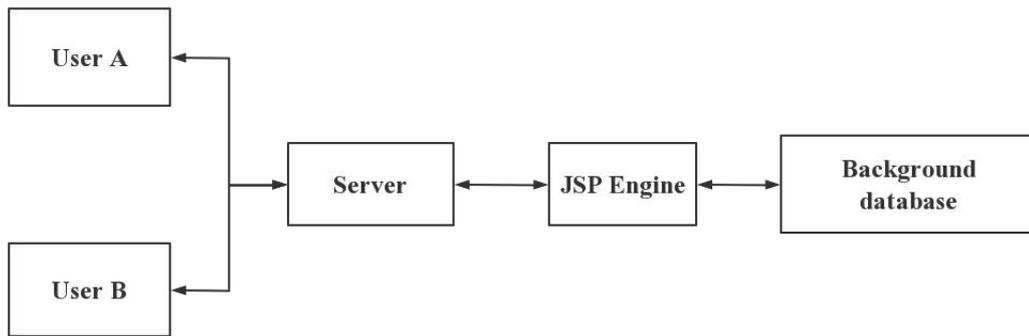


FIG. 3 Structure diagram of system design

According to the analysis of the platform function design, it is found that during the operation of the platform, the user operation interface should be divided into the third part of teachers, students and management according to the usage characteristics of different users, while the software structure is divided into two levels, as shown in Figure 4 below:

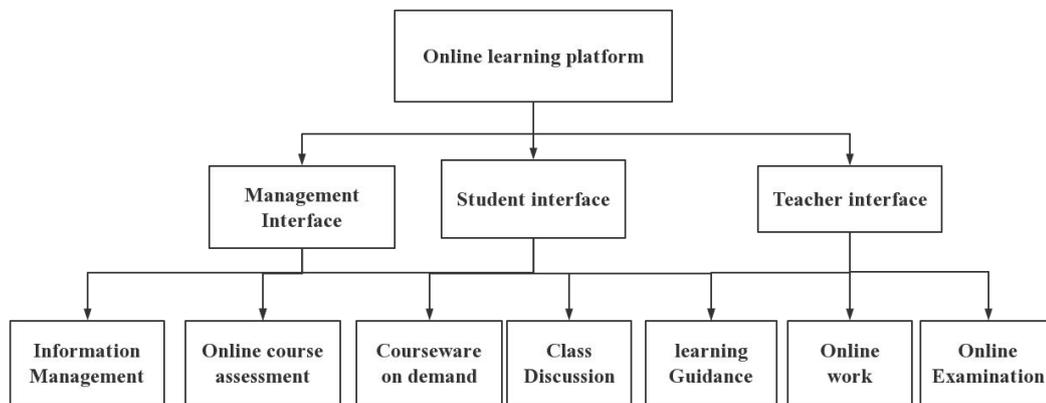


Figure 4 Software structure diagram

According to the above analysis, the teacher interface, student interface and management interface belong to the presentation layer, which can facilitate all kinds of users to truly realize human-computer interaction. Information management, online course, course discussion, student guidance and so on belong to the application layer, and system users can choose functions to operate according to their own needs.

According to the analysis of the campus network topology diagram shown in Figure 5 below, the English education network learning platform is a distance education teaching service support system based on the computer network. It is applied in the education management of colleges and universities. It not only needs to connect the main teaching building and office building, but also needs to be equipped with high-quality servers to ensure that multiple users of the system can complete various operations at the same time. Truly achieve the expected educational management objectives.

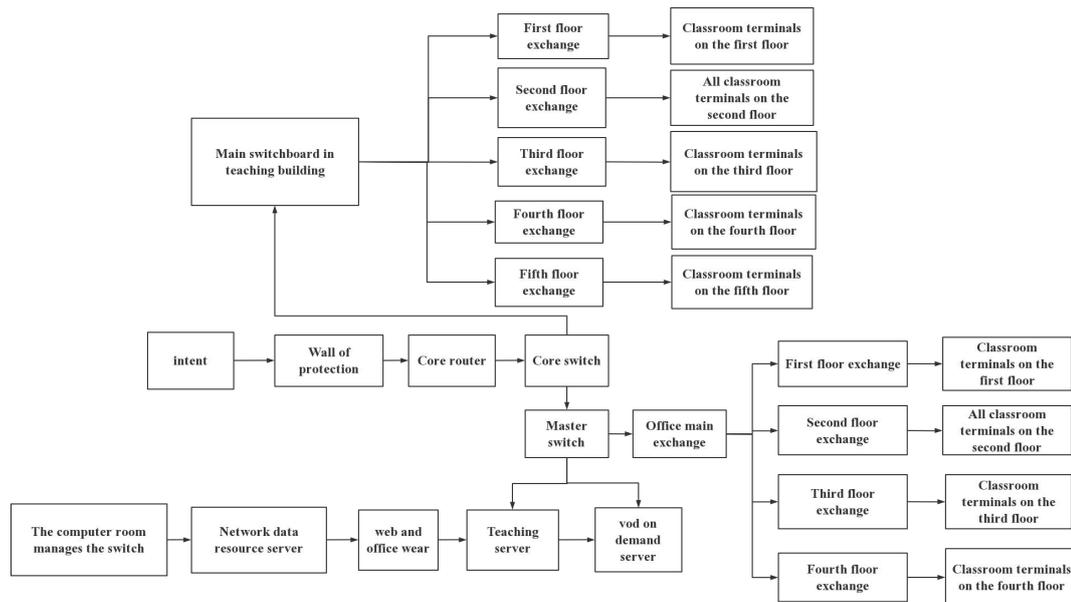


Figure 5 Campus network topology diagram

3. Result analysis

In the innovation and development of big data in education, the construction of online learning platform for English education in colleges and universities is encouraged and the promotion work has been widely concerned by all sectors of society. How to fully demonstrate the application advantages of big data technology in education and cultivate more excellent professionals for social construction and development is the main issue discussed in the field of education at present. After determining the main structure and basic functions of the English education network learning platform, we should actively explore the new network classification learning mode, which includes writing learning, oral training, word application and other content. For example, first of all, learn and train English words based on MOOC platform. After clarifying the word list, use the way of word interspersing to deepen students' impression; Secondly, to construct relevant teaching situations, so that students can truly understand the application method and basic meaning of words; Finally, using the phonetic system to score, feedback the practical learning effect to the students, correct the students' incorrect pronunciation. At the same time, when we actively carry out the innovation and development of big data technology in education, we should accurately position the education of online learning platform. We should not only play our auxiliary role in daily education, but also pay attention to the sharing of applied education information resources, so that students can master more professional knowledge in learning and training. In addition, in college English education management, it is necessary to jointly promote online and offline comprehensive education activities, focus on bridging the distance between teachers and students, so that students can share learning experience in a variety of teaching activities, master more English knowledge, fully integrate educational activities and campus culture, continuously mobilize students' awareness of independent exploration, and stimulate students' enthusiasm for English learning. The emphasis on creating a good learning atmosphere and deepening the communication between teachers and students can not only achieve the expected effect of education management, but also provide an effective basis for the reform and development of modern English education.

Conclusion

To sum up, in the rapid development of the Internet and cloud computing and other technologies, all kinds of data resources have become the main factors influencing the innovation and

development of various fields of society. Especially in the field of education, the main problems in the field of education in the new era are the rational use of big data technology theory, the construction and promotion of high-quality online education learning platform, the enrichment of various functions of practical education platform, and the accurate positioning of the teaching direction of online learning platform.

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