Research on Higher Vocational Computer Education Based on Big Data Background

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Abstract. With the application of big data technology becoming more and more mature, in the process of computer education in higher vocational colleges, we should adapt to the basic environment of the rapid development and application of intelligent technology, and stress the professional characteristics, it is necessary to work out a talent training plan that integrates big data and computer education in higher vocational colleges, reconstruct the computer education mode and teaching idea, and improve the training efficiency of computer talents in higher vocational colleges. Based on the big data environment, this paper puts forward the corresponding reform strategies in view of the practical problems existing in higher vocational computer education.

Keywords: Big Data, Higher vocational education, Computer, Education model.

It is of great significance to promote the further development of computer teaching reform, optimize the way of computer teaching, form a perfect computer teaching system and promote the all-round development of students. Under the background of big data, it is necessary for computer teachers in higher vocational colleges to strengthen the application of big data information technology.

1 THE PROBLEMS OF HIGHER VOCATIONAL COMPUTER EDUCATION UNDER THE BACKGROUND OF BIG DATA

The main characteristic of higher vocational education is to pay attention to the training of employment-oriented specialized talents. Therefore, the reform of higher vocational education should start from this characteristic and look for the educational reform mode that satisfies the characteristics and educational orientation of higher vocational colleges, computer Technology is a very strong tool of professional, so in the relevant teaching courses to focus on training students' practical ability and professional quality, with a certain degree of college characteristics.

1.1 The teaching and learning model is too traditional

With the deepening of the education system reform in China, the students need more and more computer teaching resources, and the traditional computer education model is difficult to adapt to the current changes in education. At the present stage, we should also play a role in promoting the teaching reform of big data resources, and make great efforts to eliminate the disadvantages of indoctrination and mechanical teaching in the past, and further improve students' practical ability as the main direction of the teaching reform, to solve the problems of teachers as the main body in the past, to effectively improve students' initiative in autonomous learning, to break through the problems of lack of practical teaching in higher vocational computer education, too rigid teaching ideas, and low participation of students in learning, etc. , improving the quality of computer teaching in higher vocational colleges. From an objective point of view, the vast majority of higher vocational colleges still continue the traditional "cramming and inculcating" teaching mode when they carry out computer education, it makes it difficult for students to digest the computer knowledge they have learned in the actual learning process, and does not serve the purpose of strengthening and exercising their computer ability. Teachers

occupy the main position in the whole teaching process, and students are too passive, thus causes the higher vocational college computer education level to be on the low side, the effect is not ideal and so on present situation.

1.2 Inadequate provision of teaching resources

Higher vocational colleges do not have a clear understanding of the background of the times, which leads to the lack of attention to computer education, especially in today's rapidly changing computer technology, in the process of computer teaching in many higher vocational colleges, the form of the content still does not conform to the requirements of the current era. In the past, the computer teaching in higher vocational colleges paid too much attention to the book teaching, the content of the teaching material was relatively limited and the teaching time was short. In the new era, it is necessary to optimize the resource allocation of computer education and teaching with the help of big data technology, so as to effectively meet the needs of students' individualized learning. Especially in the context of the expansion of the scale of computer education in higher vocational colleges, the increasing diversity of students' sources and the increasing complexity of teaching management, a perfect supply mechanism of teaching resources should be established, to raise the awareness of students to obtain teaching resources on their own initiative, to meet the needs of students' autonomous learning based on big data technology, to promote students to master the methods of obtaining teaching resources on their own initiative, and to break through the drawbacks of the construction of teaching environment, in order to meet the needs of students personalized, innovative and extensive learning.

1.3 Inadequate implementation of the concept of teaching students in accordance with their aptitude

Curriculum setting is a powerful tool of school teaching and a necessary means of training students. The quality of curriculum setting is directly related to the cultivation of students' ability. At present, the computer teaching in higher vocational colleges has the problem of insufficient implementation of the teaching idea of teaching students according to their aptitude. Some higher vocational colleges lack the idea of teaching students according to their aptitude, and the interest of computer education teaching is low. Some higher vocational computer education can not widely draw teaching resources, can not use big data technology to analyze students' learning situation, can not rely on big data technology to effectively solve the contradiction between supply and demand of teaching resources. In addition, the traditional network teaching takes the teacher as the center, the teacher carries on the broadcast teaching in the teaching platform, the student is in the passive acceptance status, the entire teaching does not have the teacher and the student's on-the-spot interaction, the teacher can not carry on the face-to-face study instruction through the platform, the study effect is worrying. There are also students who do not have a clear sense of autonomous learning, do not have a clear goal of career development, do not understand their own learning situation and the needs of the employing units based on data resources, and do not have a well-targeted learning practice, it is not conducive to the training of students' computer skills, and it is difficult to give full play to the value of computer education and management. The failure to make full use of online and offline activities to develop students' abilities results in many students only having empty theoretical knowledge, and there are deficiencies in the process of practical operation, and some knowledge of the use of the degree is not enough.

2 INNOVATION STRATEGY OF HIGHER VOCATIONAL COMPUTER EDUCATION UNDER THE BACKGROUND OF BIG DATA

The reform of computer education system in higher vocational colleges in the era of big data should always take employment as the ultimate goal and combine with the new employment situation at present to train applied talents in

different directions in the course setting, students' interests should also be taken into account to ensure that their choice of major direction is in line with their own positioning and interests. In the era of big data, the setting of computer education courses in higher vocational colleges should always meet the impact of the times and society on the employment of students according to the needs of enterprises and posts, only in this way can the employment problem of students be guaranteed to the greatest extent.

2.1 Cultivating students' big data thinking through big data applications

When teachers explain the basic course of computer application, they can introduce the explanation and application of big data technology into the classroom, and train students' thinking through the explanation of big data, let students have big data thinking ability while learning computer technology, so that students can adapt to the big data era, better use of computer technology in society. At present, the traditional basic courses of computer application mainly focus on the maintenance of computer hardware, the use of tools and other knowledge points that do not involve big data, and have not been updated, at the same time in the teaching mode is still the teacher to impart knowledge, but not let students practice the link, it is easy to cause students in their own practice when it is difficult to apply basic computer knowledge. Teachers can use big data technology to help students understand the changes in computer applications. For example, when explaining the "network tools software", teachers can introduce students to such as: "Questionnaire Star" and other online questionnaire tools, to the network of the questionnaire. The teacher can do a small experiment, the teacher designs the content of the questionnaire as: "Can you use Microsoft Office software skillfully, such as PPT?" The teacher can put the questionnaire on the website or some platform for several days. When the next class, teachers can through the Internet questionnaire results, so that students see all the data and analysis of the situation. Big data refers to the analysis and processing of all collected data, rather than a sample survey. Teachers can through such a small experiment, so that students can see the simple application of big data technology, but also can train students big data thinking. At the same time, teachers can also stimulate students to think about big data by asking them questions about it. Teachers can ask students to answer questions such as: "What do you think are the drawbacks of big data? What do you think big data has done to your life?" Teachers can ask students to reflect on big data, let the students improve their big data thinking, form the thinking habit of big data, change the big data learning concept.

2.2 Fully interactive teaching using Internet technology

With the vigorous development of information technology, Internet technology has also been sublimated. The cost of communicating over the internet is getting lower and lower, so there are more and more applications of the Internet. The development of Internet technology has also led to the development and sublimation of the field of education, so that teachers can use the internet to carry out teaching activities, teaching without interruption, regardless of location. Teachers are one of the important tools and directions for cultivating students in colleges and universities. Teachers' practical ability and teaching experience directly affect students' learning ability. In addition, the computer industry requires a high level of hands-on ability for the relevant professionals. Therefore, when training students, the relevant computer education teachers should fully consider the training of students' hands-on ability and pay attention to the combination of theory and practice, and mainly practice-oriented, through training students to understand how to master the corresponding computer knowledge applied to practice, which plays a vital role in improving students' employability. Enhanced interaction via the Internet can make students more willing to ask questions of teachers, thus making students more proficient in computer technology and computer operation.

2.3 Pay attention to students' individual demand and reconstruct computer classroom

The "Internet +" teaching model grasps the student study process data through the Internet technology and the big data analysis, the system can formulate the corresponding study plan for each student, personalized tutoring teachers can use internet technology to constantly improve communication and communication with students in the classroom, to keep the whole process of interaction and exchange of views in the classroom, so that students can participate in the classroom, with the teacher's teaching rhythm, it can improve the efficiency and interest of the class, stimulate students' interest and confidence in learning the basic technology of computer application, and realize all-round interactive learning. For example, teachers can use classroom interaction in platforms such as Tencent classroom to teach, allowing students to seek help from teachers at any time. At the same time, when teachers assign homework, when students have problems that can not be solved when using the software, they can ask teachers for help at home through the chat software, and do not need to call or personally looking for teachers, so that students at home can also accept the teacher's guidance, greatly enhanced the interactive teaching. Because students often do not want to meet teachers directly to solve problems, so choose online teaching platform to help teachers is more likely to be accepted by students. Similarly, when teachers teach in class, they can use platforms such as "Rain Class" to let students exchange bullet-screen information, so that students can directly ask for help from bullet-screen when they have problems, and do not need to interrupt the teacher's rhythm of class, so that can achieve a comprehensive interactive teaching arrangements.

2.4 Improving teaching content through big data technology

With the development of network technology, more and more people are willing to share their own resources and some teaching contents in the network. Many teaching skills and teaching methods can be changed by analyzing these teaching resources, according to the other teacher's teaching experience summary to perfect own teaching way and the teaching content.

When arranging lesson preparation, the teacher can pass big data technology, select a few resources in the network to undertake summary and analysis. For example, when explaining an Excel spreadsheet design course, a teacher can use the internet to look at the teaching records shared by other teachers, and to look at the teaching difficulties. Teachers may find that in most lesson plans, the use of Excel functions is listed as a teaching difficulty. According to the result of this analysis, the teacher can choose to write a summary of the table function in common use when preparing the lesson, so that the students can first master some common table functions, use these common functions as a base to learn more difficult and longer function expressions. By analyzing other teachers' teaching resources, teachers can get teaching difficulties and explain them, which can improve their own teaching contents to a great extent. Similarly, teachers can use big data technology, through the network database, compare some of the more commonly used Excel table function expressions, to enable students to effectively master the skills of daily use of forms in a shorter time, so as to achieve the goal of efficient learning of basic computer application courses, so that students can reduce the pressure. Teachers can then use the internet to summarize the latest library of functions and their meanings in a table that interested students can query to get the usage and expression of the function they want to use.

3 CONCLUSION

The era of big data has begun, and the application scope of big data technology has gradually expanded. At the same time, it brings great challenges to computer teaching in higher vocational colleges, it also requires teachers to create new ways of educating students about the role of big data, so that they can use the right thinking and vision to look at big

data, learn about computers, and improve their operational skills, to meet the relevant needs of enterprises for computer talents.

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