Research on MOOC Teaching Quality Evaluation System Based on Big Data Technology

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Abstract

With the constant progress of science and technology, MOOC teaching based on big data technology has gradually arisen. This article mainly introduces the MOOC teaching and big data technology, analyzes the main problems in the quality management of traditional computer teaching, so as to put forward the technology of data MOOC teaching quality evaluation of the main advantages.

Keywords

Big data technology; MOOC; teaching quality evaluation.

1. MOOC Teaching

With the development and progress of information technology, MOOC， education and teaching based on MOOC are gradually emerging, which revealed a teaching reform and advanced the progress of China's education reform. Some people think that MOOC teaching is an online university, students can rely on the network to learn to complete their own courses anywhere. There are also educational scholars who regard MOOC teaching as a new form of network development. From the perspective of different educators, it is not difficult to see that MOOC teaching has two characteristics. One is that MOOC teaching can be shared openly, namely, MOOC is not restricted by time, place and crowd. People have equal rights to freely participate in MOOC teaching and conduct course-related learning in MOOC teaching. The second is that MOOC teaching is large-scale and expandable. The establishment of the MOOC teaching platform is conducive to solving the shortage of teaching resources in some areas, making up for the shortcomings of teaching resources and insufficient teacher resources, and at the same time forming a special school. In MOOC teaching, the teaching content is often in the form of multimedia such as video. This form is easy to attract students' attention. In addition, each student can also perform a quiz after watching the video to consolidate and strengthen the content of previous video. MOOC teaching is also a platform for teachers and students to interact. It can solve the various problems and difficulties encountered in learning and life for most students. There are specialized teachers to interact and answer, so as to realize the interaction of MOOC education teaching mode[1].

2. Big Data Technology under MOOC Teaching

The continuous advancement of information technology has brought great changes to people's learning and living, especially the big data technology. The big data technology under MOOC teaching has received wide attention from all walks of life, especially education. Some educators believe that big data is the source of gaining knowledge and creating value. Big data is not only important to the market economy and organization, but also more important to the development of education. Thus, big data may have an influence on education from every aspect, including classroom teaching, education resolution and evaluation on teaching. MOOC teaching is closely connected with big data, with the help of which, MOOC teaching brings a thorough reform to the traditional teaching theories, teaching methods and means of evaluation. In the context of big data, the evaluation of MOOC teaching quality is different from the traditional evaluation of education and teaching, and it has its own distinctive characteristics. The most fundamental thing is that there are many learners that

need to be accommodated under the MOOC teaching based on big data technology, while under traditional teaching, specific learners should be analyzed in advance, and then a scientific and reasonable teaching model will be given to specific learners, according to which, appropriate teaching methods will be adopted. As a result, MOOC teaching quality evaluation based on big data technology is more important. Scientific and reasonable teaching evaluation is especially needed to make MOOC teaching quality evaluation throughout the teaching process, which will enable improvement and supervision of MOOC teaching quality. Since the teaching content in MOOC teaching mainly appears and spreads in the form of video, video is the carrier of MOOC teaching, leading to some features of distance education in MOOC teaching. Consequently, it is necessary to study the quality evaluation system of MOOC teaching, and big data does contribute to the MOOC teaching quality evaluation system[2].

3. The main problems in the traditional quality management based on computer teaching

With the continuous advancement of society and the continuous development of science and technology, traditional computer teaching can no longer meet the needs of people's learning. Therefore, some people have even proposed to cancel the relevant courses of the basic Computer Science, which shows that traditional computer teaching has encountered unprecedented problems and dilemma. Compared with MOOC teaching, traditional computer teaching faces many problems. First of all, the training objectives are not clear. There are a series of problems with the organization of teaching, which seriously hindered the development and progress of basic computer teaching. Second, traditional computer teaching is based on textbooks and is teacher-centered, which will cause students to be too passive during the learning process and lack of understanding of knowledge, and which will ignore students' initiative and enthusiasm for computer learning, preventing students from thinking actively and independently. As a consequence, it is not conducive to the improvement of innovation and overall quality of students. The boring classroom teaching also makes teachers feel difficult to teach computer courses and students hard to learn. The traditional mode of computer teaching separates the theoretical knowledge from the actual situation, making teaching content too single. Teachers cannot implement different teaching content and teaching process for different majors in computer teaching. In the teaching process, they are even less likely to take into account students' basic level of knowledge and their ability to accept and understand knowledge. Students are not taught according to their characteristics so that they lose interest in computer courses. What's more, the subjective position of students is ignored in the learning process. Necessary interaction in the teaching process is not guaranteed. The practice process of computer teaching cannot be implemented and strengthened very well. There is a lack of practical teaching supervision and management. It also lowers the students' enthusiasm, which makes the students' practical ability unable to improve.

4. Advantages of MOOC teaching quality evaluation based on big data technology

4.1 Stimulating students' interest and enthusiasm for learning

The use of MOOC and big data technology can solve the boring and tedious traditional teaching and arouse students' interest in the classroom. Today's MOOC teaching content is very extensive, with detailed operational procedures and steps, including online course introduction, plug-in download for e-learning, a list of teaching resources, and courseware for related professional courses. In addition, there is a teaching exchange platform for teachers and students to interact. Students can choose their own professional-related teachers to answer questions and solve problems. Students can take advantage of big data MOOC teaching to learn anywhere, anytime. This novel teaching method has greatly aroused the interest of students. Therefore, students' enthusiasm and interest in learning can be used as an indicator of the quality of teaching of big data technology[3].

4.2 Large amount of data

Since MOOC is a teaching for the majority of the population, it must include all information about students and teachers and is able to integrate data and teaching courseware, which creates a lot of raw data. These advanced requirements cannot be achieved by ordinary software or technology. They must rely on big data technology, which is also one of the fundamental causes of the current combination of MOOC teaching and big data. MOOC teaching has the characteristics of large amount of information, which is most different between MOOC teaching and traditional teaching and is certainly the advantage of MOOC teaching. In MOOC teaching, due to the differences in the basic background and personality characteristics of students, MOOC teaching needs to provide a variety of teaching modes for students to choose, creates suitable learning patterns and learning methods, establishes a prediction and teaching model for collective learning and better promotes students' personalized learning, which can only be achieved through the integration of MOOC and big data technology.

4.3 Improving the interactivity and openness of teaching

The main content of MOOC teaching is video, which determines the openness of classroom teaching and the interaction between teachers and students. Therefore, interactivity and openness are the main characteristics of MOOC teaching. In traditional teaching, teachers must rely on test papers to test students' knowledge, while on the MOOC teaching platform, teachers and students can enter the interactive teaching section to answer questions any time. In addition to the interactive teaching between teachers and students, MOOC interactive platform can also rely on an interactive platform for two student groups to interact with one another. Students conduct a discussion on the interactive platform so that they can enhance their friendship and progress together in this interaction. And the openness and interactivity of this kind of teaching will improve students' enthusiasm and initiative for learning, thus improving their professional ability to some extent. Students are free to explore and solve problems in the MOOC, enabling students to deepen their understanding and use of computer courses and lay a solid foundation for the future. Therefore, openness and interactivity are also one of the advantages of MOOC teaching, and the quality evaluation of MOOC teaching using big data technology can be applied.

4.4 Improving the quality of computer courses teaching

All course resources of MOOC teaching are repeatedly improved and tested. This rigorous and advanced attitude not only improves the quality of teaching, but also brings traditional computer teaching inspiration and alert. The promotion of MOOC teaching to traditional teaching is called flipped classroom. That is, MOOC teaching is counteracting the form of traditional teaching, which is also a new way to improve the quality of teaching. Flipped classroom combines traditional computer teaching with MOOC teaching. Teachers can pass the teaching content to the students in the classroom. The students can test the knowledge they have learned through online teaching and online interaction. They can also use MOOC to prepare the teaching content of the next section. The combination of the two not only improves the learning effect of the students, but also improves the quality of teaching.

4.5 Evaluating teaching results effectively

Another advantage of MOOC teaching quality evaluation based on big data technology is also reflected in its ability to effectively evaluate and analyze teaching effects. By evaluating the results of the analysis, MOOC teaching can be improved and innovated. Therefore, MOOC teaching based on big data technology is a brand-new teaching method and a new teaching evaluation system. MOOC teaching platforms can save students' progress and test results over a period of time, so that students can clearly define their learning goals and keep an eye on their own learning progress, effectively assessing learning effectiveness and efficiency. The MOOC of Big Data can aggregate all the teaching resources, and can compile the teaching results of the teachers for decades, which is used for teachers' reference. It greatly improves the teaching effectiveness and teaching efficiency of teachers, and saves

a lot of time for the instructors, so MOOC Education can be an effective platform for evaluating teaching effectiveness. Teachers can guide students more optimally based on the evaluation results.

5. Conclusion

There are many problems in traditional computer teaching, but the emergence of big data technology and MOOC teaching has solved these problems well, injected fresh blood into computer teaching reform and provided a new teaching mode. MOOC teaching based on big data technology has become an effective teaching platform. It can store and analyze a large amount of aggregated data, provide a variety of learning modes, and also evaluate the teaching effectiveness of computer teaching and evaluate the quality of teaching. Finally, the fundamental goal of computer teaching reform will be realized, and more excellent professionals will be trained to meet the needs of social development.

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