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Research on Higher Vocational Network Teaching Quality Evaluation System Based on Big Data Analysis

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Abstract: Internet technology has developed rapidly, and online teaching has become the development trend of teaching in higher vocational colleges, which is conducive to modern learning methods for students and innovative teaching models for teachers. However, online teaching is still in the preliminary stage of development, and there is no unified standard for teaching quality evaluation. For this reason, big data technology can be integrated into the evaluation of higher vocational online teaching. This article first introduces the concept of online teaching quality evaluation, and then The application advantages of big data technology in the evaluation of network teaching quality are analyzed, and the key points of the construction of a higher vocational network teaching quality evaluation system based on big data analysis are explored in detail.

Keywords: big data; online teaching; evaluation

Higher vocational colleges are a vital part of our country's education and teaching system and can provide applied talents with advantages for social development. Therefore, the evaluation of the teaching quality of higher vocational colleges has received extensive attention from all walks of life in order to improve vocational colleges Teaching quality requires a scientific and reasonable teaching quality evaluation system. However, with the rapid development of society and economy, the education quality evaluation system of higher vocational colleges also needs continuous improvement. In the era of big data, big data technology can be applied to the evaluation of higher vocational college education quality to ensure the reliability of the evaluation results .

1. The concept of online teaching quality evaluation

In the information age, network teaching technology

is developing rapidly, which can be used as a supplement to traditional teaching mode. In the new era, science and technology are developing rapidly. In online teaching, students can use computer technology and network technology to watch teaching videos, audio materials, etc., and participate in teaching activities online, which facilitates real-time communication between teachers and students. In the online teaching platform, teachers and students can discuss and analyze in the classroom teaching process, and the online teaching atmosphere is relatively relaxed, and students need to increase their learning enthusiasm and actively participate in online classroom teaching. In the modern education system, the network teaching model is a very important content, which can promote the reform and adjustment of the traditional teaching model. During the development of online teaching activities, teachers and students have special requirements. Teachers need to use advanced teaching hardware flexibly to improve classroom

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management capabilities, while students need to improve self-management capabilities to ensure classroom participation.

In the online classroom teaching quality evaluation, different experts and scholars pay attention to certain differences, mainly including the following points: First, in the online teaching quality evaluation, the application value of the online teaching program is evaluated and analyzed, and the teaching value is evaluated Judgment analysis. The evaluation of online teaching quality is closely related to teaching goals and educational value, and it is necessary to evaluate and analyze students' learning outcomes based on educational values and teaching goals. Second, to evaluate the application effect of the network teaching evaluation program, it is required to use evaluation indicators to evaluate the implementation and effect of the education plan and teaching objectives. In the evaluation of online teaching quality, it is necessary to compare ideal goals with actual performance.

It can be seen that, in the evaluation of online teaching quality, the curriculum teaching objectives should be used as a basis, extensive collection of online teaching content and teaching activities, and judgment and analysis of teaching results. There is a certain difference between the evaluation of online teaching quality and the evaluation of traditional teaching models. The evaluation system is complex and uncertain, requiring educators and network managers to carefully study and give full play to the application advantages of online teaching.

2. The application advantages of big data technology in the quality evaluation of higher vocational online teaching

(1) The collection of teaching evaluation data is comprehensive and true. In online teaching quality evaluation, through the application of big data technology, teaching evaluation data can be collected extensively, while ensuring the authenticity and reliability of all data. In the online teaching quality evaluation, big data technology is used to extensively collect comprehensive data required for teaching evaluation. By analyzing the collected data, you can learn more about the actual situation of teachers' online teaching and the online learning of students, so that teachers can easily assess the quality of teaching. Conduct evaluation and analysis, and provide guidance for subsequent improvement

and adjustment of teaching mode. In addition, after obtaining all the collected data, teachers need to conduct a comprehensive analysis of all the data to understand their own teaching quality and students' learning situation in a timely manner to lay the foundation for promoting the improvement of teaching quality. Therefore, by using big data technology to collect and analyze the data required for the evaluation of online teaching quality, the application advantages of big data technology can be fully utilized, and teachers' awareness of big data teaching evaluation can be continuously improved.

(2) The evaluation results can be fed back in time. In the evaluation of online teaching quality, the application of big data technology also has the advantage of timeliness, and it can feed back true and reliable evaluation results. By applying big data technology to the evaluation of online teaching quality and timely feedback of teaching evaluation results, it can provide a reliable basis for the improvement of teaching mode based on the results of teaching evaluation. In addition, by analyzing the evaluation results of online teaching quality, it can also reflect the teaching situation of teachers and the learning situation of students. By analyzing the evaluation results, the teaching methods can be adjusted accordingly to promote the improvement of teaching quality^[1].

3. Higher Vocational Network Teaching Quality Evaluation System Based on Big Data Analysis

In the evaluation of network teaching quality in higher vocational colleges, big data technology can be fully utilized to construct a network teaching quality evaluation system. The system structure is shown in Figure 1. The creation of an online teaching management platform in online teaching allows students to use the Internet for online learning and teachers to carry out teaching activities online, which is conducive to timely communication between teachers and students, and at the same time facilitates the monitoring of the entire teaching process and extensive collection of teaching process data. In addition, the application of the teaching quality evaluation system can record the results of student evaluation, peer evaluation, supervision evaluation, leadership evaluation, and teacher evaluation in detail. Through the application of big data technology to evaluate and analyze various data in the network teaching process, it is conducive to

promptly raising teaching warnings, accurately supervising the teaching process, and continuously improving teaching methods and teaching quality.

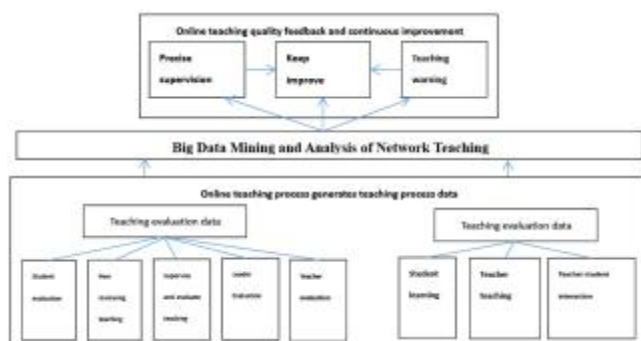


Figure1: Network teaching quality evaluation system based on big data

(1) Realize real-time monitoring of online teaching with the help of network teaching cloud platform. In the online teaching of higher vocational colleges, through the application of information technology, a network teaching cloud platform can be created, which covers the whole process of pre-class, in-class and after-class teaching. In the process of online teaching, it can be used for all classroom teaching activities, all teachers and students. Collect and organize students' online teaching and learning data, analyze the quality of online teaching based on this, evaluate teaching quality, and formulate improvement plans for teaching methods based on this, promote teaching efficiency and teaching quality, and simplify online teaching management. Promote education reform and innovation. With the rapid development of big data technology, the wisdom tree network teaching platform can be used to extensively collect various network teaching data. Through statistics and analysis of the collected data, you can understand the operation of network teaching and grasp the changes in academic conditions in time. Monitor the online teaching process. In the actual application of the Wisdom Tree network teaching platform, you can view the application of teaching resources, the process of classroom activities, and the interaction of teaching through the three dimensions of courses, teachers and students [2].

(2) Considering the differences of disciplines and majors, formulate flexible and diverse evaluation standards. In the evaluation of online teaching quality, it is necessary to evaluate and analyze the teaching quality of teachers and the learning

situation of students. In the evaluation of teachers, it is necessary to focus on teachers' educational attitudes, teaching process, and teaching effects. Evaluation of students' learning attitude, learning process and learning effect. Online teaching quality evaluation is composed of two parts: teaching evaluation and learning evaluation. In the evaluation of teacher online teaching quality, evaluation indicators mainly include the organization of online teaching, the rationality of teaching progress, the preparation of teaching resources, the effectiveness of utilization, and whether they are on time Class opening, online teaching interactive process, counseling and answering results, homework assignment and correction status, etc. In the evaluation of students' online learning, the evaluation indicators include student attendance, online learning, online interactive discussion, homework submission, and online assessment. In the online teaching of higher vocational colleges, there are certain differences in the teaching content, teaching requirements and teaching modes of different majors and different subjects. Therefore, in the evaluation of online teaching quality, the indicators involved are somewhat different, and a unified evaluation standard cannot be adopted. When evaluating the quality of online teaching in different majors and different disciplines, if the same evaluation standards are used, the applicability of the evaluation standards cannot be guaranteed, and the quality of the evaluation results cannot be guaranteed. In this regard, we should comprehensively consider modern education and teaching theories and the teaching characteristics of different disciplines, optimize and adjust the evaluation standards, and adopt differentiated evaluation standards. For example, in the teaching of theoretical courses and practical courses, the focus of teaching quality evaluation is different, so different evaluation system frameworks need to be formulated, appropriate evaluation standards are formulated according to different majors and the nature of different disciplines, and different evaluation standard questionnaires are set up. Therefore, in the evaluation of online teaching quality in different disciplines, it is necessary to formulate personalized evaluation indicators, rationally apply big data technology, and fully mine the data needed for teaching quality evaluation, thereby forming diversified evaluation standards for

online teaching quality.

(3) Based on teaching big data analysis, form an efficient teaching feedback and improvement mechanism. In order to improve the management level of online teaching quality evaluation, it is necessary to create information feedback channels and instant information feedback. In the evaluation of online teaching quality, traditional evaluation methods have lagging characteristics, and in the era of big data, online teaching is carried out through the application of big data technology. Quality evaluation can effectively avoid the disadvantages of traditional evaluation methods. With the continuous advancement of the online teaching model, the online teaching cloud platform has gradually been promoted and applied. A large amount of teaching data will be generated in the online teaching process. Through the application of cloud computing technology, artificial intelligence technology and big data technology, it can be used for teaching cloud The data in the teaching process of the platform is comprehensively analyzed, and then the learning report of all students is formed, and the learning situation of the students is fed back to the teacher, so that the teacher can understand the learning situation of the students in time, and can also play a supervisory and early warning role. In addition, through the use of big data technology, the teaching process data collected in online teaching can be collected, summarized and analyzed, and statistical charts can be formulated accordingly. Teaching reports can be formed on the teaching management side, which is convenient for teaching management departments and supervision and evaluation institutions. The teaching quality is evaluated and analyzed. If problems are found, they can be reported to teachers in time, and the feedback mechanism will be gradually improved according to the actual application situation, and the evaluation standards of online teaching quality will be optimized and adjusted to provide references for the improvement of online teaching methods. It can be seen that through the use of big data technology and the rational use of the platform's teaching management system, the quality of online teaching can be evaluated and analyzed, and effective communication channels can be established. Students, teachers, and school administrators can view the results of online teaching

quality evaluation at any time, and Provide teaching early warning in time, urge teachers to improve teaching mode, and improve the quality of online teaching^[3].

Conclusion

In summary, this article mainly explores the application of big data technology in the evaluation of online teaching quality in higher vocational colleges. The rapid development of Internet technology and computer technology, and the rapid development of network teaching mode, have become a common way of teaching in higher vocational colleges. The evaluation and analysis of the quality of network teaching can promote the improvement of network teaching quality. In this regard, during the construction of the online teaching quality evaluation system, the characteristics of information technology and online teaching methods should be analyzed, flexible evaluation indicators should be formulated, and evaluation models should be appropriately adjusted to improve the efficiency of online teaching. By applying big data technology to the evaluation of online teaching quality, various data in the process of online teaching can be collected extensively. Through data analysis, the accuracy and reliability of the evaluation results of online teaching quality can be guaranteed, and the optimization and adjustment of teaching mode can provide reliability in accordance with.

Conflicts of Interest

The authors declare that they have no conflicts of interest to this work.

References

- [1] Yan Li. The application of big data in the teaching quality evaluation system of higher vocational colleges[J]. Journal of Suzhou Vocational University, 2018, 029 (002): 87-89.
- [2] Yang Xiaodong, Zhong Chongyi. Research on the Education Quality Management of Higher Vocational Colleges in the Big Data Era[J]. Journal of Harbin Vocational and Technical College, 2018, 142 (06): 34-36.
- [3] Pan Qiang. Research on the Application of Big Data Analysis in Teaching Quality Evaluation of Higher Vocational Colleges[J]. Comparative Research on Cultural Innovation, 2018, v.2; No.65(29): 69-70.