

Research on Micro-course Evaluation Model in the Context of Big Data

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Fund: Research and Practice of Micro Course Evaluation Model Based on Big Data of Guangzhou Education Science Planning Project (Project No. 201811554)

Abstract: At present, the application of big data technology has been constantly expanding from all walks of life and it has also become one of the important resources and methods of education in the new period. The teaching approach of micro-courses based on big data is important for promoting curriculum reform and innovation. At present, carrying out micro-course evaluation is of great significance for better enhancing the understanding of the course and promoting the reform of teaching. This article mainly introduces the application of big data technology in the micro-course evaluation system, the micro-course evaluation methods, and the developing strategies of a micro-course evaluation system based on big data.

Keywords: Big Data; Micro-course Evaluation Model; Research

Big data has been applied to a great extent in teaching evaluation. With the help of big data, objective evaluation of the course teaching can be implemented and realized in the micro-course evaluation system. In addition, it is necessary to establish the assessment index and indicators for course videos to carry out multiple methods for data evaluation and analysis and achieve effective improvement of the evaluation process.

1. Micro-course evaluation method

The developing process of micro-course is diverse, including important stages such as analysis, design, development, implementation, and evaluation, among which the evaluation phase is aimed at providing timely feedback on the teaching quality of the course. The evaluation methods include network remarks, competition, and technology achievements, etc. The main indicators of online evaluation consist of the click-through rate, forwarding times, and web messages of micro-courses. In this case, the evaluation is specific and comprehensive but lacks a direct reflection of users. The purpose of network remarks mainly lies in resource-sharing with insufficient applicability for evaluation and assessment.

2. Curriculum evaluation and analysis using big data

2.1 Evaluation principles to be adhered to

To carry out a micro-course evaluation with the help of big data, it is necessary to combine the characteristics of the course into the teaching process based on the experience and feedback of users, to think carefully for getting a more accurate evaluation result.

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doi: 10.18686/ahe.v4i5.2207

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In addition, the evaluation subject and content also need to meet the requirements of diversification that the evaluation model based on the big data formicro-courses needs to integrate the advantages of multiple evaluation systems to achieve the goal of multi-form and multi-subject evaluation. Therefore, evaluation resources can be more practical. In addition, it is necessary to combine qualitative and quantitative methods to ensure the authenticity and integrity of the evaluation. Generally, the evaluation of courses conducted with the help of big data has higher accuracy, which can provide users with tangible help and put forward practical suggestions and opinions for course reforms. It is worth noting that quantitative evaluation requires the use of multiple forms to implement comparison and contrast. For the content, forms, and objectives of the course, it is necessary to combine correlated evaluation systems to achieve accurate and effective results.

2.2 Graspkey points of the evaluation

When building the micro-course evaluation system with the help of big data, it is necessary to effectively improve data support. It's recommended to use the sample evaluation method as the standard to promote the data support service and establish a comprehensive data evaluation system. The realization of the recursive application of data and improvements of data utilization efficiency are also important aspects to ensure the validity of the overall evaluation results. Multiple evaluation structures need to be built in the system to avoid a singular approach that is difficult to achieve a comprehensive and detailed analysis of problems. It is necessary to build a multi-element evaluation system according to the features of the course, simplify the structure and levels, and facilitate resource-sharing in the context of big data.

3. Analysis of micro-course evaluation model in the context of big data

3.1 Evaluation model

To carry out curriculum evaluation formicro-courses with big data, it is necessary to build a well-established evaluation model and design multiple modules within the model, which mainly include data acquisition, data mining, and evaluation feedback module.

The first one is the data collection module, which is the key part of the micro-course evaluation model with big data, whose main function is to collect associated data of network behavior for the course, including the score, number of likes, and frequencies of sharing and forwarding, to build a more comprehensive data evaluation system. Because there are many structural data and data forms in the database, it may contain some incomplete records or incorrect information. Therefore, the module also needs to perform certain preliminary data processing after collection. Only then can the data become reliable target data in subsequent processing.

The next is the data mining module used for in-depth mining of the massive data collected. The components of this module include data mining, calculation, and analysis. The functions of different parts are different, and together they form a powerful data analysis and calculation system. The algorithm of data mining includes the implementation of data classification and sequence patterns. The evaluation system can adopt a variety of algorithms to meet different needs of data analysis and evaluation requirements. In the processing of a specific data mining system, the selection of related algorithms is mainly based on the simplicity of data operation.

The last one is the evaluation feedback module, which is mainly based on the user's choice of whether to use the report or image form to present the results in the end. If the requirements are met, the evaluation process can finish, otherwise, another calculation method will be needed to run and process again to obtain the desired result.

3.2 Evaluation index

In the micro-course evaluation model with big data, evaluation indicators are very important. As far as the big data technology is concerned, its application in related fields effectively breaks through the traditional management model, and at the same time leads to some invisible problems such as data security and stability threatening to a certain extent. In this regard, when selecting micro-course curriculum evaluation model indicators based on big data, it is necessary to constantly add new indicators based on the previous model to ensure the safety of information and enhance the effectiveness of evaluation. Here, the trust index is mainly discussed. For the credit evaluation of companies, it is necessary to combine the development status and grasp the development trend and dynamics of the industry, to ensure the reliability of benchmark values for the enterprise and industry to make adjustments of

the evaluation index. In addition, in the selection of specific indicators, it is also necessary to arrange hierarchy and set multiple levels of indicators to provide a reliable basis for data analysis and ensure the empirical test effect of the model.

In the selection of evaluation indicators, it should be noted that the indicators should come from a relatively broad field, including curriculum design, content quality, work standardization, and overall teaching effectiveness. There should also be secondary indicators under the primary indicators to perfect the evaluation system. For example, the appropriateness of topic selection should be considered under the curriculum design; the content quality should include scientific and logical characters; the structural integrity, completeness of materials, technical level, and language norms should be set under the work standardization indicator; and the teaching effect column should involve goal achievement and entertainment. Through further refinement of the first-level indicators, more specific and detailed index evaluation can be used for the course evaluation to ensure the comprehensiveness target. This is the key to ensure the overall effect of micro-course evaluation.

4. Conclusion

The construction of the micro-course evaluation model plays an important role in effectively evaluating the teaching quality, also provides comprehensive and precise information feedback on the work and steps of each teaching stage. The improvement of teaching quality is of great significance. To build a micro-course curriculum evaluation model based on big data technology can make sure effective and reliable technical support for the evaluation model and meet the demands of information integration and data mining of evaluation, to ensure the accuracy and reliability of the evaluation results. This thesis mainly analyzes the micro-course curriculum evaluation model in the context of big data, studies the effective evaluation strategy for the online course, and proposes a complete course production and evaluation system to meet the accuracy needs of evaluation and provide further improvements for the evaluation model with scientific and effective support.

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