

Construction and Innovation of Higher Education Evaluation System based on Big Data

Feng Wang

Zhoukou Normal University Henan Zhoukou 466001, China

Abstract

the improvement of higher education evaluation system has a direct impact on the quality of higher education, which plays an important role. With the advent of big data era, data mining based on big data is affecting people's way of thinking. This study will focus on how to collect big data of higher education, build higher education evaluation model, set evaluation indicators, so as to comprehensively improve the quality of higher education Education quality.

Keywords

higher education, evaluation model, big data.

1. Introduction

The establishment of higher education evaluation system has a very good role in promoting the healthy development of higher education and improving the quality of education. Any higher education evaluation, on the one hand, through the establishment of a variety of information sharing, the collection of historical higher education data, the construction of higher education model, for higher education decision-making to provide a truly valuable basis for decision-making, on the other hand, through the development of evaluation index system and evaluation criteria, to regulate and guide the development of higher education to the right direction. Therefore, we should encourage the government education department and colleges and universities to combine the actual situation, through the introduction of big data analysis, while summarizing and combing the practical experience in the comprehensive evaluation and innovation of colleges and universities, in view of the existing outstanding problems and weak links, improve the evaluation index system, actively explore appropriate evaluation methods and working mechanisms, and gradually form a unique evaluation model.

[1][2][3] pointed out that with the advent of the era of big data, data mining based on big data is affecting people's way of thinking and promoting the change of scientific research paradigm. How to infer the deep education law behind the education big data through data mining has become a new research hot spot. How to assist decision-making based on the analysis of education big data has become the basic international education management Trend. Therefore, this study will focus on how to build and innovate the evaluation system of higher education based on big data, so as to comprehensively improve the quality of education.

2. The Significance of the Evaluation System of Higher Education

First of all, the evaluation system of higher education plays a feedback role. How to feedback refers to the timely feedback of the development of teaching activities and students' learning through the higher education evaluation system. From the scope, it can not only evaluate the overall higher education of a country, but also evaluate the education activities of a university, even diagnose a specific teaching activity. Through accurate feedback diagnosis, teachers can improve their teaching and students' learning efficiency. The purpose of diagnosis is to ensure that our educational activities are more effective through feedback and adjustment, so that we

can diagnose not only individual students or individual problems, but also overall or common problems.

Secondly, higher education evaluation plays an evaluation role. In education evaluation, we should use the standard to judge the result and efficiency of the evaluation object. For us, I think it's mainly about the evaluation of education authorities on schools, schools on teachers and teachers on students.

Finally, [4] points out that education evaluation should have incentive effect. The incentive function of education is the inevitable result of the evaluation function. The result of education evaluation will inevitably make the evaluation object understand their position, which has an impact on schools, teachers and students. Therefore, how to use reasonable incentive methods, mobilize the enthusiasm of schools, teachers and students, and correctly understand the evaluation results is also a problem we should recognize. As education evaluation is an important and sensitive issue, it plays an active role in the direction of running a school, the cultivation of students' quality, and the cultivation of students' innovation ability.

3. Establish Higher Education Evaluation Model by Collecting Big Data of Higher Education

3.1. Establishing Big Data Collection in Higher Education

With the help of relevant educational software, collect the relevant data generated in each teaching activity, and clean and standardize the data. The scope of collection includes five categories:

a. Teaching related data

Collect data related to teachers' teaching, including the number of teachers and relevant basic information, domain knowledge, teaching materials, degree of participation in professional construction, teaching

b. Student related data

Collect the number of students and basic information, student academic monitoring data, student classroom behavior monitoring data, student development comprehensive evaluation data, student daily activity data, student teaching evaluation data, student employment or continuous learning and other relevant data.

c. Government investment in schools and relevant data

Collect the investment of government departments at all levels in funds, scientific research projects, relevant policies, implementation and supervision of colleges and Universities.

d. Funds invested in teaching by colleges and universities and relevant data

To collect the investment of colleges and universities in teaching and teachers in funds and scientific research projects.

e. Participation data of university leaders in professional teaching

Collect the degree of participation of university administrators in major construction, including the information of participating teaching activities and participating projects.

f. Regulatory, accountability and implementation data for government departments and institutions of higher learning

Collect the relevant data of accountability, accountability system and implementation of teaching from universities and government departments at all levels.

3.2. Establish a Big Data Platform for Higher Education

Establish a big data management platform for all colleges and universities, collect the data of all colleges and universities in a unified and real-time way, and clean, standardize, code and

store the data. In this way, students' learning situation and teachers' teaching state can be controlled in an all-round way, and corresponding improvement measures can be taken for teaching activities to help teaching activities develop in a more active and effective direction.

3.3. Establish Higher Education Evaluation Model

Education big data provides great possibility for analyzing learning behavior and process, improving learning performance, scientific planning and decision-making. In the face of massive social education, the traditional analysis and evaluation method has encountered a bottleneck. How to establish a reliable learning analysis and evaluation model, to analyze and explain the education data scientifically and reasonably, has become the current research hot spot. Therefore, we use deep learning algorithm to build higher education evaluation model. Establishing big data collection in Higher Education

4. Construct and Innovate the Index Evaluation System of Higher Education

4.1. Setting up Evaluation Indicators for Higher Education Management

According to the dynamic resources and levels of colleges and universities, the evaluation indexes of the objectives, process management and school running effect of colleges and universities.

4.2. Setting up Evaluation Indexes for Teachers' Teaching

The evaluation of teachers is mainly realized through the evaluation of teaching activities. Firstly, the evaluation index of teachers' teaching level is set. Such as teaching content, teaching method, teaching attitude and teaching effect. Among them, the teaching content includes the content, information quantity and teaching schedule of the teaching content in the classroom; the teaching method refers to the method for teachers to organize teaching, including classroom interaction, blackboard writing, whether the teaching ideas are clear, etc.; the teaching attitude mainly refers to the mental state, speech and behavior of teachers; the teaching effect refers to the students' acceptance of knowledge, which can be evaluated with students comprehensively. The results are combined. In the process of index design, we follow the principle of systematization. Each index has a certain logical relationship. From top to bottom, it can reflect the comprehensive quality of students and the teaching level of teachers. In addition, it is necessary to follow the principle of comparability, provability and quantification, select the indexes that are simple, clear, micro, easy to collect, operable and comparable, facilitate the later data collection, and ensure the effectiveness of the evaluation.

4.3. Setting up the Evaluation Index of Students' Comprehensive Quality

The object of higher education is college students. The comprehensive quality development of college students directly reflects the quality of higher education. To promote the all-round development and healthy growth of college students, we divide the comprehensive quality evaluation of college students into five aspects: basic quality, professional level, physical and mental health, innovation ability, and social practice ability. Basic literacy mainly includes the performance of students' ideals and beliefs, honesty and trustworthiness, benevolence and friendliness, responsibility and obligation, discipline and law-abiding; the level of professional field mainly includes the basic knowledge of each course, the mastery of basic skills and the ability to use knowledge to solve problems; physical and mental health mainly includes the healthy lifestyle, physical exercise habits and physical skills of students, sports skills, psychological quality, etc.; innovation ability, mainly to investigate the students' innovation consciousness and ability in learning; social practice, mainly to investigate the students' hands-

on operation, experience, experience, etc. in social life. Through the detailed work of these five indicators, the comprehensive quality evaluation index system of college students is formed.

5. Summary

By introducing big data analysis, this paper is devoted to how to collect big data of higher education, how to build evaluation model of higher education, how to set up evaluation indicators, so as to improve and innovate the existing evaluation system of higher education, so as to play a supporting role in the development of higher education, such as feedback, evaluation, incentive, etc.

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