Research Article

Educational Evaluation Information System Model of Political Ideological Big Data in Colleges and Universities

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This study presents the fundamental guidelines for developing an evaluation index system for political thought education in light of the shortcomings of the current system, including its limited evaluation objectives, singular evaluation methods, lack of pertinence of evaluation indexes, and subjectivity of evaluation standards. In parallel, big data-related technologies are being used to determine the indicators and index weight coefficients of the evaluation system of political thought teaching in institutions of higher learning. This is done on the basis of earlier research on big data and teaching evaluation. The decision tree method is used in this study to create a prediction model for teaching evaluation, which is then pruned based on "relative support" to categorize the sample data. The decision tree method is aimed at a large number of teachers’ information databases. The model is validated at the end. According to the experimental findings, this educational evaluation system is stable to a degree of 94.6 percent, and its evaluation accuracy can reach a level of 95.33 percent. The validity and reliability of the educational evaluation system developed in this study are confirmed by this result. Big data can therefore be used to evaluate political thought instruction in higher education institutions, which offers some fresh perspectives for related research.

1. Introduction

A theoretical framework for evaluating education has gradually developed. The evaluation object includes the educational plan, educational activities, and even the entire educational process [1] in addition to the learning effects on young students. The political thought education evaluation system is an organic structure made up of numerous distinct but connected evaluation items and evaluation standards that capture the impact of political thought education. A systematic analysis of education quality should be included in the evaluation of educational quality, which is based on the qualitative and quantitative description [2]. AHP (Analytic Hierarchy Process), regression analysis, factor analysis, cluster analysis, homogeneous Markov chain, and data envelopment analysis are just a few of the evaluation techniques [3]. In addition to highlighting the shortcomings of political thought teachers in the process of political thought teaching, teaching evaluation is one of the key tools for gauging the process and impact of political thought teaching. This allows for the improvement of teaching methods and teaching quality. It can also assist students in identifying issues with their learning in order to increase learning effectiveness [4]. Evaluation is a conclusion based on data, and the validity of the data determines the efficacy of the evaluation [5]. It is the main issue that needs to be resolved in analysis and mining as a significant indicator of the evaluation of data education. Reforming teaching strategies, improving training methods, and giving instructional decisions a solid scientific foundation are all very important.

Big data is the term used to describe a variety of data sets that cannot be gathered, stored, queried, shared, or analyzed using currently available software tools. The use of big data has permeated all spheres of life thanks to the quick development of data technology. The use of big data in the field of education has also received a lot of attention [6]. The use of big data is prevalent across all academic fields, with particular emphasis on computer software and applications, automation technology, macroeconomic management,
mathematics, telecommunications technology, enterprise economy, and Internet technology. Data mining (DM) [7, 8] is the process of removing from data the interesting, potential, and available knowledge of individuals and expressing it in a way that users can comprehend. One of the most active research areas in DM is association rule mining, which reflects the intriguing correlation between items in a lot of data. One of the frequently employed techniques in DM is the decision tree algorithm. A way to display rules such as what value will be obtained under what circumstances is provided by the decision tree method. The education big data information platform can help the Ministry of Education assess educational resources in schools in a fair and scientific manner, and based on an analysis of teachers’ classroom performance, it can assess teachers’ educational levels in a more fair, scientific, and comprehensive manner. The general trend in the big data era is to use data to drive improvements in teaching and learning. Education quality evaluation has amassed a lot of data as a key component of learning and teaching. The data conceals a wealth of laws and issues that must be uncovered and applied immediately [9]. One important area of data research is how to use big data responsibly to support decision-making for the advancement of all spheres of life. People pay particular attention to the value of big data’s commercial applications, which can assist businesses in dividing up their clientele and offering high-quality customised services [10, 11]. The following are the innovations of this study.

This study investigates the development of the system for evaluating political thought instruction in higher education institutions from the standpoint of big data application background. The concepts of DM are divided into the following five levels based on the hierarchy and complexity of the data: descriptive analysis, correlation analysis, predictive interpretation, classification analysis, and system construction. Additionally, this study thoroughly applies its understanding of big data and political thought teaching evaluation to examine how to develop a political thought teaching evaluation system in a higher education institution that satisfies the demands of the big data era.

Aiming at the shortcomings of the current evaluation system of political thought education, such as narrow evaluation objectives, single evaluation methods, lack of pertinence of evaluation indicators, and subjectivity of evaluation standards, this study puts forward the basic principles of constructing an evaluation index system of political thought education. At the same time, based on predecessors’ research on big data and teaching evaluation, big data-related technologies are applied to determine the indicators and index weight coefficients of the evaluation system of political thought teaching in institution of higher learning. It provides a brand-new vision and broad ideas for the evaluation of political thought teaching in institution of higher learning.

The evaluation system for political thought education based on the idea of big data is the main topic of this article. The specific organizational structure of the five chapters is as follows: Beginning of Section 1. The research context and significance of the article are first covered in this chapter, along with the fundamental ideas and organizational principles of the study. A related chapter is Section 2. This chapter presents the research work and procedures used in this study, as well as the research status of the research topic both domestically and internationally. The method section is in Section 3. This section focuses primarily on the definition and categorization of DM; this study discusses the primary approaches, the course of treatment, and the applications of DM technology. Big data-based political thought education evaluation methodology is proposed and developed. In Section 4, the performance and benefits of the algorithm model used in this study are examined. The conclusion and outlook are found in Section 5. The research for this study is summarized in this section, and any current flaws are examined for potential future improvement. Finally, the study’s main points are condensed, and prospects for the direction and scope of upcoming research are presented.

2. Related Work

Wieman analyzed the existing evaluation methods of political thought education, and learned from the quantitative methods of management performance at home and abroad. Established and improved the quantitative methods of different index systems [12]. Likki and Staerkel tried to use decision tree and association rules to build a teaching evaluation system in institution of higher learning, in order to mine the relationship between teacher information and teaching effect, and provide decision-making basis for teaching evaluation method [13, 14]. Taking the comprehensive evaluation of students’ learning and test scores as the research object, Bakken et al. focused on how to establish a comprehensive evaluation model; and conducted a simulation analysis of the rationality of the evaluation model [15]. Based on the teaching evaluation data, Choi and Kim used the method of association rule mining to optimize the results of association mining by comparing different discretization methods and under different support and confidence thresholds to find the difference between the teaching effect and the basic situation of teachers. relation. The prediction model was additionally validated [16]. Villanueva et al. propose an action path for data-driven education and teaching improvement. At the same time, relevant suggestions are put forward from three aspects: the top-level design of educational evaluation, the construction of educational evaluation professional teams, and the empirical research based on data [17]. Based on factor analysis and cluster analysis, Xia and Yan proposed a factor ranking method for student evaluation [18]. This method is quite different from the traditional evaluation of student results based on the total score of students, and can evaluate students in a more diversified manner.

The lack of studies on using big data to assess the teaching of political thought in higher education institutions presents both an opportunity and a challenge for the development of this subject. This study builds an evaluation system for political thought education based on the idea of big data and summarises the advantages and disadvantages of each approach using a thorough review of relevant
literature. Given the shortcomings of the existing system, this study presents the fundamental principles for developing an evaluation index system for political thought education. This study targets a large number of teachers’ information databases while also developing a prediction model of teaching evaluation using the decision tree approach. In order to classify the sample data based on “relative support degree,” the decision tree was pruned. At the end, the model is verified.

3. Methodology

3.1. Mining the Evaluation Data of Political Thought Education Quality. Big data is a collection of data that is gathered, managed, and processed using currently available software tools. It can quickly acquire, process, and analyze data using its current software tools, and then extract useful data from it [19]. The use of big data in the field of education is expanding along with big data’s development. The foundation for the gathering and mining of educational data is also provided by educational information technology. Education quality evaluation is a key component of education and teaching, and as such, it has amassed a wealth of data. However, the data also conceals a number of laws and issues that urgently require exploration and application [20]. Massive amounts of data, a wide variety of intricate data types, low data value densities, and incredibly quick data processing speeds are the four characteristics of big data. Different departments in higher education institutions have long existed in a dispersed, independent state, and their development has been gradual. Automatic teaching evaluation can now be done in higher education institutions thanks to the growth of big data applications. Higher education institutions have entered a new era of online office and online teaching management with the development of the digital campus. It is possible to unify a sizable amount of data in various formats that were previously kept in the management systems of various departments. The amount of data in information systems is also growing quickly as a result of the change in management mode. Finding potential rules in a large amount of data using various mathematical techniques is known as data mining (DM). It is the main issue that needs to be resolved in analysis and mining as a significant indicator of the evaluation of data education. DM mines information and discovers knowledge without making firm assumptions, which is the key distinction between DM and traditional data analysis. The data gathered by DM should have three qualities: it should be novel, efficient, and useful. The DM model structure is shown in Figure 1.

On the whole, there are many shortcomings in the current teaching evaluation in institutions of higher learning. For example, the form and information source of school teaching evaluation activities are relatively single; The evaluation method is too simple and single; Lack of data platform support; A series of problems such as the inability to timely feedback and summarize the results of teachers’ teaching evaluation. The evaluation system for political thought instruction in higher education institutions must be further improved as a result of these issues. Finding stable laws and potential issues behind the data from the vast amount of data used for education quality evaluation is valuable. By foreseeing future trends and behaviors, DM makes decisions that are knowledge-based and forward-looking. Classification and prediction, association analysis, clustering, concept description, and deviation detection are the five features of DM. The analysis of students’ accomplishments at the moment relies heavily on DM [21]. A wide range of professional backgrounds, including educational management, subject teaching, psychological measurement, information technology, etc., are used in the highly professional development of educational evaluation tools. It needs to go through a lot of steps, including frame creation, project design, test interview, revision discussion, etc., which calls for a lot of labour and material resources. The evaluation of students in the traditional method of evaluating political thought teaching is primarily based on their political thought accomplishments, and the evaluation of political thought teachers is primarily based on personal, subjective impressions, making the evaluation both incomplete and unreliable. The political thought classroom environment can be precisely recorded and evaluated using big data technology, allowing political thought teachers and students to know themselves more fully and objectively. For teachers and students of political thought, we can also provide scientific evaluation techniques. The process for implementing teaching evaluation is as follows: the evaluation system is created by experts in teaching research, and after the course is over, the management department arranges for the students to grade the teachers in accordance with the evaluation system’s requirements for teaching attitude, content, methods, and impact. There are currently two fundamental issues that prevent schools from using systematic, structured databases and high-quality data for all types of quality evaluation work. First, there is a problem with the data source; second, there is a lack of top-level design and overall thinking and design for the application of evaluation contents, evaluation methods, and evaluation results in the evaluation of educational quality carried out by schools across the nation. The process of designing a scientific comprehensive evaluation index system and choosing a workable comprehensive evaluation method in accordance with the evaluation objectives constitutes the research on the evaluation of college students’ political thought education. The systematic scientific method is required as the theoretical framework for this research because it is a complex system with numerous factors, indicators, and levels. With the advent of the era of big data, it provides a brand-new vision and broad ideas for the evaluation of political thought teaching in institution of higher learning. Using big data knowledge to study the evaluation system of political thought teaching in institution of higher learning can not only promote the implementation of teaching evaluation in institution of higher learning, but also effectively improve the quality of political thought teaching in institution of higher learning.
3.2. Basic Principles of Constructing Evaluation System of Modern Political Thought Education. Teaching quality evaluation is a means for schools to let teachers and students participate in teaching management and supervision, aiming at improving teachers’ and students’ sense of responsibility to schools and ensuring teaching quality. Evaluation index is the concept and quantitative expression of a certain feature of the evaluation object. It can not only clarify the concept of the evaluation object, but also reflect the quantity of the evaluation object, and has both qualitative and quantitative knowledge. The fundamental rule of universal connection of dialectics must be followed, metaphysical oneness must be overcome, and an all-encompassing, whole-process, and multi-angle evaluation standard index system must be constructed from the ground up. The evaluation system for political thought teaching in higher education institutions should be theoretically based, starting from all aspects of the political thought teaching process, and primarily adhere to the following principles: (1) Objective and scientific principles. (2) The completeness and comprehensiveness principle. (3) The testability and viability principle. (4) The idea of fusing universality with uniqueness. (5) The openness and promptness principle. The scientific context of the political thought education evaluation target has significant guiding significance for the entire evaluation activity. Promoting people’s overall development is the overarching or core objective of political thought education. The entire political thought education evaluation index system should demonstrate care and concern for people’s current circumstances and future development, encourage people to recognise their own value and the unity of social development, and accomplish the goal of promoting people’s holistic development. Weight is used to compare and quantify the relative importance of various factors in the overall set of things being evaluated, and changes in the weight value are directly correlated with the outcome of the evaluation. As a result, the index weight reflects the degree to which a particular index matters in the evaluation index. To ensure that the detailed indicator system can comprehensively, systematically, and effectively reflect, reproduce, and cover the evaluation content of political thought education, and draw a comprehensive conclusion, the evaluation system should convert the project’s content into a number of detailed indicators. This makes it easier to comprehensively and systematically understand the evaluation object’s overall situation.

The evaluation index system cannot be changed at will once it has been established. The effectiveness of the system, as well as public acceptance of the evaluation as well as the motivation of the person being evaluated, are all factors that affect how objective the evaluation index system is. The political thought education evaluation system has the following features: (1) Objective. For this, it is necessary to have a thorough understanding of the social context, to design and implement political thought education well, and to implement political thought education well. (2) Active. The evaluation system’s dynamic nature is initially demonstrated by the requirement that courses in political thought education advance with the times. (3) Compare. The key to determining whether an evaluation system is effective is to compare it to other evaluation systems. (4) Communication. The evaluation subject must use all of their initiative and polarity to accomplish this. In order for a system of scientific political thought education to be effective, the object must be able to be evaluated. Measurability, however, does not always imply feasibility, and sometimes the system of standard scientific evaluation is challenging to put
3.3. Construction of Evaluation System of Political Thought Education. First, according to the mining target, the original data to be used are collected, and these data are cleaned, converted, and integrated to generate sample data. The statistical description of single data can be roughly divided into four categories: concentrated trend, discrete trend, distribution, relative position, etc. Generally, the corresponding indicators can be directly generated by the statistical function of the operating software. On this basis, a more detailed description and analysis can be carried out to describe and analyze a specific index category. Reliability reflects the reliability of measurement results, that is, whether the test results truly and objectively reflect the actual level of candidates. The higher the reliability, the more reliable and stable the test results are. The main factor affecting reliability is measurement error. Data preprocessing can provide clean data for mining, so it is an important stage in DM. Data preprocessing is mainly to clean up the collected data. Due to the fact that the data in databases is frequently unreliable and noisy, it is important to check the data to ensure its accuracy and consistency, eliminate any errors, replace any missing information, and delete any outdated information before storing the database with accurate, consistent, and whole data. The expert enthusiasm coefficient refers to the response rate of the expert consultation form. The greater the value of the acceptance rate, the higher the enthusiasm of the experts. The formula is:

$$J = \frac{n}{N}$$  \hspace{1cm} (1)

Among them, \(N\) refers to the number of all experts, and \(n\) refers to the actual number of experts involved. The coefficient of variation is calculated as follows:

$$V_j = \frac{S_j}{M_j}$$ \hspace{1cm} (2)

$$M_j = \frac{1}{n} \sum_{i=1}^{n} X_i$$ \hspace{1cm} (2)

$$S_j = \sqrt{\frac{1}{n-1} \sum_{i=1}^{n} (X_i - M_j)^2}$$

where \(V_j\) stands for coefficient of variation, \(S_j\) stands for standard deviation, and \(M_j\) stands for arithmetic mean. Let the data set be \(S\), \(n\) be the number of classifications of \(S\); \(T_i\) is the label of a certain classification; \(P_i\) is the probability that any sample belongs to the \(T_i\), and \(S\) is the number of samples on the classification \(T_i\). The expected information for a given sample classification is:

$$I(s_1, s_2, s_3, \ldots, s_n) = - \sum_{i=1}^{n} P_i \times \log_2(P_i)$$ \hspace{1cm} (3)

Let the attribute \(A\) have \(m\) different values:

$$\{a_1, a_2, a_3, \ldots, a_m\}$$

(4)

\(S\) can be divided into \(m\) subsets with attribute \(A\):

$$\{s_1, s_2, s_3, \ldots, s_m\}$$

(5)

Among them, \(S_j\) contains some samples in \(S\), which have value \(a_j\) on \(A\). If \(A\) is selected as the test attribute, these subsets correspond to branches grown from nodes containing set \(S\). Let \(s_{ij}\) be the number of samples of class \(T_i\) in subset \(S_j\). Then, the entropy or expected information divided into subsets by \(A\) can be given by

$$E(A) = \sum_{j=1}^{m} \left( \frac{s_{ij} + s_{2j} + s_{3j} + \ldots + s_{nj}}{s} \right) \times I(s_{ij}, s_{2j}, s_{3j}, \ldots, s_{nj})$$

(6)

In general, the smaller the entropy value, the higher the purity of the subset division. Where, for a given subset \(S_j\):

$$I(s_{1j}, s_{2j}, s_{3j}, \ldots, s_{nj}) = - \sum_{i=1}^{n} P_{ij} \log_2(P_{ij})$$ \hspace{1cm} (7)

Then the information gain is:

$$Gain(A) = I(s_1, s_2, s_3, \ldots, s_n) - E(A).$$

(8)

Gain \((A)\) is considered to be the reduction of entropy obtained by dividing the sample set according to the attribute value. The Pearson correlation coefficient is a measure of the similarity of variables, and the output range of the correlation coefficient \(\rho\) is between \([-1, 1]\). The Pearson correlation coefficient calculation formula can be chosen to determine the correlation coefficient between the two variables if the populations from which the two variables are derived have a normal distribution:

$$\rho(X, Y) = \frac{E[(X - \mu_x)(Y - \mu_y)]}{\sigma_x \sigma_y}$$

$$= \frac{E[(X - \mu_x)(Y - \mu_y)]}{\sqrt{\sum_{i=1}^{n} (X_i - \mu_x)^2} \sqrt{\sum_{i=1}^{n} (Y_i - \mu_y)^2}}$$

(9)

Among them, \(\mu_x\) and \(\mu_y\) are the mean values of the two samples; \(\sigma_x\) and \(\sigma_y\) are the standard deviations of the two samples.

The purpose of factor analysis is to re-express the correlation between the original variables and common factors,
study the internal dependence of the correlation matrix and covariance matrix, summarize the data of numerous original variables with fewer common factors, and re-classify the variables in light of the common factors. As long as the top-down upper three-layer branch node is found, the remaining attribute is the last branch node. The goal of gain calculation is to choose the attribute from the untested attribute set with the largest gain as the subsequent branch attribute. The main structure and process of teaching evaluation are shown in Figure 2.

In addition to knowing the outcomes of a single variable, it is necessary to study the relationship between two types of phenomena or behaviors in education and to understand the direction and degree to which one type of behavior is influenced by the other. When two or more related variables are analyzed using the correlation analysis method, the degree of the close correlation between the variables is quantified using specific correlation coefficient values. Studying some objective laws and facts is the main goal of correlation analysis. If we can identify the elements that are highly correlated with one another, we can adjust the independent variables to improve the outcomes of the dependent variables. Data preprocessing does not ensure the accuracy and perfection of the data, and it may contain some noise data. Many branches in the generated decision tree reflect the abnormal situation in the training data set when there is noise in the training data set or when the number is too small to produce representative samples of the objective function. It is frequently necessary to classify the samples in the data analysis of quality evaluation when the sample size is large or there are numerous variables to be analyzed in order to analyze the groups more thoroughly. In order to determine whether the data is abnormal, this study applies the three principles. In this study, an abnormal value deviates from the average value of a group of measured values by more than three times. This study uses direct elimination for highly abnormal values. In order to obtain ideal decision rules from a fully grown decision tree that are as loyal to the source data as possible, it is necessary to prune the decision tree. Obviously, over-pruning and under-pruning will greatly affect the quality of decision rules. In this study, the method of combining front pruning with back pruning is chosen, in which the front pruning adopts the pruning algorithm based on “relative support” and the back pruning adopts the simplified pessimistic error pruning algorithm.

4. Result Analysis and Discussion

For the evaluation of college students’ political thought education, the formulation of indicators and standards is a very important basic work. Different indicators have their own characteristics and changing ranges. The index

![Figure 2: The main structure and process of teaching evaluation.](image)
standards formulated in this study are universal in the evaluation of political thought education in universities. This chapter uses the index system to evaluate the political thought education. The hardware experimental environment studied in this study is: Windows64-bit operating system, based on X64 processor, with 1.60 GHz CPU and 16 G running memory; The software environment is SPSS software, and the version is Statistic WinWrap Basic Script; Python language. The survey results of political thought education evaluation are shown in Table 1.

Data must be gathered prior to data mining in order for the mining to have a clear data analysis object and for the database to store the collected data. The primary data sources for this essay are the teaching evaluation information table and the basic information table for teachers. The network’s learning performance curve after training with training samples is shown in Figure 3.

From this, we can see that the network can achieve the predetermined performance target relatively quickly. This shows that the network model established in this study is reasonable. In addition, whether the data is representative or not will have a great influence on the mining results. For unrepresentative data, we should expand the database, increase the distribution ratio of node samples, and mine again, which will get different results. Data collection means that after a new project is built, the evaluation data is finally entered according to the project category and the prescribed evaluation method. In this study, leaders, political thought teachers, and students input the evaluation data of political thought teaching from the campus network platform, and at the same time, they can add, modify, delete, and perform other operational functions. The stability results of the system are shown in Figure 4.

Display the analysis results as charts, words, reports, etc. through visualization tools. In addition, the test data set is used to check, and the analysis and modeling process is re-optimized to improve the accuracy and efficiency of mining. Figure 5 shows the accuracy comparison of different algorithms. Figure 6 shows the efficiency comparison of different algorithms.

By applying big-data-related technology to political thought teaching evaluation, the collected data can be integrated and analyzed, and a large amount of information can be deeply excavated, so that the evaluation results are more scientific and objective, which has a certain application value. Comparing different algorithms in this chapter, the experimental results of MSE (Mean squared error), RMSE (Root mean square error), and MAE (Mean absolute error) are shown in Table 2.

After the evaluation, there is an indispensable link, that is, the feedback link, without which the evaluation is incomplete. The evaluation of political thought education should play its role through the final feedback. Without feedback, the evaluation of political thought education will lose its due significance and role. A total of 200 teachers and students were selected to evaluate the educational evaluation system in this study. The subjective scores of teachers and students are shown in Figure 7.

<table>
<thead>
<tr>
<th>Index</th>
<th>Evaluation content</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>Course achievement</td>
<td>61.34</td>
</tr>
<tr>
<td>X2</td>
<td>Learning skills</td>
<td>59.31</td>
</tr>
<tr>
<td>X3</td>
<td>Activity participation</td>
<td>21.15</td>
</tr>
<tr>
<td>X4</td>
<td>Classroom performance</td>
<td>56.27</td>
</tr>
<tr>
<td>X5</td>
<td>Political thought theory knowledge</td>
<td>63.78</td>
</tr>
<tr>
<td>X6</td>
<td>Mental health level</td>
<td>8.21</td>
</tr>
<tr>
<td>X7</td>
<td>Learning interest</td>
<td>6.14</td>
</tr>
<tr>
<td>X8</td>
<td>Innovation capacity</td>
<td>5.89</td>
</tr>
<tr>
<td>X9</td>
<td>Attitude to learning</td>
<td>24.67</td>
</tr>
<tr>
<td>X10</td>
<td>Preparation before class</td>
<td>10.06</td>
</tr>
</tbody>
</table>

The experimental results of this chapter show that the stability of this educational evaluation system is about 94.6%, and its evaluation accuracy can reach 95.33%. This result verifies the validity and reliability of the educational evaluation system constructed in this study. Therefore, it is feasible to apply big data to the evaluation of political thought teaching in institutions of higher learning, which provides some new ideas for related research.
Figure 5: Accuracy comparison results of different algorithms.

Figure 6: Efficiency comparison results of different algorithms.

Table 2: Experimental results of different indexes of different algorithms.

<table>
<thead>
<tr>
<th>Algorithm</th>
<th>MSE</th>
<th>RMSE</th>
<th>MAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional evaluation algorithm</td>
<td>0.158</td>
<td>0.416</td>
<td>0.708</td>
</tr>
<tr>
<td>Reference [15] algorithm</td>
<td>0.096</td>
<td>0.287</td>
<td>0.621</td>
</tr>
<tr>
<td>Reference [18] algorithm</td>
<td>0.088</td>
<td>0.269</td>
<td>0.537</td>
</tr>
<tr>
<td>Evaluation algorithm in this study</td>
<td>0.061</td>
<td>0.241</td>
<td>0.502</td>
</tr>
</tbody>
</table>
5. Conclusions

The use of DM technology in the field of education management has grown steadily along with the advancement of scientific management standards in institutions of higher learning. University administrators have a solid foundation to make wise decisions thanks in particular to the application of association rules in teaching management. The evaluation of political thought education can integrate and analyze the gathered data, delve deep, and gather a lot of information with the help of big data-related technology. This study investigates the development of the system for evaluating political thought instruction in higher education institutions from the standpoint of big data application background. The concepts of DM are divided into the following five levels based on the hierarchy and complexity of the data: descriptive analysis, correlation analysis, predictive interpretation, classification analysis, and system construction. According to the experimental findings, this educational evaluation system is stable to a degree of 94.6 percent, and its evaluation accuracy can reach a level of 95.33 percent. The validity and reliability of the educational evaluation system developed in this study are confirmed by this result. As a result, it is possible to use big data to evaluate the teaching of political thought in higher education institutions, which serves as a model and source of inspiration for the ongoing promotion of educational quality evaluation. The selection of evaluation indicators for political thought teaching in institutions of higher learning is still not sufficient for the age of big data due to technological limitations and the influence of feasibility; as a result, the study’s conclusion may have some restrictions and flaws. Additionally, there is no empirical research, necessitating future investigation and study.

Data Availability

The data used to support the findings of this study are available from the author upon request.

Conflicts of Interest

The author does not have any possible conflicts of interest.

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References

10 Mobile Information Systems


