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The Application of Big Data Thinking in Ideological and Political Education

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The Application of Big Data Thinking in Ideological and Political Education

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Abstract: The arrival of the era of big data has brought new vitality to the teaching of ideological and political education in universities. At the same time, the sparse, redundant and fuzzy features of massive data pose challenges to the application of big data in university ideological and political education. This article describes the establishment of the ideological and political education database, the application of various stages of data analysis in university ideological and political education and how to use the results of big data analysis for educational reflection and teaching reform. Only by using these data reasonably and effectively can the advantages of big data really benefit college teachers and students. At the same time, the problems of data leakage and privacy leakage that may exist in the process of big data analysis should also attract the teachers' full attention and take appropriate measures to avoid these problems.

1.Introduction

In recent years, with the continuous development of Internet technology, the emergence of explosive data has brought a lot of convenience to our lives, and it has also brought great resistance to our timely finding of effective information. As the amount of data continues to grow, the laws of things will continue to emerge, and we can use these laws to carry out research work effectively. The introduction of big data makes the results more objective and scientific. The advantages of big data mainly include the following four points:

First, Big data can help us save time and make work more efficient.The combination of big data and artificial intelligence algorithms can use millions of historical data to perform prediction operations to maximize time-saving costs and greatly improve work efficiency. At the same time, the use of big data can also calculate the optimal solution, so that the resources get the most reasonable configuration. Therefore, the analysis operation of big data not only greatly saves labor capital, but also reduces the probability of error.

Second, Big data helps people make decision analysis.Human imagination is extremely rich, but in the process of implementing these ideas, it will inevitably encounter large calculations and difficulties that humans cannot expect. Therefore, through the analysis of big data such as historical data, it is possible to effectively predict the problem and conduct an effective analysis and display of the current situation. Through objective data analysis results, the executives are helped to make the most reasonable and scientific decisions. At the same time, the memory space of the human brain is limited. As the amount of data increases, the computing rate that the human brain can perform no longer satisfies the demand for data. The storage of big data, the analysis of big data, and the application of big data have become an indispensable part of every industry.

Third Big data can quantify work. In some cases, it is difficult to quantify the workload, but the introduction of big data can accurately record the workload. After effective analysis and utilization, it

is possible to objectively demonstrate the amount of work and the completion of the workload, and it is possible to have a reasonable control over the progress of the entire work.

However, how to find the news we need from the massive information is a difficult thing. Therefore, the analysis and application of massive big data is one of the urgent problems that need to be solved urgently.

The primary problem of college education is to cultivate high-quality talents with all-round development of morality, intelligence, and beauty. Therefore, while emphasizing academic education, colleges and universities should also pay attention to the ideological and moral education of students. How teachers can make students pay more attention to their own ideology and politics through the reform of teaching methods and teaching contents is also one of the important topics of teacher reform.

Under the environment of advocating the comprehensive development of college students, improving the ideological and political teaching of college students should be placed in one of the more important positions. In college ideological and political education, the use of big data is particularly important. In the process of teaching and training, you can effectively use big data analysis to provide intuitive and reasonable guidance for teaching and training.

2. Application of Big Data of Ideological and Political Education in Universities

To obtain the relevant ideological and political education database, usually need to conduct offline survey work or online data crawling. For the large amount of data collected, if you want to use it further, the first thing you need to do is to clean and filter the data, and delete invalid or duplicate information. The second is to visualize a large amount of ideological and political teaching training data. Through the visualized operation results, teachers and students have a more intuitive experience to facilitate the next communication.

Data cleaning: Data cleaning refers to the deletion of various invalid information such as repetition and redundancy, and effective completion of the missing necessary information through various processing algorithms.After the cleaning process, only the ideological and political education training data of college students can be effectively processed for the next step. For practical guidance in ideological and political education. The data analysis results after the data cleansing step are more scientific, which can achieve a multiplier effect and better demonstrate the ideological and moral qualities of college students.The data cleaning steps are shown in Figure 1:
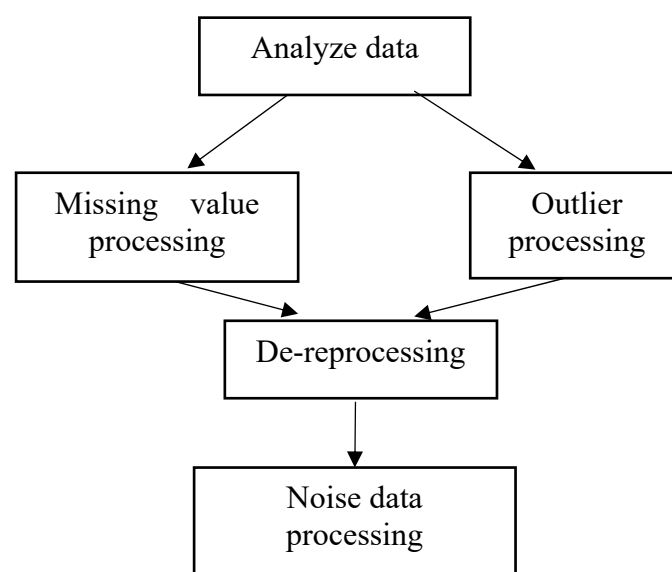

Figure 1. Step flow of data cleaning

Figure 1 shows the specific flow of data cleaning. The first thing that needs to be done is the handling of individual exception data, including the handling of missing values and outliers. Secondly, the complete data is de-duplicated to avoid invalid work and improve the efficiency of data processing. The specific methods commonly used in each step of data cleaning are shown in Table 1.

Table 1. Specific methods in each step of data cleaning

Missing data value	Delete missing values
	mean padding method
	hot card filling method
Outlier	Simple statistical analysis
	3∂ principle, box plot analysis
	clustering based
	density based
	model based detection
	distance based
noise	Regression method
	Boxing method

There are many methods for data analysis. On the basis of focusing on the analysis results, we also need to pay attention to the stability and security of software and methods. Therefore, while studying how to conduct data analysis, it is also a very important issue to pay attention to protecting the confidentiality of college students' information.

Data visualization operations: A large amount of data after data cleaning can be seen by professional data analysts. However, for college teachers and students, it is still difficult to understand the laws hidden behind them through data. Therefore, how to perform a visual processing of big data is another key issue in the data processing stage.

The five ways in which data visualization is commonly used include: **Area & Size Visualization:** By using a series of dimensions such as area, length, height, etc. to represent the size of the data, it is possible to clearly show the significant differences between the different indicators. However, in the process of data visualization, it is usually necessary to use the relevant mathematical formula to calculate the specific correlation value. **Color Visualization:** In the entire graph, a stronger color indicates that the indicator value of this area is stronger, while a weaker color indicates that the indicator value of this area is weaker. Through the depth of the color gives a strong visual impact, more obvious highlights of the overall characteristics of the data. **Geographical spatial visualization:** This visualization is mainly applied to the representation of data related to geographic location. Through the specific division of the region, the user has a more accurate understanding of the value of each region. When you want to see the detailed values of an area, you can also find the information quickly and accurately based on its geographic location. **Graphical visualization:** As the name implies, it is the introduction of the graphics of the things represented by the data in the process of data visualization. Through the display of the graphics, the user also has a more intuitive understanding of the subject terms of the data, so that the user can understand the theme to be expressed by the chart.

3.Innovation of Big Data in Ideological and Political Education Teaching Methods

3.1Establish a database of ideological education and training

First, it is necessary to organize student feedback on the effects of ideological and political education. Only a relatively large number of databases can provide ideological and political education teachers with a large amount of original data for teachers to use these data for effective research. College teachers can conduct research on the basis of massive data, and constantly propose new teaching concepts and innovate teaching methods. At the same time, the introduction of big data has also promoted a more objective exchange of teaching among teachers from different universities. Therefore, these big data-based application methods require college teachers to systematically study big data analysis and related technologies. At the same time, in some aspects, the collection of massive data also means listening and learning from student feedback. As a result, the entire teaching reform process is more democratic and more convincing.

3.2Reflection and improvement through feedback data

By analyzing the big data in the ideological and political education database, teachers should make corresponding improvements according to the analysis results, and try to adjust other less popular ideological and political subjects in a reasonable and appropriate manner to attract students 'attention, Then guide students to like ideological and political education. At the same time, by analyzing the differences between the data, teachers also need to adopt different teaching methods for different education and training programs. By analyzing the big data of the historical training of specific students, it can help teachers scientifically formulate the current student training plan.

With the continuous development of the network teaching platform, the number of online teaching videos is increasing. The emergence of massive teaching videos is also one of the important signs of the arrival of the big data era. Massive information means that teachers and students can learn more from these sources, learn from the advantages of each teaching video, and constantly improve themselves. But on the other hand, the emergence of massive video, video quality level is not uniform, how to find high-quality resources in massive data, is also one of the important application methods of data analysis. Colleges and universities should actively organize teachers and students to learn about data screening and data analysis, so that they can make better use of these resources in the learning process.

4.Innovation of ideological and political education methods in the era of big data

The innovation of ideological and political education methods in the era of big data refers to the application of big data thinking, technology and methods to the entire process of ideological and political education practice and research, and promotes the organic integration of big data and ideological and political education methods to ultimately achieve ideological and political Informatization, scientization and shortcut of educational methods. Taking advantage of the opportunity of the implementation of the national big data strategy to promote the innovation of ideological and political education methods, lead the social trend of thought, and grasp the ideological voice and leadership is an important historical mission and new task of the current development of ideological and political education disciplines.

Under the influence of the era of big data, ideological and political education methods take information as a link, take information theory and communication as the foundation of educational method innovation, and adopt ideological and political education methods based on the law and process of information dissemination by adopting big data information processing technology The innovation is more scientific and modern. At present, the development direction of ideological and political education activities has become more and more informatization. Through the development trend of informatization, the original traditional single education model has been changed, and innovation in teaching methods has been achieved.

In the process of research and specific practice of ideological and political education, through the use of big data information processing technology, the entire process of research and practice of ideological and political education methods can be vividly displayed, making the visualization characteristics more and more obvious.

Because big data itself has the characteristics of personalization, diversification and convenience, the use of big data information technology has also made the ideological and political education methods more diverse and flexible in practice. In the era of big data, ideological and political education can divide the educated into individual education or group education through the characteristics of personalized, diversified and convenient information. For individual education, the method of tracking or supervising education can be used. For group education, information push and other methods can be used. According to the different education groups, formulate different education methods to make the ideological and political education innovation more flexible.

5. Conclusion

With the continuous development of science and technology, the ideological and political education of college students is also constantly changing. The rapid development of big data technology has had a huge impact on some traditional models and traditional methods in China's education system. Flexible use of big data thinking can be used as an important means to promote the progress of ideological and political education of college students.The era of big data has come. And college students who are active in thinking and easy to accept new things are undoubtedly the group most affected by the era of big data. The era of big data has brought opportunities and challenges to ideological and political education in colleges and universities. People must start with strengthening big data awareness, improving the ability to use big data, improving the use of big data technology and system protection, continuously improving the relevance of work, and tapping the deep rules of ideological and political education.Therefore, it is of great practical significance to do ideological and political education well in the new era, introduce big data technology, realize the interdisciplinary integration and development of ideological and political education and big data science, and promote the informatization and scientificization of ideological and political education methods.

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