Development Path of Ideological and Political Education in Colleges and Universities from the Big Data Perspective

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Abstract. With the development of information technology and the growth of new media, the big data perspective is coming. A detailed introduction to the big data is performed in this paper, and the faced by the ideological and political education in colleges and universities are analyzed from the big data perspective. Combined with the above analysis, the specific reform measures are proposed to guide the teaching practice.

Keywords: Big Data, Ideological and Political Education in Colleges and Universities, Challenges, Reform Measures

1. Introduction
With the continuous development and deepening of big data perspective, people are facing increasingly massive information[1]. As a means to cultivate is also facing considerable challenges. Colleges and universities that are responsible for nurturing future pillars for the motherland should carry out reform in time to adapt to the changes[2-3]. Only by innovating teaching approaches, strengthening big data awareness, and establishing a big data system in teaching practice can the quality be improved to achieve the ultimate goal of training students into talents with excellent ideological and moral characters.

2. Overview of big data
“The so-called big data is what people can do based on massive data. It is also the source of people's new cognition and creativity[4-5]. Most of the big data can also change the relationship between citizens and governments and the institutions of market organizations.” for the definition of big data, the U.S[6]. Internet data center also has a corresponding meaning, which believes that big data is communication. Through the methods of discovery, capture, and analysis, a new technical framework for obtaining similar value. In a word, big data is a large-scale, rich, and diverse data collection:
\[ S = \{(x_i, y_i)K(x_i, y_i)\} \in \mathbb{R}^n \times \{+1, -1\} \]

\[(x_i, y_i) \text{ represents the optimization problem of regularized dynamic functions:} \]

\[ \min_{w \in \Omega} \Phi(w), \Phi(w) = r(w) + \frac{1}{n} \sum_{i=1}^{n} f_i(w) \]

\[ w \in \mathbb{R}^n, r(w) \text{ represents a regularization term, a dynamic function } f_i(w) \text{ from data } x_i \text{ caused by.} \]

It is assumed that the dynamic function is dynamic, the objective function \( \Phi(w) \) has strong convexity. Many researchers have studied the solution of the optimization problem (2), among which the gradient descent method is the simplest first-order optimization method

\[ w_{i+1} = w_i - \eta_t g(w_i) \]

\( g(w_i) \) is about all data objective functions \( \Phi(w) \) is \( w_t \) total gradient at, \( \eta_t \) is the learning step.

Marxist dialectics are used to analyze the challenges brought by the bid data to the ideological and political courses of vocational college students. It also brings opportunities for curriculum reform and innovation, such as resource base of massive data, cloud computing and computing technology that can provide data analysis for teachers and other data-intensive scientific and technological progress, which creates corresponding hardware and software conditions.

3. **Overview of political teaching in colleges and universities**

Talents are the foundation and core of national development and progress. However, what kind of talents can be called talents? In general, talents with morality and intelligence can be called talents. Comprehensive education in students' ideological and moral aspects and professional knowledge basis and allow the students to adapt to society well after graduation. In the society today, morality and talent are very important for a person. If a person has morality but does not have corresponding knowledge and skills, then his contribution to the world is limited to some extent. A person WHO has wisdom and skills but lacks good morality will eventually become one who endangers the society. In recent years, there have been many murders and poisons by highly knowledgeable people. Such vicious events of revenge against society reflect the defects and disadvantages existing.

Whether a person has a high ideological and political literacy, there is no objective evaluation standard, but the level of ideological and political can be observed in many of its external performances. However, It is believed that the theoretical knowledge involved in the course is too obscure and difficult to understand. Many students think that the main purpose of learning this course is to cope with the examination of the school. Because of the various prejudices of students on this course, they lack the corresponding will not take the initiative to learn and explore the deeper ideological and political knowledge.

In today's college education, the ultimate purpose of teaching means, methods, and corresponding evaluation systems is to test, which makes the college teaching have a solid color of the test. There is no corresponding objective evaluation system, no emphasis on the combination of teaching and
practice, and too much emphasis on scores in teaching. To a certain extent, it ignores the real purpose of this course and greatly reduces the teaching effect.

4. Challenges for ideological and political education in colleges and universities from the big data perspective

The forms of information expression are very complex and diverse, including not only the common telephone, newspaper, and radio in people's lives, but also the video, text, and voice on the Internet. In the era with explosive volume of information, people are exhausted by false and superficial information, it also gradually destroy people's trust. Given the above situations and challenges, colleges and universities must have feelings when conducting. It is necessary to let students have necessary thinking when learning this course and establish and improve their “Three Outlooks” in the process of thinking and feeling. In the era of complex network data, while cultivating high-quality students with correct values and far away from terrible network violence, it can also optimize the network environment.

Among which, 4.36% were “excellent”, 26% were “good”, 43.28% were “medium”, and 26.36% were “poor”. From the results of the survey, the overall situation of online teaching is not very good. (see Table 1)

**Table 1.** How do you evaluate the application of network teaching in ideological and political courses at your school?

| Options     | Subtotal | Proportion |
|-------------|----------|------------|
| Excellent   | 24       | 4.36%      |
| Good        | 143      | 26%        |
| Secondary   | 238      | 43.28%     |
| Poor        | 145      | 26.36%     |

In general, the application of network teaching is still not very high. Some colleges and universities have excellent network teaching courses, but the assessment standard is relatively low, which has little binding force on students. Most of the classes use ppt display teaching, but most of the teachers only use ppt as a brief version of the “textbook”, listing the knowledge points, lack of case analysis and interaction, and students' participation is not high. Some schools have been equipped with classrooms and media for online teaching, but teachers rarely organize the development of online courses.

**Table 2.** if you do not often use the Internet for ideological and political education, what are the main reasons (multiple choice)?

| Options                                           | Subtotal | Proportion |
|---------------------------------------------------|----------|------------|
| Not required in teaching assessment index         | 76       | 13.82%     |
| Network teaching is troublesome and energy-consuming | 240     | 43.64%     |
| Without the help of network teaching, we can have a good class | 139   | 25.27%     |
| Teaching content and course nature are not suitable for use | 120   | 21.82%     |
| Inadequate mastery of network information technology | 170 | 30.91%     |
| School network teaching equipment and conditions are not perfect | 261 | 47.46%     |
| Teaching objects, students' classroom performance, and other factors | 150 | 27.27%     |
| Not interested                                    | 38       | 6.91%      |
| Others                                            | 55       | 10%        |

As a teaching worker, the first thing is to make oneself aware of big data, and become a receiver,
manufacturer, and disseminator of data information in teaching and life. Meanwhile, teachers should also be able to sort, collect, and analyze data in teaching work. After school, students should be properly observed and actively communicated daily to clarify their interest points in two-way communication with students. Subsequently, the search function of the network should be used for further understanding and analysis. For example, once in the chat with students, the author learned that they were very interested in the Syrian war and had many questions. The author believed that it could make a proper teaching content, through which the students could understand China’s national strength and the cruelty of the war. After class, the author collected information online, the origin of the war in the region, and the views of the various personages on this issue.

5. Conclusions
With the continuous development and deepening of big data perspective, people are facing increasingly massive information. As a means to cultivate is also facing considerable challenges. Colleges and universities that are responsible for nurturing future pillars for the motherland should carry out reform in time to adapt to the changes. Only by innovating teaching approaches, strengthening big data awareness, and establishing a big data system in teaching practice can the quality be improved to achieve the ultimate goal of training students into talents with excellent ideological and moral characters.

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