

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

Chong Gao^{1*}, Yue Huang²

1.College Of Humaites And Marxism, Hubei University Of Medicine, Shiyan, Hubei, China

2.College Of The Fifth Clinical Medical, Hubei University Of Medicine, Shiyan, Hubei, China

1.gaochongb107@126.com 2.hyhbmu@126.com

*Corresponding Author

Keywords: Ideological and political education, Big data, Multi-modal perspective

Abstract: Internet technology is constantly evolving and is widely used in many fields, making it possible for education and the Internet to integrate with each other. This is also an important direction for the development of the education industry. Universities should use the Internet technology to promote the innovation of the political education work in universities. The development of Internet technology is able to transmit the spirit of the thinking and political education work in colleges and universities through an efficient and fast and accurate way. With the rapid popularization of Internet information technology, human life has entered the era of “Industry 4.0”, and a new round of technological trends such as big data, cloud computing and artificial intelligence are breaking out. The construction of “Big Data + Thinking Politics” mode can make the ideological and political education of colleges and universities keep pace with the times, inject effectiveness and innovation into the ideological and political education of colleges and universities, and improve the data value and supervision effect of ideological and political education of colleges and universities. “Big Data + Thinking Politics” mode can inject new vitality into the ideological and political education of colleges and universities, and improve its effectiveness, innovation and scientificity.

1. Introduction

In the context of the rapid development of global informatization, big data has become an important basic strategic resource for the country and is leading a new round of scientific and technological innovation [1]. Big data can be understood through three aspects. First, the theoretical level. According to the advanced technology of big data and its basic characteristics, different definitions can be drawn in different industries and fields, and it is especially important to analyze the value and development trend of big data in this industry and to face the opportunities and challenges brought by big data to the industry. Second, the technical level. Technology is the fundamental means and basis for the embodiment of the value of big data, and the use of data collection, processing, analysis and other technologies of big data are supported by advanced technologies such as cloud, cloud computing and artificial intelligence [2]. Finally, the practice level. Practice is the ultimate value embodiment of big data. The development and use of national database, enterprise database, and social database and the construction of data sharing and common platform are the concrete practical ways to realize the highest value of big data, which can depict a better prospect for our society and life [3].

Big Data has five basic characteristics, as shown in Figure 1, also called “5V” characteristics, with massive data size (Volume), diverse data types (Variety), huge data value (Value), fast data flow (Velocity), dynamic data Vitality [4]. Based on the above five basic characteristics, the big data system presents greater advantages in data collection and storage, data analysis, and functions when compared with traditional information systems. For example, in terms of data collection and storage, the data collected by traditional information systems are scattered and independent, and

lack of sharing, while big data systems use a unified cloud computing platform to share data comprehensively; in terms of data analysis, traditional information systems are based on causal analysis of a small number of samples, while big data systems are based on analysis of a large number of samples; in terms of functionality, traditional information systems solve a single business problem through a single machine or local area network, while big data systems are based on a large number of samples. In terms of function, traditional information system solves a single business problem through single machine or LAN, while big data system solves a variety of complex problems through Internet and mobile Internet. Big Data is not only a huge data collection composed of massive data, but also an emerging information technology to explore the law and discover the value in a large amount of data. It can also be seen that big data is to be based on advanced technology, and with the continuous development of technology, the development of big data is bound to follow, so the arrival of the era of big data and the use of big data is the inevitable result of the development of science and technology [5].



Fig.1 The “5v” Feature of Big Data

“Big Data + Thinking Politics” is the high integration of ideological and political education in colleges and universities with big data technology, which is the dataization of all information of ideological and political education and the high-density and all-round monitoring of ideological and political education. Under the influence of big data, ideological and political education in colleges and universities gradually changes the traditional education method and injects the factors of the times into ideological and political education, thus shaping the mode of “big data + ideological and political education” and adapting it to the current background and spirit of the times. New technology has become a trend to lead the innovation and development of education industry, and universities should deeply understand the national strategic layout and the important advantages of big data. The ideological and political education work under big data is the product of combining ideological and political education with information age, which has distinctive characteristics of the times.

2. Opportunities and Challenges of Ideological and Political Education in Universities in the Era of Big Data

2.1 Teaching Resources

The Action Plan of Education Informatization 2.0 issued by the Ministry of Education states, “Make full use of new technologies such as cloud computing, big data and artificial intelligence to build an all-round, all-process and all-weather support system to help the reform and development of education teaching, management and services.” It has become a trend for new technologies to lead the innovation and development of education industry, and universities should deeply understand the national strategic layout and profoundly recognize the important advantages of big

data. Big data brings infinite possibilities to people's life and turns the dream of data into reality, and various industries are actively welcoming the advanced technology and huge data of big data. Big data has a massive and diverse database, while it can quickly classify and process all kinds of data [6]. These data not only have authenticity and accuracy, but also its cost is low and the volume is sufficient. Big data has brought new changes to the ideological and political education of colleges and universities, making them gradually reform the student management mode; making college teachers gradually innovate the teaching mode. Big data makes college ideological education innovative and promotes the renewal of concept and deepening of research of college ideological education. The traditional management mode and teaching mode can no longer meet the teachers' demand for data information and the students' demand for teaching mode reform. The massive information of big data brings rich and colorful data resources for college management and teaching; the analysis technology of big data brings a new way for college student management and teaching with high efficiency and low cost, which effectively improves the precision and personalization of student management and teaching mode, as shown in Figure 2. The convenient search engine of big data can quickly and accurately find data information while also analyzing, classifying, modeling and other technical support for data, and college Civic Education workers can screen, summarize, analyze and process the information related to Civic Education objectives, education contents and educated people. The database provides rich and diverse teaching resources for Civic Education. Compared with the traditional way of finding information, big data can find the latest information more conveniently and quickly to assist Civic Education work.

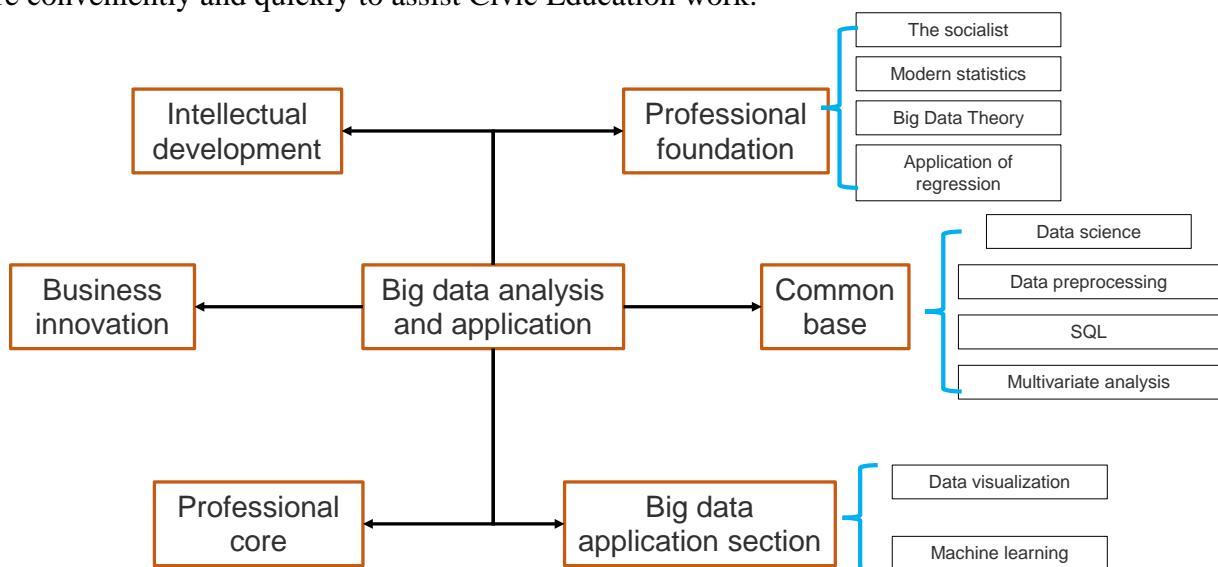


Fig.2 The Application of Big Data Analytics in Universities

2.2 Personalized Management and Teaching

Firstly, it helps the personalized management of college Civic Education. Civic education workers can manage students scientifically through big data software. Civics class in colleges and universities is a lobby class with a large number of students, teachers can't know every student and can't do specific management, therefore, problems may occur in student attendance statistics, summaries of regular grades, summaries of final grades and other links. Efficient Civics educators can use some big data software to perform class sign-in, collect electronic assignments and other forms to form an Internet database so as to manage students' attendance and grades.

Secondly, it helps the personalized teaching of college Civic Education. In the current era, big data is widely used and the traditional teaching mode begins to change, from focusing on collective teaching mode to focusing on personalized teaching mode. Big data accurate data collection and finding can facilitate college ideological and political education workers to grasp the recent dynamics of students' thoughts, values and learning status, so as to use the data to analyze the existing problems. At the same time, contemporary college students are influenced by the information society and have the characteristics of active thinking, contradictory knowledge and

action, and reliance on the Internet [7]. On the one hand, dynamic management of daily life and study status of college students can be carried out. Ideological and political education in colleges and universities should adapt to the ideological characteristics and living habits of college students at this stage and actively change the student management mode. The complex and diverse Internet information is constantly eroding the daily life of college students, and it becomes especially important for college ideological teachers to cultivate the ideology and values of college students. The diversified Internet environment has enriched the ways for college students to get in touch with new things, and at the same time has caused the contradiction between college students' cognition and behavior. The teachers of college thought and political science should manage all information of college students dynamically, use big data engine to grasp the situation of college students' ideological cultivation, and improve the effective role of college ideological and political education.

Big data technology is actually a “double-edged sword”, which brings rich opportunities for the work of college political science education on the one hand, and brings serious challenges to the work of college political science education on the other. Due to the rapid development of big data, there is not enough time to update and improve the ideology, system regulations and application methods, and the incomplete technology application has become a big obstacle to the work of political science education in colleges and universities. Bad information in the network is easy to invade people's thoughts, especially students whose thoughts are not mature enough, and these bad information may lead to a series of ideological problems. Attracting students' attention in new ways suitable for contemporary college students and establishing healthy ideological concepts for them.

3. Development Path

3.1 Establishment of a Special Website for Ideological and Political Education

With the help of Internet information technology, colleges and universities should establish thematic networks for ideological and political work in colleges and universities, so that ideological and educational work can be close to students' daily life and guide them to learn red culture on top of thematic websites. On the thematic website, there are the latest ideological and political messages and a window to communicate with teachers. Students can get information and communicate with teachers on it. This changes the traditional concept of the course staying only in the classroom. Thematic websites can serve as a better guide [8]. For example, colleges and universities can make full use of the Internet means to establish special thematic websites, where they can select some real educational work content and present it in a way that is interesting to students, so that students can accept it more easily and combine the content of Civics and hot topics to stimulate students' interest. Colleges and universities can interconnect the traditional teaching courses of ideology and politics with the Internet through online education means; through online teaching, help students establish correct values. The implementation of ideological education and political work in colleges and universities should make full use of the diversified development characteristics of the Internet to give students relevant advice and guidance from life and study as well as future work, and really solve the problems that students actually encounter.

With the continuous and in-depth development of socialist rule of law, the concept of rule of law is known to more and more people. Strengthening the construction of rule of law in ideological and political education work can provide solid institutional guarantee for the development of ideological and political education work in colleges and universities. The development of network information has made the construction of rule of law in China a new development, laws and regulations, current affairs and policies are more widely spread on the network platform, and the work of legal education is more deeply rooted in people's hearts. The ideological and political education work in colleges and universities should be carried out from the perspective of legal system, combined with the actual situation of students, so that the ideological and political education and students' learning can be integrated. Based on this, the ideological and political education work in colleges and universities cannot be separated from the construction of rule of law culture in China. The thought and political work in colleges and universities cannot exist apart from the rule of law, and the

corresponding teaching process should also ensure the efficient dissemination of network information.

The talents of “New Engineering” need to have strong professional skills in data screening, data organization and data updating. The database is provided for all the teachers and students in the university to use in their daily work and study, so the data information should be classified according to the type and date, so that they can use it in time, as shown in Figure 3. The ideological and political data supervisors can take the initiative to set up positive campus discussion topics through the popular current affairs on the Internet platform and carry out the propaganda of ideological and political education related contents to form a positive campus public opinion atmosphere, grasp their roles and create a harmonious and civilized campus network environment. At the same time, when bad information and bad ideas are popular on the Internet platform, information management and information diversion should be done in time to avoid bad information from affecting college students' values. Therefore, colleges and universities should actively cultivate and introduce “new engineering” professionals with advanced high-tech technology, and improve the application ability of “big data + political thinking” mode.

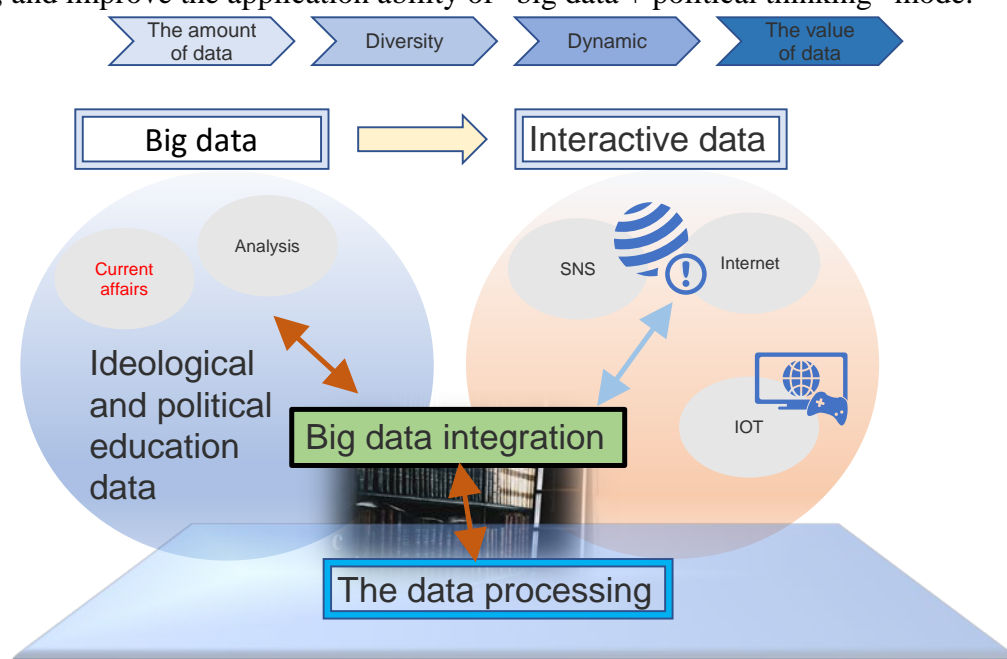


Fig.3 Classification of Data Information

3.2 Create a Learning Platform for Interaction with Students

With the rapid development of online information, the communication methods among students have become diversified, with less time for face-to-face communication and even less frequent use of text messages and phone calls. Students have chosen more mobile social means, such as WeChat, microblogging, and online catechism forms. Combined with this situation, teachers can also choose these means to communicate with students to create a good interactive platform to promote the exchange of learning experiences between students and also promote the exchange of learning work between teachers and students to trigger the emotional resonance of students and continuously improve the quality of teaching, as shown in Figure 4. WeChat public number has been developed and paid attention to in the new media era. Teachers can publish some highly current and authentic red culture contents on the public number in time to strengthen students' learning and understanding of red culture and ideological education work. Teachers can use WeChat public number to push some information to keep students up-to-date. Teachers can also push teaching contents and recommended reading materials to students and let them express their thoughts after reading the materials. Teachers can select messages to answer students' questions and answer their doubts. Teachers can also take advantage of the dynamic development of the information's platform to actively interact with students and improve the content and teaching style of their work.

The development and application of “Big Data + Thinking Politics” mode in the ideological and political education of colleges and universities cannot be done by a single enterprise or school, but must be supported by national laws and regulations and national policies. The openness and complexity of big data make some risks and obstacles in the process of using it, and the state should establish a perfect security warning system. The complex environment of big data, government legislation and law enforcement are important to protect personal privacy, protect data security, and safeguard social development. It is necessary to set up special legal provisions according to different industries and different units, and use strong means to prevent the problem of data information leakage and interference of bad data. Moreover, data regulation laws and regulations should be introduced to strictly deal with data falsification, misuse and other undesirable behaviors. The research and development of big data technology requires a lot of capital and talents, and the government should actively support enterprises or individuals to engage in the business of big data technology research and development, and increase efforts to support and develop high-tech information technology. Continuously upgrade and improve big data-related data storage, mobile devices, application software, etc. to ensure the development trend of big data, cloud computing and artificial intelligence. It is also necessary to set up rules and regulations related to the use of big data technology to ensure the safe use and effective monitoring of data and prevent data risks and leaks.

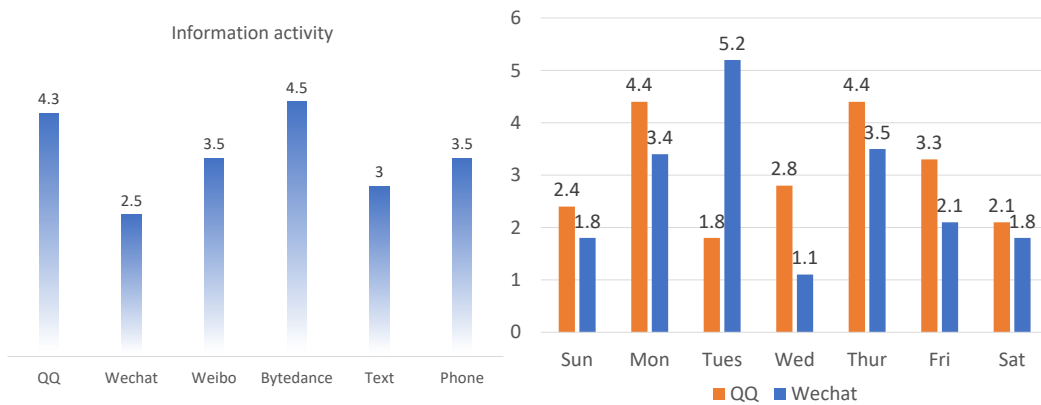


Fig.4 Application of Mobile Social Software among Student Groups

4. Conclusion

To sum up, in the background of Internet, the means of network information has become an important choice in ideological and political education in colleges and universities. With the help of this means, teachers have changed the traditional teaching methods and made teaching more possible. Likewise, for students, the Internet facilitates the learning process and conforms to their own daily learning habits. However, it is undeniable that information technology has also had a certain impact on the work of Civic Education. In response to this situation, teachers should change their teaching methods and interact and communicate with students in a timely manner in order to achieve their teaching goals and do a good job of talent training. At present, the development of network media era and the wide dissemination of information resources bring serious challenges to the ideological and political education work in colleges and universities, and form a considerable impact on the value orientation and behavior orientation of college students. In this regard, colleges and universities should combine the actual teaching requirements, fully exploit the advantages of Internet technology and launch high-quality teaching work.

5. Acknowledgment

Project supported by the ideological and political theory and the collaborative innovation of practice (SZ201902).

References

- [1] Yang Liu. "The Modern Ideological and Political Education from the Perspective of Big Data." *Advances in Education*, vol. 8, no. 3, pp. 167-171, 2018.
- [2] Lu, Jie. "Ideological and Political Education in China's Higher Education." *East Asian Policy*, vol. 9, no. 2, pp. 78-91, 2017.
- [3] Li, Qiong, and Jian Qing Ma. "China's Research and Prospects on Discursive Power of Ideological and Political Education in Internet Environment." *International Journal of Wireless and Mobile Computing*, vol. 18, no. 3, pp. 221-225, 2020.
- [4] Wang, Shanshan. "Construction of Mobile Teaching Platform for the Ideological and Political Education Course Based on the Multimedia Technology." *International Journal of Emerging Technologies in Learning (Ijet)*, vol. 12, no. 9, pp. 156-167, 2017.
- [5] Hu, Bing, et al. "A Study on Integrating Historical Culture of Hospitals into the Ideological and Political Education of Medical Students." *Chinese Journal of Medical Education*, vol. 37, no. 3, pp. 381-385, 2017.
- [6] Dong, Wangnan, et al. "Effectiveness of Ideological and Political Education in Colleges and Universities under the Outbreak of Internet Media." *Eurasia Journal of Mathematics, Science and Technology Education*, vol. 13, no. 11, pp. 7605-7610, 2017.
- [7] Yan, Zheng. "The Role of Introduction to Ecological Science in Ideological and Political Education in Universities." *Ekoloji*, vol. 28, no. 108, pp. 517-521, 2019.
- [8] Delis, Manthos D., et al. "On the Effect of Business and Economic University Education on Political Ideology: An Empirical Note." *Journal of Business Ethics*, vol. 155, no. 3, pp. 809-822, 2019.