

# Innovation and exploration of ideological and political education in higher vocational education network driven by big data

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**Abstract:** *Big data is an important characteristic of Internet technology in the new era. In the era of big data, the ideological and political education of colleges and universities is facing the real situation of "integration and expansion" of the scope of education, the "data imprint" of the ideological behavior of the educational object, and the "big data development" of the education model. The development of network technology has organically combined it with traditional ideological and political education. Network ideological and political education has been continuously updated and advanced. In particular, the rapid development of big data in recent years has significantly improved the collection and processing capacity of data information. To this end, this article starts from establishing big data thinking, improving big data literacy, enhancing the scientificity of big data information analysis and use, and the long-term mechanism of online ideological and political education in colleges and universities, strengthening the online ideological and political education platform and team building in colleges and universities, etc., and put forward a specific path to promote the innovation of online ideological and political education in colleges and universities in the era of big data.*

**Keywords:** *big data; network ideological and political education; Internet technology; data information*

## 1. Introduction

In the era of big data, people's lifestyle and even the living world have undergone profound changes, and people's thoughts and behaviors are bound to be imprinted with data. College students in the new era pursue new and seek differences, which is the main force in generating and using big data. In the living world of big data, their thoughts and behaviors are deeply influenced and changed. The unique characteristics of the big data era are the important basis for reflecting the changes in the thoughts and behaviors of college students and carrying out online ideological and political education in colleges and universities. In the era of big data, the online ideological and political education of colleges and universities is easier to accurately capture the personalized needs of educational subjects and provide high-quality educational content. Of course, in the face of the social boom of big data, online ideological and political education in colleges and universities should not follow by itself, but should think dialectically and calmly about the basic logic of its application from a rational perspective, and use big data to innovate and develop online ideological and political education in colleges and universities<sup>[1]</sup>.

## 2. The innovation and development logic of online ideological and political education of higher vocational colleges and universities in the era of big data

### 2.1. Deeply understand the "human nature" of big data

The era of big data is the era of "quantifying everything and counting everything". We should cherish the technical value of big data through its technical attributes. As Marcuse said, technology, as a tool field, can not only enhance human strength, but also strengthen human weakness. At this stage, people may be more unable to control their equipment than before. B We need to explore the "human" factors behind big data through the results of data quantification and recording, and fully highlight its technical value. First, big data should serve people. Specifically, the development of online ideological and political education in colleges and universities is to handle the relationship between the big data of the times and the small data of ideological and political education. In the era of big data, we no longer

insist on the pursuit of accuracy, and we don't need to get to the bottom of some phenomena. What we need to do is to grasp the general direction of the development of things. Online ideological and political educators should collect information closely related to the changes in thought and behavior of college students and the law of healthy growth from the digital appearance with the characteristics of the times, and grasp the key to innovative online ideological and political education. The second is to grasp the ethics in the use of big data. Big data analysis has a strong penetration of privacy, and it can even reproduce the trajectory and panorama of a person's life. When using big data technology, ideological and political educators should examine and overcome the coldness of numbers and information itself, carefully consider their ethical value orientation, and let big data release attention to the needs and capture the greatest goodwill of people's hearts<sup>[2]</sup>.

### ***2.2. Soberly grasp the essential form of big data***

Content and form are the two aspects of things. Anything is the unity of content and form. Form is the way things exist and express, and content is the basis of things' existence. We should look at their mutual relationship dialectically and uniformly. First of all, content determines the form. In terms of online ideological and political education in colleges and universities in the era of big data, the era of big data is an important environmental background. Network and big data analysis are the main forms of political thought, morality, law and other aspects for college students. Education and guidance are important contents of online ideological and political education in colleges and universities. The specific application of big data depends on the educational needs of ideological and political education. What data to choose and how to integrate data mainly depends on which aspect of educational guidance to students, which is the most critical<sup>[3]</sup>. Of course, there are often many forms of the same content. Ideological and political educators should change their thinking in time, establish a correct attitude towards big data, master the operation laws of big data, learn how to filter out effective information from massive information, and how to quickly master big data analysis technology. Secondly, content and form are also interconnected, interdependent and inseparable. The development and change of content promotes the development and change of form. Big data provides a new opportunity for the development of online ideological and political education in colleges and universities, and the development and change of online ideological and political education in colleges and universities is also further promoting the expansion and adaptability of the scope of big data application and enhancing the innovation of ideological and political work in colleges and universities is also an important driving force for the innovation of big data technology application.

### ***2.3. Follow the laws of online ideological and political education***

In the era of big data, the integration of big data technology and educational activities, virtual and real interaction, online and offline parallel, some colleges and universities blindly pursue data and index quantification, which not only deviates from the actual needs of educational objects, but also violates the development purpose of online ideological and political education, and is even more inconsistent with the laws of online ideological and political education. The use of big data technology to carry out online ideological and political education in colleges and universities should not only follow the evolution law of big data itself, but also follow the basic laws of online ideological and political education. Among them, following the laws of big data itself is the premise and foundation, and the number, the appearance, arrangement and integration of data have their own laws. We should understand and master the laws objectively, scientifically and dialectically, and give full play to the function of big data technology in practical application<sup>[4]</sup>. Following the laws of online ideology and political education is the key to innovation. The law of online ideological and political education is a legal system composed of multi-sided and multi-level laws, which is manifested in the process of the trinity of the law of network cultural development, the law of human ideological and moral formation in the network environment, and the law of online ideological and political education work. Among them, the most fundamental thing is to grasp the specific laws of the ideological and moral formation and development of educational subjects in the network environment, that is, how educational subjects interact with the environment in the network environment and the evolution laws of knowledge, emotion, belief and action in cyberspace. People's thoughts do not arise out of thin air, but always form and change under the influence of external social conditions. In the era of big data, colleges and universities should grasp the process of interaction between educational objects and the environment to carry out online ideological and political education, and conduct descriptive and predictive analysis through the regular data and data they have mastered; we should fully combine the laws of information acceptance of educational subjects, such as the sensitivity of image information, information length and

the impact of transmission time nodes. Accept the effect, etc. No matter how big data is or will change the development of online ideological and political education, when using big data technology, we should always aim to promote the ideological and moral development of educational subjects and help educational subjects better adapt to the requirements of social development, and follow the laws of online ideological and political education as the core essence<sup>[5]</sup>.

### **3. The principle of using big data to carry out online ideological and political education for college students in higher vocational colleges**

#### ***3.1. Scientific principles***

Big data has become the basis for the scientific support of network ideological and political education, which lies in the scientific nature of data content, source and processing, which means that we must adhere to the authenticity of data content, the comprehensiveness of data sources and reasonable data processing, so as to achieve a comprehensive reflection of students' ideological status. The data information relied on must be complete and objective, and meet the quantitative quality and standards. Campus big data should penetrate students' professional learning, network behavior, examination attendance, library borrowing information and other aspects to ensure multi-dimensional data collection. The huge amount of data and multi-channel source data put a test on data processing. Only by choosing appropriate processing means and analysis methods can the conclusion be reliable and valuable. At the same time, the online ideological and political education must always focus on "", appropriate analysis methods and statistical tools. Although the application can better present the appearance characteristics, its intrinsic causes and countermeasures cannot be separated from the analysis, screening and summary of ideological and political educators<sup>[6]</sup>.

#### ***3.2. The principle of dynamism***

As an important part of ideological and political education in colleges and universities, online ideological and political education should positively guide the ideological concepts and moral behaviors of college students through comprehensive and rich network information. New problems are constantly emerging in the ideology, moral behavior and other aspects of college students, which requires the use of big data to maintain a dynamic concept to carry out online ideological and political education. On the one hand, we should rely on existing technology to constantly collect and manage relevant information about college students during their time in school, and regularly record and analyze the information content. On the other hand, with cloud computing technology and Internet of Things technology with the gradual development of art, mobile phone attendance and intelligent access control are gradually realized on campus. The information services of computer networks are constantly integrating various applications and service fields of colleges and universities. Therefore, the scope of big data collection should adapt to the development of campus comprehensive information platforms to ensure that big data can provide effective support for network ideological and political education<sup>[7]</sup>.

#### ***3.3. The principle of privacy***

While enjoying the convenience brought by big data, we must also face a series of problems caused by the leakage of personal information. While collecting and analyzing big data on campus, it is necessary to maintain students' privacy, especially with the increasing awareness of students' own legal rights protection, we should be especially cautious about data involving students' personal information. In the data collection stage, we should strengthen data collection and collection specifications, set different administrator permissions, and ensure the basic information security of students in the early stage of big data application. The data analysis processing process is the core process of big data application. In addition to the original data, the leakage of data information should also include the characteristic information and analysis conclusions in the process of data analysis processing. It should strengthen the security of the data information network, improve campus information security technology, and curb the leakage and infringement of student data information privacy.

#### **4. Analysis of the dilemma of innovation in online ideological and political education of higher vocational colleges in the era of big data**

##### ***4.1. Insufficient big data thinking, and the ideological and political concepts of the network lag behind***

The understanding of ideological and political workers in colleges and universities online ideological and political education is not in place. Scientific and solid big data awareness and big data thinking have not been established. Insufficient attention is paid to the collection and storage of data information. For the Internet and emerging media. The mastery of physical and network communication technology is not good, and the application of big data and network ideological and political education professional knowledge, cutting-edge theories and working methods is insufficient, and it is difficult to give full play to the technical advantages of big data in ideological and political guidance, online public opinion early warning and other aspects. Young college students have strong independent learning ability, active ideas and concepts, and a wide range of information access channels. However, the Internet space is virtual, showing the characteristics of decentralization. The information source channels on the Internet are diverse, the structure is complex, the reliability is low, the wrong trend is rampant, the network environment is complex, and the construction of mainstream values is more than ever. It's more difficult. Therefore, network ideological and political education without the support of big data information makes it difficult to achieve the requirements of being close to students' thoughts, serving students' growth, and responding to students' confusion. The traditional simple and boring education model and teaching content are difficult to stimulate students' interest, the authority of ideological and political workers is facing challenges, and the effectiveness of ideological and political education is weakening. Leading the educational goals of values, unifying moral norms, and establishing common ideals require that online ideological and political education must be deeply integrated with big data.

##### ***4.2. The dominant position of online ideological and political education is weakened***

Internet space is not a natural objective real space, but a virtual space similar to the environment and characteristics of real space. The data information in the Internet space is selected, processed and reinterpreted, and then displayed and presented through the Internet communication medium. Although the massive amount of data information is proposed to understand and explain the world. It provides more perspectives and bases, but people are also trapped in the information jungle, different values, society. Thought trends, ways of thinking, behavior patterns, etc. collide and blend with each other. The content is mixed, and the characteristics of decentralization are obvious, which strongly impact students' worldview, outlook on life and values, reduce students' discrimination and resistance to wrong ideas and culture, and increase students' difficulties in establishing ideals and beliefs and correcting their value orientations. Confusion and doubts even affect the development of students' healthy personality and physical and mental quality. The dominant position of ideological and political workers in the Internet space has been weakened and challenged, and the difficulty and resistance of carrying out work have increased. The influence, inspiration and control of online ideological and political education are no longer stable. The network public opinion monitoring mechanism still needs to be further improved, and the initial exploration of network ideological and political education has shown its importance.

##### ***4.3. Insufficient innovation in network ideological and political education platform and team building***

Some colleges and universities do not pay much attention to the top-level design and system construction of network ideological and political education. The construction of institutional design, educational carrier, educational platform, work mechanism and guarantee system lags behind, the investment of funds and equipment is insufficient, the hardware optimization and upgrading is slow, the construction of big data resource library is slow, and the joint construction and sharing of data resources is not yet Realization, the maintenance and update of the big data platform is not timely, the content is old-fashioned, the form is single, and the attention is low. The data security protection mechanism is not yet perfect. While enjoying the advantages of convenience, breadth and openness brought by network data, there are hidden dangers in information security. User information is no longer a secret in the era of big data. Information leakage makes students lack a sense of trust and security in cyberspace. In addition, there are also weak construction of online ideological and political

education teams. The problem is that most of the online ideological and political educators in colleges and universities are ideological and political teachers, counselors, party workers, etc., who lack professional technology in the application of big data, and professional computer talents lack ideological and political work experience and methods. It is difficult to effectively develop data value. In the process of exploring the network ideological and political education, there are many challenges to construct and maintain its discourse authority.

## **5. Analysis of the innovation path of online ideological and political education in the era of big data to promote online ideological and political education**

### ***5.1. Sort out big data thinking and improve big data literacy***

Big data is the source for people to gain new cognition and create new value. The birth of new ideas often becomes the driving force for the advancement of society. Big data leads the new information era. Establishing big data thinking and improving big data literacy have become the primary prerequisite for promoting the innovation of online ideological and political education in colleges and universities. It is necessary to establish a sense of data collection, use modern scientific and technological means to record the data of the whole process of students' learning and life in detail, and provide data support for statistical analysis; it is necessary to establish a sense of data analysis, process and analyze the collected data from all aspects of students, explore the correlation between data, and grasp the dynamics of students' thoughts, research Judge the work situation, predict the trend of students' thoughts, and provide support for the formulation of work countermeasures; to establish the awareness of data storage, big data is always in constant update and change, but the previous data still has analytical and predictive value for students' future thoughts and behaviors. In the current context, ideological and political workers in colleges and universities need to significantly improve their big data literacy, not only to deeply learn the basic theory of big data, but also to master the big data processing technology. By enhancing the integration ability of big data, they can more effectively use the advantages of big data technology to conduct in-depth analysis and processing of constantly changing data information, thus significantly improving the actual effect of ideological and political education.

### ***5.2. Enhance the scientificity of big data analysis and use***

In the face of a variety of complex massive data resources, enhancing the scientificity of data analysis and use is the core requirement to accurately grasp the direction of work and lead students' thoughts. It is necessary to fully explore the internal logic and objective laws implicit behind the data, instead of simply analyzing the causal relationship. In order to facilitate the process of data acquisition, management and innovation, comprehensive and in-depth analysis of text data, location data and communication data is required. Through the integrated application of charts and modeling, we can effectively identify and extract data information of great significance. On this basis, we always take the content as the core and systematically promote the innovation of the discourse mode of online ideological and political education according to the output results of data analysis. According to the characteristics of different student groups, we not only provide universal materials with broad educational value, but also tailor-made personalized educational content, so as to realize the popularization of mainstream values and the organic integration of personalized educational content. In the current educational environment, the real-time and dynamic characteristics of big data technology can be effectively utilized through the combination of rational learning and motivational education strategies. This technology not only reflects changes in the data in real time, but also provides in-depth analysis of potential problems behind the data. Based on these analysis results, the push of educational content can be more accurate, ensuring that current political news, party policies and mainstream ideology can be organically integrated into various online cultural products. At the same time, taking into account the preferences of the students, the content will be presented in a form that they are comfortable with. Although the exchange and collision of diverse cultures in cyberspace may have a certain negative impact on college students, by strengthening the guiding role of socialist core values, it can ensure that mainstream ideological values occupy a dominant position in the formation of college students' thoughts.

### ***5.3. Strengthen network ideological and political education and platform construction***

The era of big data brings new opportunities and challenges to online ideological and political education in colleges and universities, and puts forward high requirements for the platform and team construction of online ideological and political education. It is necessary to improve the work mechanism, guarantee system and management system of online ideological and political education, create a good online ideological and political education environment, build a network ideological and political education platform integrating management, service, communication, interaction and other functions, with the characteristics of education, service, interest, timeliness, etc., and build a series of networks Network channels, featured websites, new media platforms, etc., continuously improve the experience, interactivity and coverage of the platform, broaden the position of online ideological and political education, and optimize the carrier of online ideological and political education. At the same time, it is necessary to build a network ideological and political education team with strong theoretical literacy, proficient in network technology and good at big data analysis. It is necessary to improve the data mining, analysis, analysis, and Research, judgment and prediction ability, pay attention to the selection and cultivation of computer professionals with excellent politics and the backbone of students with firm beliefs and strong appeal to enrich the network ideological and political education work team, and strengthen the radiation, leadership and influence of the work team.

### ***5.4. Optimize the environment and improve the effectiveness of online ideological and political education***

The optimization of campus culture, network and other aspects of the environment can make college students feel the power of thought and culture in daily life and various activities, and further improve the effectiveness of online ideological and political education.

First, pay attention to cultural education and build a practical education system. Culture is like air, which plays a role in subtletization. At the same time, online and offline practical activities can guide students to unify knowledge and action. In the current educational environment, through the public display of campus cultural activities popular with students, it can effectively build a cultural atmosphere to promote the healthy development of young students. In order to improve the overall quality of campus culture, we should carefully design cultural activities with network as the core, and organize online and offline discussions on hot Internet issues. By sharing typical examples of outstanding alumni and teachers, students can be positively influenced and motivated, thus creating a positive campus network culture environment. In addition, making full use of the school's cultural resources and integrating these resources into daily management will help further strengthen the positive impact of campus culture. Garden culture, create and cultivate campus culture, especially campus network culture boutique, so that students can be infiltrated, infected and influenced in it. Second, encourage and guide college students to engage in social practice, and pay attention to giving full play to students' subject consciousness in practical activities. At the same time, the communication of the network environment makes it possible for society, schools, families and other parties to link together, and social practice is a need. In the overall and coordinated system project, we should actively explore the establishment of a coordination mechanism between universities and society and families, and gradually form a practical synergy of educating people.

The second is strict position management and clear campus cyberspace. In the current academic and social environment, the management of seminars, classroom teaching, lecture activities, forum exchanges and network platforms must be comprehensively strengthened. This not only involves the in-depth analysis and accurate judgment of the situation in the comprehensive field of ideology, but also includes the strict specification of the network information release mechanism. In this process, the right direction must always be maintained to ensure that the dissemination of information is in line with the core values of socialism. In addition, we should actively mobilize the enthusiasm of network social organizations and the majority of Internet users, and jointly build a network environment full of positive energy. By strengthening the guidance and management of public opinion in the Internet era, especially the handling of hot and sensitive topics, we can ensure that we can make a timely voice in major events and key moments and effectively guide public opinion. At the same time, students are taught to pay attention to mainstream values, essential problems and positive social phenomena, so as to occupy a favorable position in the public opinion system and timely respond to and deal with various online public opinion events. High point, maximize the dissemination space of negative information and constantly strengthen the network position. Ideological, educational, serviceful and interactive, pay close attention to the new development of online public opinion and the new situation in the ideological

field, collect data information reflecting the ideological dynamics of college students in a timely manner, and improve the ability and level of Olympic analysis, research, judgment and disposal.

## 6. Conclusion

After the advent of the era of big data, it not only facilitates the development of all walks of life, but also creates favorable conditions for the improvement of the quality of ideological and political education in higher vocational colleges and universities. Under the perspective of big data, higher vocational colleges and universities can accurately collect students' ideological dynamic information, so as to find students' ideological problems in time and give guidance. Achieve the goal of guiding students to establish a sound personality. In order to further enhance the effectiveness of ideological and political education, higher vocational colleges and universities can strengthen the construction of ideological and political teachers through implementation, high investment in big data technology and other strategies to promote the effective integration of big data and ideological and political education, and ensure the steady improvement of the quality of ideological and political education.

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