

The Connotation and Function Mechanism of Ideological and Political Education of Big Data*

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Abstract—With the advent of big data tide, especially the demand for real-time data which is becoming increasingly important, it puts forward higher requirements for the pertinence, effectiveness, practicality and politics of ideological and political education quality. Although ideological and political education has tentatively the relevant characteristics of big data, it is still superficial, original and fragmented information, and has not formed the systematic model, which is one of the important barriers for big data embedded in ideological and political education. Starting from the connotation of big data ideological and political education, this paper discusses the function mechanism of ideological and political education in the era of big data from four aspects, namely, politics, individual, society and practice, in order to make a research breakthrough in this field and provide effective reference for the ideological and political education in the new era.

Keywords—big data; ideological and political education; function mechanism

I. INTRODUCTION

In present era, data has penetrated into every industry and business function field and become an important production factor, which also puts forward new requirements to ideological and political education field and opens up a new ground. It is undeniable that in the new era of big data innovation flourishes everywhere and open data sharing, on the one hand, all kinds of ideology and culture mutually agitate, on the other hand, the network virtual space also gathers all kinds of excitement and demands of students. This is not only a theoretical problem in the ideological sphere, but also a practical problem of network ideological and political education. Therefore, people must have the profound understanding of the connotation of big data ideological and political education, strengthen the cross-over research of big data and ideological and political education in various disciplines and fields, grasp the important

integrating points, focus on the research on function mechanism of big data embedded in ideological and political education, and ensure the feasibility and effectiveness of its optimization path.

II. THE CONNOTATION OF BIG DATA IDEOLOGICAL AND POLITICAL EDUCATION

Big data, also known as massive data, is a unique data phenomenon generated with the rapid development of computer technology and Internet technology [1]. It is generally acknowledged that big data has five characteristics, namely, (Volume) huge volume of data; (Variety) unstructured data diversity; (Velocity) rapid growth of data; (Value) value of data; (Veracity) veracity of data. It can be seen that on the one hand, big data presents massive and complicated data, on the other hand, it shall carry out analysis, processing and application on these massive and unstructured data that cannot be processed by traditional methods, find out the correlation between different data factors, and further provide scientific and empirical technical support for the formulation of effective countermeasures.

Under the function mechanism of big data, its technical support for ideological and political education is becoming increasingly important. A large number of scholars cannot wait to implant big data into ideological and political education to serve it, which is also an important way of big data ideological and political education. How to achieve this work is a question. There are two methods. First of all, in terms of the overall ideological and political education, there will be a large number of data for reference in the specific education activities, which can be gathered as required for the development of ideological and political education teaching. This requires that the sources of big data of ideological and political education should be sorted out in the first place, and the data sources can be divided into the following four aspects according to their attributes. First, it is relevant data generated in the teaching process. For example, course teaching, performance evaluation, web-based learning, online and offline interaction and so on are the primary sources. Second, it is relevant data generated in the process of teaching management. For example, students' learning background, self-study level, students' health information, related information of family and teachers, school course setting, professional infrastructure, etc. Third, it is scientific

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research information of academic team in the field of related discipline in the university. For example, teachers' scientific research achievements, scientific research equipment, scientific research procurement, scientific research consumption, scientific research sharing, etc. Fourth, information generated by students and teachers in school life. For example, catering, consumption, Internet, borrowing, fitness, societies, lectures, rest, etc. Among them, special attention should be paid to the fact that not all information can be used for big data ideological and political education, only a part of data can be used. Therefore, it is necessary to discard the dross and select the essential, find the data that can serve the development of ideological and political education and improve its effectiveness and value belong to the relevant data in ideological and political education activities. In addition, even the data generated in teaching will have a lot of impurities, which need further to be sorted, filtered and processed.

The second method is that educators can apply big data technology to the field of ideological and political education through cloud computing, Internet +, instant messaging, data analysis and so on, and make earthshaking changes in teaching methods, research models, learning methods, teaching thinking, teaching concepts and others. In this sphere, a large number of scholars have made efforts and thought, and the representative views are as follows — the impact of big data on ideological and political education, the impact and response of big data on traditional teaching methods of ideological and political education, the methods and paths to guide the launch of ideological and political education work through data analysis and the research on dynamic and digitized management mode of ideological and political education. For example, Fan Jie believes that the era of big data is the new environment of network ideological and political education, which puts forward new requirements for network ideological and political education. Huang Xinrong believes that the all data model of big data is a kind of digitized holistic view, and a kind of scientific holistic view that can be depicted, described and calculated concretely. Chen Ruisan proposes that educators shall build the "cloud classroom" for students' ideological and political education. All of these views focus on data mining and students' ideological and behavioral dynamic grasp, which plays a positive role in the innovation of ideological and political education in the context of big data.

III. OPPORTUNITIES FOR IDEOLOGICAL AND POLITICAL EDUCATION IN THE ERA OF BIG DATA

A. *Big Data Brings Massive Information to Ideological and Political Education in the Modern Times*

Massive information is the significant feature in the era of big data. In the era of big data, students get more knowledge not only in the classroom but also outside the classroom, and through the data shared by network technology. For this purpose, some teachers one after another send the contents related to ideological and political education to the network in the form of pictures, languages, videos, documents and so on, so as to influence students

imperceptibly. This makes the ideological and political education work have made great progress in depth and breadth, effectively promotes the equalization of educational opportunities, and covers the scope of education to a large extent. In addition, by using the massive information of big data platform, more vivid and detailed cases shall be effectively enriched into the teaching, which also promotes the teachers' own knowledge enhancement and reforms the teaching methods of ideological and political education.

In the traditional ideological and political education, classroom teaching is the key point of mastering the right to speak, while in the era of big data, data is the foundation, and massive data and resource sharing expand the field of teaching as the main front. For students, online learning can break through the limitations of place to make students get the utmost out of the fragmented time to learn and also carry out personalized learning according to the actual situation. By using big data for investigation and analysis, it can also achieve full coverage. For example, it can digitize the daily lives of teachers and students of all majors in the school, such as campus card consumption, book borrowing, Internet browsing, community activities, sports life, etc., from which it can obtain comprehensive, objective and real materials, and draw students' recognition degree and cognition degree of ideological and political education, so as to accurately grasp their thinking tracks and behavior lacks. Therefore, it can pave the way for the implementation of big data ideological and political education.

B. *Big Data Provides Diversified Teaching Modes for Ideological and Political Education in the Modern Times*

Traditional ideological and political education generally attaches importance to the inside of classroom and ignores the outside of classroom; attaches importance to teaching and ignores acceptance; attaches importance to groups and ignores individuals. This directly leads to the vast majority of students to passively accept knowledge and teachers in classroom teaching. Most of their work advocates the one-size-fits-all approach, so their enthusiasm for traditional ideological and political education is not high on the whole or on the individual, so they cannot effectively enter the hearts of students. In the era of big data, teachers can get the utmost out of big data technology to realize the organic combination of classroom teaching and big data from multiple perspectives and levels, which has resulted in the booming growth like mushrooms after rain of rain class, micro class, flipped class, intelligent class, etc., which lays a good foundation for the acceptance and identification of core knowledge of ideological and political education. At the same time, teachers use big data resources to acquire and fabricate teaching materials, assign online homework and carry out online examination to consolidate the learning effects. Students can also watch over and over again to review the teaching contents, so that students can gain new knowledge by reviewing old.

The contemporary students are hungry for fresh information, individual equivalence, and sincerity of friends and so on. Under the circumstances, big data comes, so

students are competing to nibble at the extensive contents and boundless information of big data. The discourse power of ideological and political education lies in the equality of subjects, which remains a problem generally ignored in the traditional ideological and political education and has made great progress in the era of big data. First, in the era of big data, information access is equal in the subjects. Both students and teachers have the same status in the process of network search and communication. Teachers are no longer the monopolists and forerunners of knowledge, and sometimes even lag behind students in accepting new knowledge and information to some extent. This puts higher demands on ideological and political teachers who shall not only have a solid theoretical foundation, but also have a broad vision of the network, constantly update knowledge reserves, break the limitation of time and space, effectively apply data information to teaching, improve teaching effectiveness, and enhance students' sense of gain of learning. Secondly, in the era of big data, teaching individuality becomes possible. Individualized teaching has always been the difficulty of subject equality education of ideological and political education; however, the effective use of big data makes it full of youthful vitality. Teachers can use big data to capture information for analysis to understand students' concerns, and make individualized teaching programs. For example, different grades of students have different needs, so teachers need to have targeted design programs and carry out individualized communication.

C. Big Data Has Consolidated the Teaching Effects of the Ideological and Political Education in the Modern Times

Ideological and political education is a long-term systematic project. In addition to focusing on the teaching effects, educators shall also pay attention to the duration of the effects. In the traditional ideological and political education, it shall be generally carried out in the way of summary, feedback and evaluation. In the era of big data, data information is long-time and sustainable, in this way, records can be tracked. So it can be seen that as long as the educational activities continuously proceed, the data will be continuously recorded. The ideological and political educators can achieve the exploration of teaching effects on the basis of data analysis.

First of all, before a teaching activity, educators can observe the existing problems of students and carry out analysis on them. Meanwhile, educators shall actively rectify them in educational activity, intensify the favorable factors, and eliminate the adverse effects, so as to enhance the effects of ideological and political education. Secondly, after a teaching activity, educators can tail after the relevant data before the activity, make a contrast between them, detect their changes, and make the educational effect stand vividly revealed on the paper. In this way, through a series of iteratively ways such as observation, implementation, evaluation, comparison, analysis, feedback and adjustment, educators can ensure the long-term phenomenon of ideological and political education implementation. Thirdly,

the consolidation of teaching effects should be scientific. Ideological and political education is complex, and students' personalized demands are more than the normal. The standards are different, so the effects produced are different. For this purpose, for educators, it is necessary to make the data voice, and the data analysis shall be built on small number of assumptions on the basis of the experience of educational activities, so as to dissect more accurately the connection that they did not realize before and make the teaching effects more convincing.

IV. FUNCTION MECHANISM OF IDEOLOGICAL AND POLITICAL EDUCATION OF BIG DATA

A. Function Mechanism on Political Dimension

The core and key point of ideological and political education is political education. The approach is to help the educatees to establish the corresponding political conviction through the dissemination of political theory and political values. Directionality is an important yardstick for ideological and political education to firm correct values and take the firm stand. However, when the big data sweeps in, no matter how to resist it, its strong impact on the network ideology has been formed, and the trend of social thought diversification is increasingly apparent. The data itself has no trade-offs, and it will not tell users what is right and what is wrong. Under the circumstances, students are prone to the appearance of cognitive deviations and faults, which are seriously inconsistent with the mainstream ideology of China.

Some wrong thoughts are made and publicized by some people who have an ulterior motive to perplex the public. Therefore, from the perspective of students, it should constantly be alert to the textual research of data and pay attention to the interpretation of data. If the data are correct and misinterpreted, and deviate from the track, it is not good for ideological and political education, and even pulls to the opposite direction. Therefore, while the whole society is constantly improving the all-network legal system, it also needs to give play the political leading role of ideological and political education, which has immeasurable advantages for national security and social governance.

B. Function Mechanism on Social Dimension

Ideological and political work not only includes classrooms, courses, teaching, scientific research, teachers, students, administration, the Party and the masses, departments, societies, activities and other internal factors, but also includes family, society and other external factors. It is impossible to achieve long-term development by relying on one department, one course and one measure. It can be seen that the social function mechanism of ideological and political education should start from the macroscopic perspective of the development of socialized work, penetrate around the social needs of students, close to life, close to students, and strive to strengthen the consistency of students' ideology, positions and behaviors with the mainstream ideology.

In the era of big data, the realization of social dimension function requires educators to accurately grasp the social resource information, adopt advanced teaching methods, show vivid individual case, guide students to actively abandon unhealthy information, and give play to the online and offline guiding role.

C. Function Mechanism on Individual Dimension

Every student is an individual, and there are differences in psychology, value and acceptance ability among individuals. Therefore, accurate grasp of individual differences is an important guarantee to elevate the pertinence and affinity of ideological and political education. In the traditional ideological and political education, it is only limited to the single and limited resource library. Teachers and counselors usually understand the situation of students by the method of talking with students and questionnaire. And sometimes, when teachers assume a large number of classes, it is difficult to take care of students well. Some students are not willing to share their real ideas with teachers, which makes the investigation more difficult.

In the era of big data, it can not only record and analyze the whole information in a whole-sample manner, but also accurately extract and analyze the individual behavior data. This meets the needs of the individual development of ideological and political education in the modern times, from the opposite scanning to the leap of focusing on the point. Ideological and political education is the education of human in the final analysis. Only by the individual students growing up comprehensively can their contribution to society be improved. Against the background of big data, ideological and political education can be more close to students, walk into the individual, see big things through small ones, present the data in different levels and categories, and accurately research the behavior trace of each individual, which plays an inestimable role in promoting ideological and political education to personal customization and precise support.

D. Function Mechanism on Practical Dimension

Innovation, practice and education are the basic premise of improving the effectiveness of ideological and political education and building collective identity. In the era of big data, the position of ideological and political education practice shall be strengthened. The combination of theory and practice shall not only base on the actual teaching situation, but also do a good job in empirical research on the big data practice of ideological and political education while collecting, excavating and analyzing the data of ideological and political education, strengthen the theoretical teaching and achieve the important theoretical results of Ideological and political education obtained by exploring and using the data.

The carrier of big data will broaden the practice platform of students' ideological and political education, and enables students' practice to be carried out in the network. For example, it can carry out network visits, network experiences and so on. Thus, students can understand the society, walk out of the small circle in school, and stimulate their sense of social responsibility.

V. CONCLUSION

In conclusion, against the background of big data, ideological and political education is the continuation and development of traditional ideological and political education. The political essence of its ideological and political education is unchangeable under any circumstances. What changes is only the adjustment of the content and form system combined with the characteristics of the times. In the era of big data, a large number of sample data can truly reflect the actual situation of students' ideology, facilitate the accurate guidance of students' ideological and political education work, and lead the new development trend.

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