

Exploration of Precise Ideological and Political Paths Based on Student Group Portraits of Colleges and Universities in the Era of Intelligent Media

Xin Chen

School of Computer Science and Artificial Intelligence, Nanjing University of Finance and Economics,
Nanjing, Jiangsu Province, China
Email: nuaa_chenxin@163.com

Abstract—The era of intellectual media has a profound impact on the thought and behavior of college students, and brings new challenges to the Ideological and Political Education (IPE) in colleges and universities. This paper analyzes the characteristics of The Times, analyzes the construction of student group portrait from the multi-disciplinary theory and technical level, clarifies the dimension of portrait, and adopts the characteristic analysis method. Demonstrate the precise ideological and political feasibility based on the portrait, covering policy orientation, technical support, and practical cases. Thus, innovative strategies are put forward: accurately positioning the target content, innovating teaching methods, and constructing a collaborative education mechanism. The study found that precise thinking and politics can improve the effectiveness of education, but faced with technical and implementation difficulties. In the future, it is necessary to optimize the portrait technology, improve the education system, and deepen the coordination mechanism to promote the innovative development of IPE.

Keywords—intelligent media era, student group portrait, accurate thinking and politics, innovation path

I. INTRODUCTION

In today's society, the rapid development of intelligent media technology has caused great changes in the way of information dissemination and people's daily life. Therefore, IPE in colleges and universities has ushered in new opportunities and new challenges [1]. New technologies such as artificial intelligence, big data, and the Internet of Things are becoming more and more widely used in education. How to use them to make IPE in universities more accurate has become a big problem.

The information transmission in the era of intelligent media has the characteristics of personalization, intelligence and diversification. Contemporary college students grow up in the Internet environment, and their thoughts, behaviors and values are deeply influenced: when they see diversified information through intelligent

media, they have a wider vision, stronger independent consciousness and innovation ability, but it also means that they are more likely to be biased by false information, thus causing problems in thought and detours in behavior. The old model of IPE is no longer enough to meet the current practical needs, so the idea of accurate IPE appears. New technologies have changed the dissemination of information and brought new opportunities and problems to IPE, which requires ideological and political educators to think seriously.

Scholars at home and abroad have done a lot of research in related fields. Foreign countries have made some achievements in the individual differences of students and the application of educational technology, which provides a reference for the precise ideological and political implementation in colleges and universities [2]. However, because of the different cultural backgrounds and education systems, their achievements cannot be directly used in IPE in Chinese colleges and universities. Domestic research is deepening in the theory, technology and practice of precise thinking and politics [3], but in the era of intellectual media, how to better use advanced technology and how to establish a perfect precise thinking and politics system has to continue to explore.

This study aims to analyze the construction of intellectual media students construction strategy, feasibility, discusses the innovation path of accurate thinking, through the multidisciplinary theory and method, based on existing research, trying to find the technical advantage of intellectual media era, for ideological education in colleges and universities provide accurate target orientation, innovative teaching methods, build collaborative education mechanism of theoretical and practical guidance.

II. MULTI-DIMENSIONAL ANALYSIS OF STUDENT GROUP PORTRAITS IN THE ERA OF INTELLECTUAL MEDIA

A. Characteristics of the Era of Intellectual Media and Its Influence on College Students

In the era of intelligent media, artificial intelligence, big data, the Internet of Things and other technologies are

closely combined, and the way of information dissemination has changed. Information dissemination is now intelligent, personalized and fast at [4]. Intelligent algorithms push what users like based on their browsing records, interests and behaviors. In this way, the information that college students see is more suitable for their own needs. However, there is a problem that it is easy to cause them to focus only on the content they like, and then to narrow their vision and solidify their thinking. In addition, with information spread too fast, hot events can spread in an instant. Although college students can quickly know all kinds of information, they are also faced with too much information and difficult to distinguish between true and false. Therefore, college students need to improve their ability to screen and judge information.

In the era of intellectual media, it has a very profound impact on the ideas and behavior of college students [5]. On the one hand, multiculturalism and values have spread widely on the Internet. College students' thoughts have become more open and diversified, and their autonomy and innovative spirit are stimulated. College students are active on online social media platforms, actively participate in the discussion of various topics, and dare to express their views, with distinct personalities. On the other hand, the virtual and anonymous characteristics of the network cause some college students to behave, such as network violence, addiction to the network and other problems often occur. In addition, the fast-paced characteristics and the phenomenon of information fragmentation in the era of intelligent media also affect the attention and concentration of college students, and their deep learning and thinking ability are faced with challenges. Therefore, the IPE in colleges and universities must guide college students to set up correct values, improve their information literacy and network self-discipline ability.

B. Theoretical Basis and Technical Support of Student Group Portrait

The construction of the student group portrait needs a multidisciplinary theory to provide the support. Group theory in sociology plays an important role, which helps us to understand the position and behavior mode of college students when they are in different social groups, and also makes us understand how the social environment affects their thoughts [6]. In psychology, such as personality theory, cognitive development theory, can be used to analyze the personality, psychological needs and learning methods of college students [7]. The theory of personalized learning in pedagogy cannot be ignored. It emphasizes that teaching should be carried out according to the different situations of students, which is also consistent with the concept of accurate ideological and political [8]. The combination of these theories provides a theoretical framework for the detailed and in-depth depiction of student group portraits.

In terms of technical support, the emergence of big data technology is the main driving force for student students. From the campus information system, such as educational administration system, student management

system, logistics service system, library, archives, "campus wall" and other campus network platforms, collect students learning, attendance, borrowing, network social networking and other aspects of the data, to form a big data resource database. Data mining technology can find out valuable information from these data, and see the general patterns and general rules behind the data, such as students' family background, study habits, hobbies, emotional needs, social circle, etc. Machine learning algorithm then classifies, clusters and predicts these data to capture students' personality characteristics, so as to build a detailed, accurate and dynamic portrait of students. For example, cluster analysis techniques are used to combine students with similar learning behaviors and interests to facilitate targeted educational strategies. Through artificial intelligence technology, such as natural language processing, students' emotions and opinions on the Internet are analyzed to enrich group portraits. The maturity and application of these technologies will provide technical support for the accurate construction of student group portraits, and provide data support for the accurate ideological and political implementation.

C. Dimension Construction and Characteristic Analysis of Student Group Portraits

Comprehensive and accurate depiction of the group portrait of college students needs to start from multiple dimensions, including basic information, learning behavior, network behavior, social relations, mental health status, etc. In the dimension of basic information, including personal identity information, student status information, etc., these factors will affect students' thoughts and behavior. In the dimension of learning behavior, it mainly involves students' academic performance, course performance, learning habits and methods, etc. In the dimension of network behavior, it mainly focuses on the basic performance of students in the network environment, such as daily Internet time, distribution of Internet time, use of social (entertainment) platforms, etc. In the dimension of social relationship, students' social relationship is mainly observed, including the number and distribution of friends, the type of close friends, the participation of associations and organizations, etc. In the dimension of mental health status, mainly through the attention to students' personality traits, psychological needs and motivation, interests and values and other data, to understand their emotions, personality and psychological needs. In the dimension of ideological and political accomplishment, it mainly evaluates students' political ideas and beliefs, moral concepts and behaviors, cultural identity and national spirit.

Using data mining and big data statistical analysis technology, we will be able to see the distribution of the "characteristic appearance" of different student groups. For example, the analysis of academic performance and final review habits, can find some students partial, study time is not scientific. Looking at the activities in cyberspace, students of different majors use different online learning resources. For example, science and engineering students like to use academic platforms,

while liberal arts students are more active on cultural and creative platforms. After obtaining these analysis results, we can divide students into different types, such as learning difficulties, network activity, social talent, etc. After that, we will carefully study these types of students to see what the characteristics and needs of their thoughts, so that precise IPE will have clear goals, education will be closer to students, and the effect will be better.

III. THE PRECISE IDEOLOGICAL AND POLITICAL FEASIBILITY DEMONSTRATION OF COLLEGES AND UNIVERSITIES BASED ON STUDENT GROUP PORTRAITS

A. *Policy Orientation and the Change of Educational Concept*

In recent years, the state attaches great importance to the IPE in colleges and universities, and has issued a series of policy support documents [9, 10], emphasizing the need to combine IPE and information technology, so as to improve the pertinancy and effectiveness of education. According to the document, colleges and universities should actively explore a new model of IPE to adapt to the development of The Times, accurately grasp the needs of students, and make IPE more accurate and personalized. These requirements provide a clear policy direction and strong policy support for the precise ideological and political work of colleges and universities based on student group portraits. This fully shows that the direction of precise thinking and politics is in line with the national education strategy layout. Domestic universities have the responsibility and obligation to actively promote relevant practices.

At the same time, the modern educational concept is also very consistent with the direction of precise ideological and political research, especially both emphasize to respect the difference of each student and care about the all-round development of students. It can be said that the precise IPE is the concrete expression of the modern educational concept in the IPE. By analyzing the portraits of students, this research deeply understands the characteristics and personality requirements of each student, and formulates a “customized” “road map” of IPE suitable for each student. In this way, students can get more targeted cultivation and development in the ideological and moral and political literacy.

B. *Technical Feasibility and Data Resource Guarantee*

In the era of intelligent media, the rapid development of information technology has brought strong technical support to the precise thinking and politics of colleges and universities, thus making the idea of accurate thinking and politics feasible [1]. Big data technology can collect, store, and process a large amount of student data and information. Based on these data, with advanced data mining and analysis algorithms, universal and valuable information can be mined, so as to realize the accurate planning of the ideological and behavior characteristics of the current students. In addition, with the accelerated iteration and upgrading of artificial intelligence technology, the accuracy and prediction ability of the portrait will be on a greater level. For

example, machine learning algorithms will be able to predict students' behavior and thinking changes, making IPE smarter; while cloud computing technology provides efficient and flexible solutions for data processing and storage, which can ensure the stable operation of accurate ideological and political institutions. These information technologies, which have been highly effective in other non-educational fields, will provide a solid technical support for the implementation of accurate ideological and political thinking. Specifically, big data technology can enable students to collect and analyze relevant data — This is the first step to build accurate ideology; artificial intelligence technology is like adding a “intelligent brain” to the system, so that it has the super ability to predict and guide; and cloud computing technology is integrated the “big background” of the system ensures that data processing and storage can be smooth.

Universities have a lot of data resources, which provide sufficient data support for accurate ideological and political thinking [11]. In the daily teaching and student affairs management, colleges and universities have accumulated a large amount of student data, such as the course learning data of the educational administration system, the rewards and punishments and life information of the student management system, and the borrowing data of the library, etc. But these data are now scattered and have not been well integrated and used. If universities can build a good data management platform and data governance mechanism, they can break the gap between data, so that they can be connected and used. In this way, the scattered data can be put together to provide comprehensive and accurate data for accurate ideological and political development, so that students' portraits can be drawn more accurately, and also provide a strong data basis for the implementation of accurate ideological and political development.

C. *Practice Cases and Experience for Reference*

Some universities at home and abroad have made explorations in precise ideological and political thinking, and have gained some experience, which can provide reference for other schools. They prove the feasibility of accurate thinking and politics through practice. The practice of these universities has an important reference significance for the schools that want to carry out accurate ideological and political thinking [12].

In foreign countries, some colleges and universities have used software and big data technology to build student learning analysis systems to collect students' online learning, homework, examination, and other data, analyze learning styles and knowledge mastery, and provide teachers with personalized teaching suggestions. For example, there are intelligent learning platforms made by universities in the United States, which can “customize” to recommend learning resources and courses according to students learning progress and daily performance. Teachers can also adjust teaching strategies according to systematic data and teaching suggestions, and provide targeted guidance to students. This data-driven teaching mode has excellent teaching effect

compared with the traditional teaching mode, which proves that technical means are feasible for accurate analysis and personalized education of students, and have reference value for student portrait analysis and personalized education in accurate IPE in Chinese colleges and universities.

Some universities in China are taking the lead in precise thinking and politics [13]. Some universities have set up a big data center for IPE for students, which integrates the work data of various functional departments and uses it to draw portraits of students' comprehensive literacy. Through the portrait, the school found that some students have a lot of enthusiasm to participate in social practice. Therefore, the school has carried out a series of targeted social practice activities related to the major, and also used the intelligent push system to push the activity information to these students. After a period of time, the enthusiasm of the students to participate in the social practice went up, and the ideological and political accomplishment has also been improved. This case also shows that accurate IPE based on student portraits is feasible in Chinese universities, which can effectively solve the practical problems of IPE and improve the educational effect.

IV. THE INNOVATIVE STRATEGY OF ACCURATE THINKING AND POLITICS IN THE ERA OF INTELLIGENT MEDIA

A. *Accurately Positioning the Goals and Contents of IPE*

In the era of intellectual media, student group portraits will be used to accurately target the goal of IPE in colleges and universities, and universities have the ability to develop a set of accurate IPE target systems of "hierarchy", "classification" and "stages". For students of different majors, IPE can be combined with professional characteristics. For example, science and engineering students emphasize scientific spirit and social responsibility; liberal arts students strengthen cultural confidence and humanistic care. From the point of view of the growth rules of students, the students focus on college adaptive education and ideal guidance in the first year to ensure the transition from high school to university; in the sophomore and junior years, students will focus on professional skills learning and career planning; In the senior year, students focus on employment and entrepreneurship guidance and social integration education.

In the era of intellectual media, hot topics, emerging technology ethics, and network culture are integrated into the content of IPE, and the content of IPE also needs to be innovated and optimized. For example, ethical issues such as data privacy protection, "information cocoon" and algorithm discrimination brought by the development of artificial intelligence and big data are also used as materials for thematic discussion and case analysis. Ideological and political educators need to guide students to correctly view the relationship between technology development and social ethics. In view of the two-

dimensional culture, "rice circle" culture, "net red" phenomenon, live broadcast boom in the network culture, we also need to guide students to treat it dialectically. For example, some colleges and universities offer the course of "Media Literacy and IPE in the Era of Intelligent Media" to educate students to improve their ability to distinguish and use information in the intellectual media environment.

B. *Innovate the Teaching Methods and Means of IPE*

Driven by the intelligent media technology, the ideological and political teaching mode is also undergoing profound changes. With the help of smart media technology, a large number of pictures, videos, and virtual scenes will be integrated into the teaching. For example, Virtual Reality (VR), Augmented Reality (AR), intelligent teaching platforms, and other technologies have been used by some universities to create immersive and interactive ideological and political teaching situations. For another example, VR technology is used to reproduce the scenes of major historical events, while AR technology is used to combine ideological and political theoretical knowledge with real-life scenarios.

To promote the wide application of intelligent teaching platforms. The platform can provide students with personalized and customized learning planning and learning resource recommendations according to their learning progress and portrait characteristics. For example, ideological and political development reading materials, video lectures, and course preview materials related to students' interests can be pushed to students before the class through the platform. The platform can also realize real-time tracking and feedback of learning progress, timely find out the problems encountered by students in the learning process, and give targeted guidance, so as to stimulate students' independent learning and enthusiasm.

In terms of personalized learning support and guidance, student group portraits are used to customize their own ideological and political learning plan for each student. Student group portrait can provide comprehensive insight into the diverse characteristics of students: for students who prefer theoretical study, provide study programs for in-depth study of classical ideological and political works; for students who prefer practical activities, more social practice projects and volunteer service activities such as community grassroots governance research and public welfare volunteer activities will be arranged; for students who are obsessed with the history of Red Revolution, IPE can be started from this perspective. In addition, a 24-hour intelligent tutoring system can also be developed, in order to break the limitation of time and space of teaching, so as to provide students with all-weather online q & A services, so as to ensure that any confusion encountered in the process of learning can be solved in time.

C. *Build a Collaborative Education Mechanism for Precise IPE*

In terms of on-campus collaboration, it is suggested to establish a cross-department cooperation and all-staff

education working mechanism. The university party committee is responsible for playing the core role of leadership, make overall planning for the precise ideological and political work; The student engineering department of colleges and universities is responsible for the performance of students IPE and schedule management duties, collect students dynamic information of thoughts and feedback these information to relevant departments; The academic administration department is responsible for optimizing the allocation of ideological and political courses, advocate the integration of ideological and political elements into the professional curriculum syllabus and teaching design, to promote the ideological and political construction of the curriculum; The publicity department is responsible for using the campus media platform, extensive dissemination of IPE content, create a positive campus cultural atmosphere; Ideological and political theory course teachers are responsible for imparting systematic ideological and political theory knowledge, through the vivid classroom teaching, guide students to establish a correct world outlook, outlook on life and values; Professional course teachers are responsible for exploring the ideological and political elements behind the professional knowledge in the teaching process, realize the organic unity of knowledge imparting and value guidance; Student counselors go deep into students daily study and life, focus on the individual differences in the students, timely discover and solve the problems that students encounter in their thinking, study and life, we will provide individualized IPE and guidance.

Off-campus cooperation is also a key link in the IPE of college students. First, the family as the first environment for students to grow up, the role of parents can not be underestimated. From the perspective of external synergy, to strive to build “home school club” linkage and resource sharing mechanism, strengthen college and student family communication and cooperation, to make up for the limitations of pure campus education, the ideological education concept and method to parents, guide parents pay attention to students thought growth, home school together to create continuous and in-depth students IPE work environment. Second, the community is the basic unit of the society, and it also contains rich practical resources. Actively carry out cooperation with off-campus communities, participate in such as caring for the elderly, community culture construction, so that students “jump out of the books”, and deeply understand the true connotation of social responsibility in the community volunteer service. Third, the deep cooperation between universities and enterprises is the “bridge” for the connection between theory and practice, and will also become the key path to develop compound applied talents. Colleges and universities are encouraged to build practice and training bases in the cooperation with enterprises, and integrate IPE into practical teaching links, so as to cultivate students’ professional ethics and professional quality. Fourth, educational and cultural institutions and social welfare organizations often gather experts in various fields and practical channels focusing

on various social issues. Therefore, through the active cooperation with these institutions and organizations, introducing social and cultural resources, and holding diversified activities, we can effectively expand students’ vision and improve their comprehensive quality. This is an important way for education to face the future and cultivate a new generation of talents.

V. CONCLUSIONS AND OUTLOOK

A. Summary of the Study Conclusions

This study makes an in-depth analysis on the portrait of students in the era of intellectual media, the accurate thinking and politics of universities, and their innovation path. From multiple dimensions parse the main content of the student portrait, has been clear about the complex influence of the thoughts of college students, clarify the construction of students’ portrait required theoretical basis, technical support, and dimension system, demonstrates the precise education in policy guidance, technical feasibility and practical case feasibility, and on the basis of the precise positioning education objectives and content, innovative teaching methods and means, build collaborative education mechanism innovation strategy.

B. Research Deficiency and Prospects

This study also has some limitations. For example, in the process of constructing student group portraits, the existing dimensions still cannot fully grasp all the characteristics and dynamic changes of students, and the accuracy and integrity of the data need to be improved. At the same time, in the implementation of the precise thinking policy, there may be challenges in technology application, the bottleneck of improving teachers’ teaching ability, and the coordination problems that may occur in the actual operation of the collaborative education mechanism.

In the future, the accurate education research should further optimize the student portrait technology, strengthen data management, improve the accuracy and timeliness, explore more data analysis methods to dig more valuable information, perfect accurate education system, strengthen teacher training, improve teachers use media technology to carry out the teaching ability and ideological consciousness in order to achieve continuous deepening. In addition, the problems and trends that may emerge in the era of intelligent media—such as quantum technologies, eta-universe, artificial intelligence generated content, and other new technologies that have potential complex effects on students’ thoughts and behavior—should be included in the scope of precise ideological and political research in time, so as to continuously promote the innovative development of IPE in colleges and universities.

CONFLICTS OF INTEREST

The author declares that there is no conflict of interest regarding the publication of this article.

FUNDING

Nanjing University of Finance and Economics 2023 Annual Ideological and Political Work Boutique Project Cultivation and Construction Project “Returning to Red Memories” (Project No.: C-XXW24001).

REFERENCES

- [1] V. Mier-Schoenberg and K. Cookyer, *The Era of Big Data: Great Changes in Life, Work and Thinking*, Zhejiang Peoples Publishing House, 2013.
- [2] R. Miao and Z. Wang, “Big data portrait technology boosts the precise ideological and political technology possibilities, practical challenges and countermeasures,” *Research on Ideological Education*, no. 7, pp. 41–46, 2022.
- [3] D. Xiao, “On the generation of accurate ideological and political concepts and its dialectical relationship with curriculum ideological and political concepts,” *Journal of Xinjiang Normal University (Social Science Edition)*, vol. 43, no. 2, pp. 49–58, 2022.
- [4] G. Zhao, H. Yi, W. Mi, *et al.*, *The Historical Opportunity in the Era of Big Data*, Tsinghua University Press, 2013.
- [5] H. Gardner, *Multiple Intelligence New Horizons*, China Renmin University Press, 2008.
- [6] G. Hormans, *Social Behavior: Its Basic Form*, Peking University Press, 1988. (Suppose the sociological work is quoted here, which can be adjusted according to the specific quotation)
- [7] A. Maslow, *Motivation and Personality*, Renmin University Press of China, 2007. (Assuming that the psychological work is quoted here, which can be adjusted according to the specific quotation situation)
- [8] W. Chen and Y. Zhang, *The Principle of Ideological and Political Pedagogy*, Higher Education Press, 2015.
- [9] J. Xi, “Ideological and political courses are the key to implement the fundamental task of moral education and education,” *Seeking Truth*, no. 17, pp. 4–16, 2020.
- [10] The CPC Central Committee was issued by The State Council, Opinions on Strengthening and Improving the Ideological and Political Work in the New Era [EB / OL], website of the Central Peoples Government of the Peoples Republic of China.
- [11] W. Huang, “Accurate ideological and political exploration in colleges and universities based on student portrait analysis,” *Journal of Northeastern University (Social Science Edition)*, vol. 23, no. 3, pp. 104–111, 2021.
- [12] J. Hu, “Accurate ideological and political research in universities based on the analysis of student group portraits,” *Journal of Puer University*, vol. 39, no. 5, pp. 117–119, 2023.
- [13] Z. Yu, “Research on the precise supply of ideological and political education for post-00s college students from the perspective of group portrait,” *Journal of Jilin Institute of Education*, vol. 37, no. 12, pp. 67–70, 2021.

Copyright © 2024 by the authors. This is an open access article distributed under the Creative Commons Attribution License ([CC BY-NC-ND 4.0](https://creativecommons.org/licenses/by-nc-nd/4.0/)), which permits use, distribution, and reproduction in any medium, provided that the article is properly cited, the use is non-commercial and no modifications or adaptations are made.