Research on Precision Ideological and Political Education in Universities Based on Student Group Profiling Analysis

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Abstract: Utilizing big data technology to analyze student group profiles and implement precise ideological and political education (IPE) is an effective measure for universities to achieve educational goals. The profile of contemporary university students exhibits several characteristics: distinct personalities, low receptiveness to traditional didactic education, high engagement with online media, susceptibility to adverse ideologies, strong competitiveness, and both ambitious yet pragmatic outlooks. This study examines the feasibility of precision IPE based on student profile analysis and proposes strategies focusing on core traits of student profiles, improving profiling technology, building data-sharing mechanisms, and fostering a supportive institutional environment for student profiling.

Keywords: student group profiling; universities; precision IPE

1. Introduction

Effective IPE in universities requires attention to students' unique characteristics and needs, setting educational goals around students, and selecting appropriate content and methods that support and serve them. This approach enhances students' moral standards, political awareness, and cultural quality, fostering their healthy and holistic development. As big data technology matures, analyzing student group profiles provides a valuable basis for precision IPE, enabling educators to analyze student characteristics, adopt a precise thinking model, and innovate traditional IPE methods.

2. Characteristics of the Group Portrait of Contemporary College Students

2.1. Distinct Personality Characteristics, Low Recognition of Indoctrination Education

Contemporary college students are a group of people with distinct thoughts, ideals and valuable pursuit. They enjoy the pan-entertainment life and are good at carrying out personalized learning. At the same time, the contemporary college students have a strong subjective consciousness, distinct ideological characteristics, personality publicity, the pursuit of freedom, do not want to be limited by external factors, these characteristics require the ideological and political education in colleges and universities must be reformed and innovative, in order to adapt to the development of The Times and the needs of students. At present, the ideological and political education in colleges and universities to take centralized classroom theory professor and indoctrination, emotional education is poor, teaching idea, content and method slightly lag, difficult to obtain the contemporary college students love and recognition, is not conducive to the socialist core infiltration in the ideological and political education values, cultivate students ideal faith and sound personality.

2.2. Addiction to the Network Media, Easy to be Affected by Bad Ideas

As the post-00s group, contemporary college students are the new generation growing up with the development of Internet information technology. Many college students have long been addicted to the Internet world. The explosive growth of massive information in the network platform provides a lot of convenience for college students to study, but at the same time, there are negative theories, negative thoughts, bad public opinion and other information. These bad information will have a negative impact on college students world outlook, outlook on life and values, interfere with students judgment, and even lead to students behavior anomie. College students do not really integrate into the society, and the school living environment makes them lack of sufficient experience, both in the mind and in the body, they are in the immature stage of development. Under the influence of bad thoughts, values and public opinion from the outside world, some students have hedonism and money worship, or give up their studies due to addiction to the Internet, which affects their individual growth.

2.3. A Strong Sense of Competition, both Ambitious and Objective and Pragmatic

The character of contemporary college students reflects the strong autonomy, innovation, personal consciousness and other characteristics. In study and life, I am good at self-display and self-proof, and I have a strong desire and sense of competition. Based on the psychological perspective, this is a positive behavior, but

everything requires a degree, excessive competitive will lead to negative effects. Many students grow up under the protection of parents for a long time, face setbacks and difficulties, and lack the ability to cope and deal. Therefore, in the competitive competition, it will form self-denial, depression and confusion due to difficulties and setbacks, which is easy to hinder the subsequent growth and development of students.

3. Analyze the Feasibility of Accurate Ideological and Political Education in Colleges and Universities based on the Student Group Portrait

The application of student group portrait analysis in ideological and political education is to accurately predict the learning characteristics, learning differences, life conditions and ideological status of each student through the mining, integration and analysis of data information, and to timely find potential problems and accurately deliver education.

3.1. The Law of Ideological and Political Education Points Out the Path for Students Group Portrait

Materialist dialectics requires grasping the essence and law in recognizing things and reforming the world. In the process of implementing moral education in colleges and universities, we should understand the objective laws of ideological and political education, take ideological education as the central link, and adhere to the concept of student-oriented education. The formation and development of college students ideological and moral qualities and values are usually influenced by the external environment, interpersonal relationship, family factors and educational factors. In the process of students receiving higher education, classroom teaching environment, teaching means, campus cultural activities will affect students ideological and moral character. Using the technology of student group portrait analysis, understand the characteristics of contemporary college students, accurately predict the changes of students thought and behavior, and combine the classification of student group portrait to carry out hierarchical guidance, so that each college student develops in the right direction, to achieve the educational goal of growing up as college students.

3.2. The Law of Student Growth is an Important Basis for Student Group Portrait

The growth and development of college students show the characteristics of stages, and it is very important to conduct group portrait analysis and ideological and political education according to the growth law of college students. In the analysis of student group portrait, the core data of daily behavior traces is collected and the information of the implementation of accurate ideological and political education is related to the growth process of students. Get the examination scores, study time and internship data of college students, understand the students knowledge and skill level; obtain the data of students participating in volunteer service, campus cultural activities, social work and party building, grasp

the values of the student group; obtain the data of students social networking, psychological consultation and interpersonal relationship, and grasp the emotional and psychological status of the students. Based on the growth law of college students, to accurately understand the growth dynamic information of college students, colleges and universities can implement the ideological and political education work more accurately and effectively.

3.3. The Popularization of Data Technology Provides Possibilities for Student Group Portraits

In the era of big data, accurate image analysis can be used with big data technology. By conducting research on users, we can understand the similarities and differences of their thoughts, behaviors and views, and carry out scientific and reasonable classification and stratification. The qualitative characteristics are selected, and give the corresponding description and labels, and then form the user portrait. At present, the data portrait based on big data technology is relatively mature and widely used, which provides technical support for the analysis of student group portrait. At present, Chinese universities are committed to promoting the construction of digital and smart campus, widely introducing big data, artificial intelligence and cloud computing technology, and then integrating a large number of data and information. After screening and integration, the thoughts, habits, personality, behaviors and many other information of college students are formed, providing technical support for the accurate portrait of users.

4. Analysis and Verification of Student Group Portraits

Through the results of interview and questionnaire survey, the information of college students learning characteristics, life characteristics, behavior characteristics, interests, hobbies, people and international communication is analyzed, and the hierarchical label system of student group portrait is constructed for these five aspects. First, learning characteristics, mainly including learning habits, learning methods, learning ability, subject choice preferences and other content. The second is the life characteristics, mainly including personal living habits, dining habits, work and rest time, consumption habits and other content. The third is the behavior characteristics, mainly including the school behavior norms, extracurricular behavior performance, self-management and other contents. Fourth, interests and hobbies, mainly including culture and art, outdoor sports, social communication and other content. Fifth, interpersonal communication, mainly including social ability, emotional cognition, team cooperation and other contents.

This system contains multiple levels of labels, and there are also multiple attributes within each label to accurately describe different characteristics and key factors. In order to better provide specific information support, the label system will be finely designed and meet the requirements of label attribute customization.

The clustering algorithm is used to display the category portrait model in a multi-dimensional form to help and analyze the characteristics of college students, social behavior rules and other aspects. Big data and machine learning model are used to establish the portrait model of college students. Through the analysis of these data, we can better understand the characteristics and behavior rules of students, so as to provide more accurate and personalized education services, improve the teaching effect and comprehensive quality of students, and realize the precision of ideological and political education in colleges and universities.

Combined with the intelligent management platform of colleges and universities, it integrates the data sources of student portrait, including questionnaire and interview data, and collects information, including students performance, attendance and activity participation, so as to realize the centralized management of data and create a "one table" information project. Through the analysis and display of the visual interface, the massive data height is summarized as a chart, making it easier for the staff, students and parents to understand and obtain the data. Then, the student portrait module is integrated with ideological and political education, campus culture construction and other related modules to realize multi-mode and block collaboration to form a comprehensive information system, so as to improve the integration degree of ideological and political education data information. Based on the portrait data of students, according to the personality and needs of different students, the ideological and political education content that is in line with the cognitive characteristics of students is designed, so as to enhance students participation and interest in learning, so that they can better understand and master the connotation of ideological and political education. Colleges and universities adhere to the educational concept of student-centered and entry point, find students cognitive blind areas, select targeted cases and materials, and carry out vivid ideological and political education activities, so that students can inspire and encourage both perceptual cognition and rational cognition.

The "SOR" framework was used to verify the precise ideological and political results, the student feedback results and group portrait attributes were compared and corrected, and the communication feedback mechanism was improved. The "SOR" model is a model based on the psychological theory applicable to the evaluation of the effect of all kinds of educational activities [1]. It is mainly composed of three elements: Stimulus, Organism and Response, which can be used to verify the effect and quality of educational activities. Therefore, the accurate ideological and political effect can be verified by combining the portrait data of college students. The model regards the evaluated educational activities as a stimulus, the population receiving the educational activities (such as the college student group) [2] as tissues, and the response of the population to the educational activities as the evaluation of the educational effect.

The first step is to determine the stimulus, that is, the effect of ideological and political education activities. The stimulus can be the content of ideological and political courses, the interaction between teachers and students, etc. The second step is to determine the tissue, that is, the information of college students receiving education. The third step is to determine the reaction, which is, the students reaction to the ideological and political education activities. This can be achieved by collecting student feedback results, including indicators of satisfaction, engagement, cognitive level, and emotional experience.

According to the feedback results of students and the analysis of the group portrait data, the feedback results of students are compared with the attributes of the group portrait, and further analyzed and corrected, so as to provide more scientific, reasonable and accurate data support and decision-making basis for accurate ideological and political thinking. Through the "SOR" framework to verify the precise ideological and political effectiveness, it can help educators to better understand the characteristics of students and implement targeted ideological and political education, so as to improve the effect of ideological and political education.

5. Optimization of Accurate Ideological and Political Path in Colleges and Universities based on Student Group Portraits

In the era of big data, accurate ideological and political research in universities based on the analysis of student group portraits is the only way for the transformation and upgrading of traditional ideological and political to precise ideological and political transformation. In this regard, through the analysis of college student group portrait, from the perspective of combining theory and practice [3].

5.1. Reasonable Use of Student Group Portrait Data

Based on the collection and analysis of student group portrait data, we can grasp the various situations of students in study and life, and carry out ideological and political education accurately combined with the actual situation, so as to achieve a definite goal. Combine the data of student group portrait with the ideological and political education work of colleges and universities, analyze the commonness, personality characteristics and abnormal situation of the data, and explore the reasons behind it. According to the data analysis results, the education mode and content should be adjusted in time to provide students with more effective ideological and political education, and promote the formation of diversified and open ideological and political education mode, so as to achieve better educational effect.

5.2. Innovative Ideological and Political Education Concepts

It is necessary to innovate the concept of ideological and political education, and use modern data collection and analysis technology to collect students basic data and related indicators, so as to provide scientific basis for

accurate ideological and political thinking of colleges and universities. Clarify the objectives and tasks of precise ideological and political work in colleges and universities, formulate corresponding management systems and responsibilities, and establish special working institutions to ensure the development of ideological and political work from the organization. Strengthen the construction of teachers, train professional and high-quality ideological and political teachers, strengthen the study and research of their ideological and political theories, improve the level of education, teaching and scientific research, and provide a strong guarantee for accurate ideological and political education. Promote the full participation in ideological and political education, build a platform for students to participate in ideological and political education, give full play to students initiative and creativity, and further improve the effectiveness of accurate ideological and political education.

5.3. Design of Targeted Educational Content

According to the research results and the needs of students, the learning needs of students of different levels of the same level and different groups are defined, and the educational content with strong pertinence, interest and high point is formulated, so that students self-identification and renewal of value can be significantly improved. Interactive teaching methods are adopted to guide students to think independently, improve their creative, innovative and divergent thinking ability, stimulate students interest and enthusiasm, and guide them to form a healthy and upward attitude towards life and a sustainable way of life. Strengthen the integration of disciplines, combine with professional courses, and carry out targeted ideological and political education, so that ideological and political education will become the supplement, extension and promotion of professional education, and promote the all-round development and growth of students.

5.4. Carry out Diversified Forms of Ideological and Political Education

In the implementation path of ideological and political education, we should take improving students innovative ability and comprehensive quality as the core of education and teaching, pay attention to the combination of practice and theory, and focus on cultivating students innovative thinking ability, independent thinking ability and independent learning ability. Organize and carry out learning and exchange activities inside and outside the class, so that students learn to cooperate, learn to serve, enhance the team, cooperation spirit, have good social ability and comprehensive quality, so that students have the ability of self-adjustment and survival in a complex social environment.

6. The Strategy of Analyzing the Accurate Ideological and Political Education in Colleges and Universities based on the Student Group Portrait

6.1. Focus on the Core Characteristics of Student Group Portraits

Student group portrait should grasp the core elements. On the one hand, when depicting the group portrait of college students, we should closely combine the core elements of the ideological and political education of contemporary college students, namely. [4] Through the ideological and political education activities, college students are guided to correctly understand the development situation of the world and the country, understand the historical responsibility and the mission of The Times, and set up lofty ideals and aspirations. On the other hand, in the process of student group portrait analysis, we should do a good job of classification and stratification, and analyze the individual differences of college students in classroom learning, practical activities, campus cultural activities, innovation and entrepreneurship activities. By taking targeted educational measures, to ensure the effectiveness of precise ideological and political education. In addition, portrait analysis for college students to understand the ideological characteristics, learning methods and growth rules of the group, and then improve the effectiveness and effectiveness of accurate ideological and political education.

6.2. Improve the Student Group Portrait Analysis Technology

The portrait analysis technology of college students mainly includes cluster analysis, outlier analysis and association analysis. First, the cluster analysis. This is a teaching method to classify the research subjects according to the degree of intimacy. In the process of cluster analysis, data categories do not include classification information. Cluster analysis can be used to classify all kinds of data information without the background of preset classification, and college students can be divided into different types. After the cluster analysis, the group categories and portraits of the students were clearer. On this basis, the ideological and political education scene of colleges and universities is integrated, and precise ideological and political education activities are carried out for the refined and divided student groups. Second, the outlier analysis. A method of mining discrete objects with differ differences from other data and analyzing their outliers. As long as the data bias is found, the influencing factors must be found. Using the outlier analysis method, the hidden and internal data relations are mined from the data resource database of college student group portraits, and then the common characteristics of college students group thoughts are accurately studied, so as to understand the ideological differences of each college student. Finally, the association analysis. The association rule is used as an algorithm for group portrait analysis to analyze the correlation degree of different labels and pass it. The list

is presented in the form, and the top label of the list represents a higher degree of correlation. To carry out portrait analysis and accurate ideological and political education through the correlation analysis technology, the variables with high correlation can be taken as the prediction unit in the variable status evaluation. [5]

6.3. Construct the Student Group Portrait Data Sharing

The application of college student group portrait data in the field of ideological and political education needs to do a good job in the construction of systematic database, and carry out comprehensive analysis and judgment of the growth and development of student groups through the extensive integration of multiple data such as college teaching and student management. [6] On this basis, the sharing mechanism of data information should be improved to realize the sharing of all kinds of data information on campus and form a complete database. Colleges and universities should increase the resource investment of system construction, extensively collect all kinds of data and information related to students, and break down the data barriers of colleges and universities. Based on the performance level of college students, their data information includes family background, learning performance, course selection, basic information, library borrowing and other data. At the same time, all kinds of data and information must be integrated to form a perfect database covering all the students information. Only in this way can the analysis of student group portraits be more clear and intuitive, and targeted and precise ideological and political education measures can be adopted to improve the effectiveness of ideological and political education.

6.4. Create an Institutional Environment for Student Group Portrait

First, create a soft environment for full education work. As ideological and political educators in colleges and universities, we can build a professional technical team to provide guidance, help the majority of ideological and political teachers recognize the advantages and values of data technology application, and integrate ideological and political theory teachers, course ideological and political teachers, counselors, teaching management teachers and many other ideological and political education forces. Focusing on the goals of ideological and political education, the characteristics of ideological and political courses and the ideological and political education scenes of college students, the precise ideological and political education model based on the portrait of students group is constructed. [7] To understand the individual characteristics and learning needs of college students with group portraits, and optimize the allocation of educational resources. Second, build the institutional environment of the whole process of education. [8] First of all, colleges and universities should popularize big data technology and application concepts in their schools, and guide all departments to develop the idea and habit of data co-construction and sharing by giving full play to the

constraint and supervision role of the system. Secondly, give full play to the guiding role of precise evaluation, understand the deficiencies of precise ideological and political education in colleges and universities, constantly strengthen the analysis of student group portrait, and cooperate with various departments to improve the mode of precise ideological and political education, so that student group portrait can become an important basis for precise ideological and political education. Thirdly, colleges and universities should set up a team of big data technology professionals, that is, to fully understand and flexibly use computer, big data, cloud computing and other technologies to make them Maintain the database and system platform, accurately analyze the group portraits of college students, and provide a basis for ideological and political teachers to carry out teaching work. Finally, do a good job in the safety supervision of the big data system. Standardize the use of data and information, conduct regular safety detection and risk assessment, eliminate risks and hidden problems in time, and ensure the security and integrity of data and information. Third, to form a full range of data support. Using the analysis of student group portrait, accurate ideological and political education can be implemented without face-to-face contact between ideological and political teachers and college students, requiring teachers to master the all-round information of student groups. [9] On the basis of the construction of student portrait database, improve the data collection, index analysis, classification directory, data quality standards, for universities to carry out the accurate ideological education to provide one-stop service, data information sharing to promote ideological and political education work coordination, giving full play to the advantages of group portrait data, strengthen the effect of ideological and political education. [10]

As an important position of talent training, colleges and universities should carry out the fundamental task of cultivating people by virtue, cultivate the correct world outlook, outlook on life and values of contemporary college students, so that they can become builders, successors and dream builders in the new era. All these are inseparable from ideological and political education, and we must gradually improve the pertinacity and effectiveness of ideological and political education. Through the analysis of student group portraits, the characteristics, growth rules and needs of students can accurately convey ideological and political education content and select ideological and political education methods, thus consolidating the achievements of ideological and political education and giving play to the maximum value of ideological and political education.

7. Conclusion

Universities, as key places for nurturing talent, play an essential role in fostering students' worldviews, values, and cultural identities. Precision IPE, supported by profiling analysis, aligns educational content and methods with students' characteristics and needs,

maximizing the impact of IPE efforts and enhancing educational outcomes.

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