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Retraction

Retracted: Construction and Analysis of School Moral Education System Based on Big Data Technology

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This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] G. Du, Y. Sun, and Y. Zhao, "Construction and Analysis of School Moral Education System Based on Big Data Technology," *Advances in Multimedia*, vol. 2022, Article ID 3782561, 12 pages, 2022.

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Research Article

Construction and Analysis of School Moral Education System Based on Big Data Technology

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Using educational big data to enhance the performance of the moral education system in colleges and universities is important to smart moral education. However, educational big data has an obvious diversity. For this reason, combined with multiple resources, the "adaptive" data processing method with strong dynamic and active adaptability is cited to analyze the big data in colleges and universities to understand and grasp the dynamic of users' thoughts and behaviors. At the same time, according to the interest bias, the concept of "interest group" is used to classify the interests of a large number of users form different groups for modeling and use it as the core framework to build an intelligent research model of moral and ideological education. Then, on this basis, the experiment was carried out using the WeChat public account data of 20 universities, and the WeChat Communication Index (WCI), WeChat Service Index (WSI), and WeChat Management Index (WMI) were used to evaluate the function of the WeChat public accounts of universities in ideological and moral education. The roles and characteristics in the system are classified into three categories: communication-oriented, service-oriented, and general type. Among them, the communication-oriented type is mainly used to provide and disseminate educational information, while the service type can be the bridge to build direct connection between teachers and students. Therefore, the performance of ideological and moral education system in universities can be enhanced. While the general type is multifunctional, its performance in information dissemination and interaction is modest. Therefore, it is suggested that the WeChat public account should take the dissemination of information and the interaction between teachers and students into account.

1. Introduction

Data is an objective existence that is constantly evolving in the development of culture and education [1]. Big data is a valuable information resource with huge scientific [2] and social value [3, 4]. In colleges and universities, everyone in the universities and colleges will make, disseminate, and use data, and they are also the object to be analyzed in this process [5]. Big data is continuously booming. How to use big data scientifically, efficiently, reasonably, and legally and use big data to research and sublime the moral education system of all sizes [6] are vital important to improve the overall performance of moral education system of colleges and universities, which is not only related to the growth of young people but also related to the development of society and the future of the country [7].

Big data technology is an accurate, multifunctional, reliable, and straightforward method for improving the pertinence and scientific of the ideological and moral education system [8]. The scientific use of big data can not only improve work efficiency but also provide more accurate results. However, the diversification of data makes the utilization of data extremely challenging. Also, the rapid development and great changes in the internet technical means resulted by big data pose new challenges, especially on the ideological and moral smart educational system. [9]. Therefore, the use of big data is to identify the opportunities and challenges that big data brings to ideological and moral

education, then to build college educational network based on the laws of ideological and moral education [10]. To realize this goal, it has become a major challenge that should be studied and solved in near future [11, 12].

How to effectively use the various databases of colleges and universities with complex contents is the basic procedure of use big data. In terms of data processing, big data sources analyzing is actually a revolutionary change compared to traditional databases [13]. The traditional database focus on processing method of data engineering, and big data needs new logic thinking to deal with, not just the object of engineering processing [14]. Different scholars also have different views and the research on big data can be classified as the following three typical categories:

(1) Focus on the Nature of the Data [15, 16]. Its main points are that big data is a union of large data sets that are very challenging to be easily handled by existing general technologies. This kind of view focuses on the essential level of data and is narrowly defined. It has obvious difference from "small and statistical data" in the early days.

(2) Focus on the Data Capability Level [17]. Its main points are that big data means the new data processing method; it can mine decision-making power and insight that can be valuable to businesses from data. This view recognizes the diverse and massive characteristics of big data. Based on the first view, it further proposes a discussion on the ability to use data. They believe that "there is only a large amount of data, and if it is not able to use it, it cannot become real big data."

(3) Pays Attention to the Technical Application Aspect [18]. Its main points are that big data is defined as a technical problem; we should rely on big data technology to solve the "big" problem. The big data technology is "take data, calculate data, and sell data". The core difference of it from traditional tools is that it is suitable for processing large amounts of data. This view regards major data as a technical tool, and it is able to capture the apparent properties of it, but it is easy to fall into the trap of "technical only" and "technical determinism", which easily leads to the limited or narrow vision of researchers and developers.

Educational big data is broadly defined as the behavioral data generated by human's daily educational activities, while the narrow big educational data is limited to the behavioral data of learners, namely student in different levels [19, 20]. Here, big educational data is defined as a data collection that conforms to the characteristics of big data generated in the interexchange process between users and the outer material world, including both real environment data and virtual environment data. Based on the generation link of data, education big data is divided into process data and result data. In the moral education system of colleges and universities involved in this article, process data mainly refers to the qualitative and quantitative behavior data generated by students in learning and life, such as social practice behavior, social dynamics, and preferences. Outcome data is easy to quantify with numbers, such as social practice results, behavioral results, and statistical results, based on the second category, using the tool of big data to analyze the quantifiable and unquantifiable data of online and offline, and then develop the model system of moral and ideological education of universities, and use the moral education system through case studies and evaluation. At the same time, the adaptive analysis method is introduced to strengthen the adaptability of big data analysis and improve the accuracy of data analysis. And based on this, a moral education platform based on big data was constructed and verified by experiments.

2. Education Big Data Analysis System

Different schools have different characteristics; the same school also has different majors. These results in different educational environments and the data characteristics in different environments are therefore different. It is difficult to analyze and utilize the same standard and data analysis methods with high flexibility and adaptability are required. Among different types of methods, the "adaptive" data processing method has obvious advantages.

The word "adaptive" is a special term in the field of automation, which means that the system automatically adjusts according to the changes of the environment, the characteristics of the data, processing methods, sequences, parameters, and other elements to make its behavior in the new or the process of adapting the changing and dynamic environment [21]. The dynamics and active adaptability of the process are emphasized in adaptive process. The process of adaptive dynamic analysis is a process in which behaviors will be converted into "digital single", identifying it as "digitalization" and then transferred into "application" object by the form of digital information. Thus, it can successfully capture the properties of objects in different educational living environment and family background, different majors, and different age groups, and to record the students' different behavioral expressions and ideological tendencies. Thus, the use of an adaptive moral education system is to actively use the different properties of students and flexibly record and analyze students' ideological changes. The self-adaptive system model of an effective architecture through big data technology consists of at least five layers from the outside to the inside [22], including the perception layer, the original data layer, the information layer, the high-level control layer, and the application layer for service expansion, as shown in Figure 1.

In this system, iPad, school card, mobile phones, portable computers, electrical terminals, data acquisition instruments, microcontrollers, and other acquisition hardware, as well as various IoT devices such as Wi-Fi, sensors, and actuators, together constitute the perception layer. It is responsible for perceiving and acquiring various data of ideological and moral education objects, such as student information systems, access control systems, consumer systems, library lending systems, sports venues, and other system data sources based on the perception layer, continuously collecting "structured" numbers; text; "semistructured" images, audio, and video; weblogs; and "unstructured" data streams, click streams, and other data forms the original data layer. Based on the original data such as videos, pictures, texts, and numbers obtained by the recognition layer, a data layer

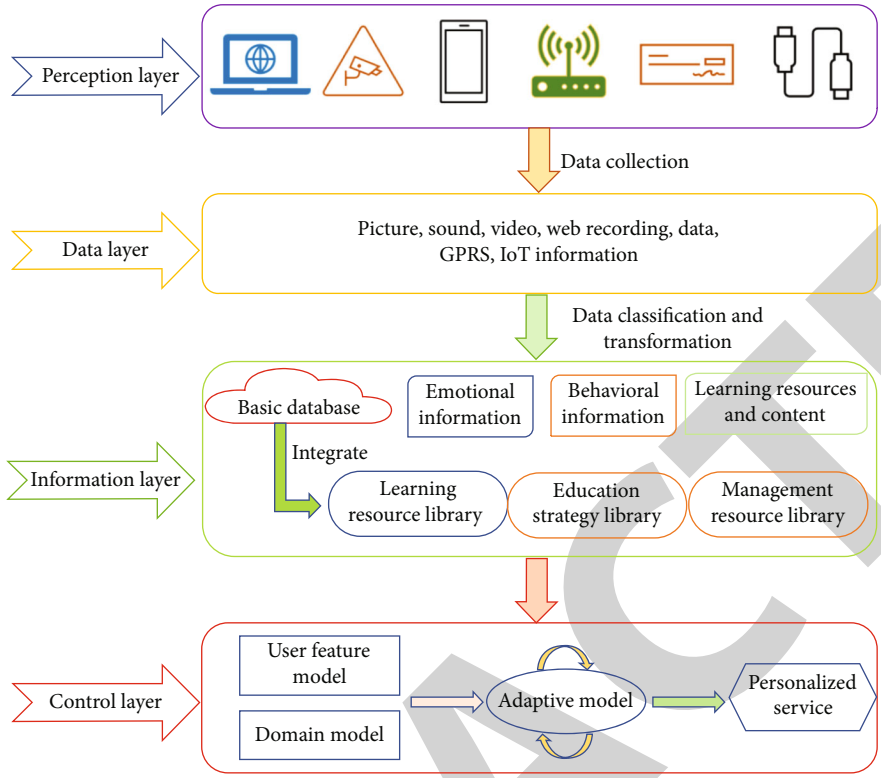


Figure 1: Education big data analysis process.

based on schools is constructed, and data is stored and extracted based on this, providing data support for subsequent data analysis. The original data is then identified, cleaned, mixed, integrated, and stored and finally upgraded into the information layer. After group analysis, this information is stored in the "subinformation bases", such as teacher-student behavior information base, rule base, and emotion information base. During this process, the content in various databases will be updated continuously, and thus effectively grasping the comprehensive information of students.

The core of the adaptive dynamic analysis system is the control layer. At this level, the "adaptive engine" in the module will carry out personalized guidance, education, and services based on model characteristics during the implementation process of education, and it also dynamically evaluates the running process and effect. According to the evaluation, it will continuously update and adjust the adaptive rules, so as to optimize the analysis as much as possible. The application layer is the key to providing ideological and political core application products. Ideological and political instructors should develop a variety of ideological and political products, such as educational scene design, construction of value identification systems, and knowledge presentation tools.

Universities and colleges have resulted in deep influences on nearly all aspects of the society, and the data related to colleges and universities is massive and messy. It is quite challenging to obtain the above data without the use of big data technology, and without the guarantee of big data technology, the workload of integration will be huge. Moreover, the types of these data are different. For example, the data formats and types of school card, computers, and students' academic studies are significantly different. Despite this, they are connected though data circle layers with ideological construction as the core (as shown in Figure 2). Objects with different backgrounds, thoughts, and behaviors are connected by living, learning, and recreational activities, and these connection points constitute the intersection between different individuals and ultimately form a network of relationships that link a large number of individuals. Based on this, it analyzes the basic information, living habits, learning methods, characters, professional specialties, and ideological tendencies of college students.

Behind these huge data is the valuable information of ideological and moral education system, so the adaptive dynamic analysis system is closely linked from data integration and import to data mining and analysis, and then transferred to data practice and application, as shown in Figure 3.

Adaptive dynamic analysis, as a new breakthrough of "path dependence" in ideological and moral smart educational system, is to establish an educational path strategy based on "groups", the multigroup selection and an educational resource push method through big data technology, more details see later section. The big data technology is used here to collect, analyze, and classify the information generated in the dynamic flow and generate the results from the data analysis. And then the processed information will be used in by different department of universities for moral education. In the final analysis, it relies on big data recognition and processing to realize the recording, analysis, and personalized support of students' thoughts and behaviors. Educational path recommendation based on "groups" is extracted by collecting, collecting, mining, and analyzing

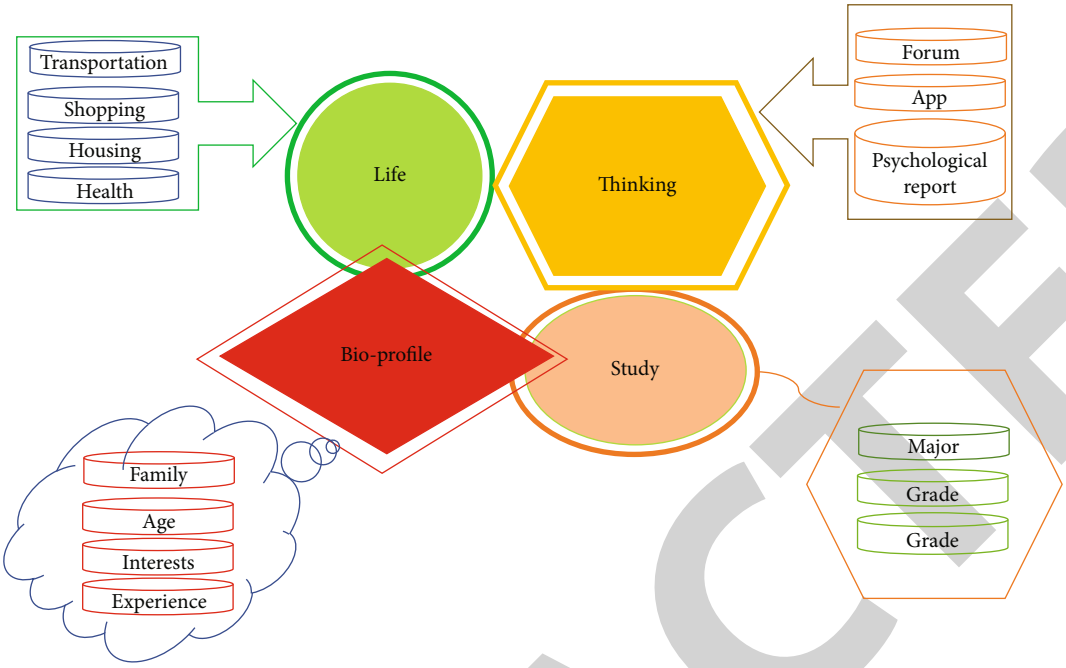


Figure 2: Data circle layer structure.

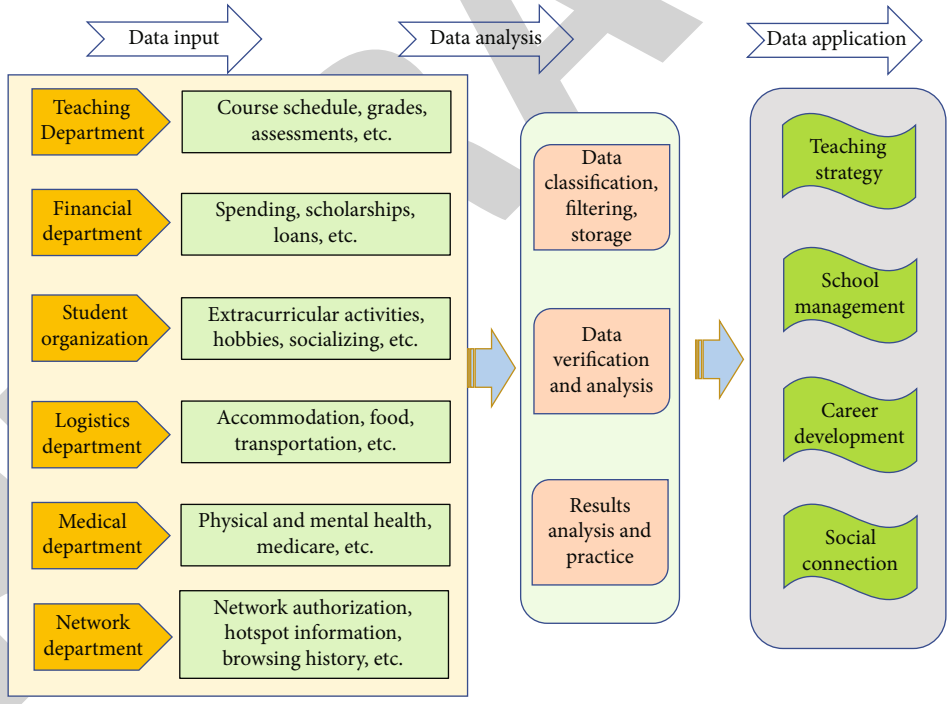


Figure 3: Data flow.

the personalized and differentiated characteristic data of educational objects from the complex, massive, diverse, and heterogeneous data. The bottleneck of information can be adapted to meet the needs of educational objects. It can choose appropriate and key "times" to support and realize dynamic education flexibly and proactively. At present, such a path has been reflected in some teaching links, such as the well-known "knowledge mastery heat map", which is dynamically presented and recommended through the mining of these teaching data.

3. The Establishment of a Smart Moral Education Platform

The contribution of big data to the push method of educational resources lies in that, through algorithm calculation,

Table 1: Big data intelligent platform content.

Layers	Technical method and equipment	Function
IntelliSense layer	Induction technology	Perceive and collect data on the life, learning, health, and environmental interaction status of teachers and students
Network communication layer	Network communication layer	Real-time data transmission, sharing, and updating through web clients and apps.
Big data layer	Data collection, storage, management, and analysis platform	Data collection, storage, management, and analysis platform
Application layer	Smart education system	Build a platform for online ideological and moral education
Adaptive interaction layer	Intelligent terminal	Realize barrier-free communication between instructors and learners in universities through intelligent terminals, provide personalized services, and enhance the effect of smart ideological and moral education
Support layer	Information security assurance, system operation, and maintenance	Provide protection for campus network, information security and information sharing, etc.

the weighted coordination of data information is strengthened, the group is classified, and the data is effectively filtered. Based on the advantages of "recommending resources with difficult content identification and thorough analysis", it can not only overcome the data that cannot be handled or analyzed by computers at this stage but also can "share" the evaluation and analysis that have occurred and summarized. Therefore, the characteristics of shares are also very clear.

Compared with digital campuses, the smart campus platform built on big data emphasizes the integration of physical space and digital space. The big data intelligence platform built on the function layer of big data can better realize the intelligent application of ideological and moral smart educational system. The big data intelligent platform in colleges and universities should be constructed including following contents, see from the Table 1.

From the actual situation, we can find that there is a certain similarity in the interest preferences between the student groups in different universities and the student groups within the university. Based on this, the concept of "interest group" is proposed. In this process, users who are interested in the same topic will form an interesting group, and all users will be classified into different groups of interest according to their interest preferences. During this period, the system algorithm will establish a relationship network based on the intersections of different individuals in the group in life, work, and study and group them according to specific interest tendencies to obtain the final interest group. Based on this concept, user groups are modeled according to user ontology and similar interests, as shown in Figure 4:

In the user information recording module, big data technology is used to record and collect users' behaviors, and it can be expressed as

$$u_r = \{\text{record}_n | 1 \le k \le K\}, \quad (1)$$

where $\text{record}_n = (i_r, t_x)$, i_r represents the user behavior-related document, and t_x is the time step.

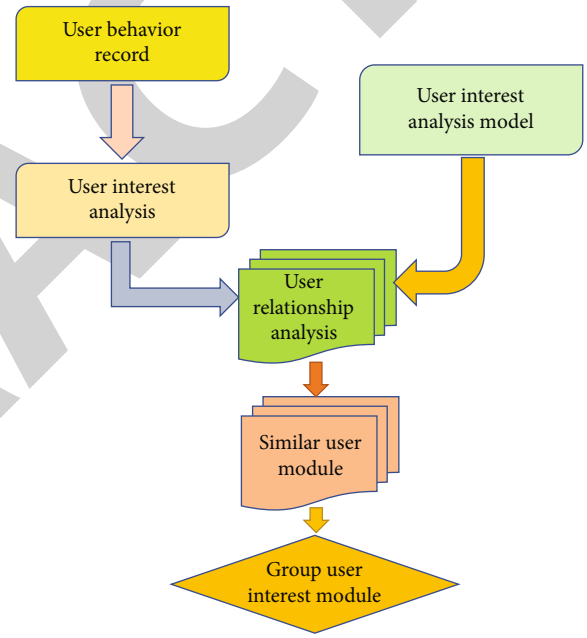


Figure 4: Group modeling of the same interest group.

In college online forums, the relevant information of users' posts is recorded and replied to form a corresponding database, which is used for user relationship analysis and user relationship analysis on the basis of interest analysis. In this module, the user behavior record set is built. During the model building process, the user's comments, and responses to the content of cyberspace will be recorded in the network log. Through data analysis of network logs, the historical interest bias of users can be distinguished. The user relationship mining module mainly forms a user aggregate through the collection of user personal information and friend relationship information. It creates a specific user portrait to describe the relationship between user groups. The two eventually form a collection about the relationship between users.

The user interest mining module mainly performs keyword extraction. In this process, word frequency is extracted based on keyword occurrences, user sentimental tendency is

extracted based on interdata relationships for the previous records of user behavior, and then form a composition including keywords, word frequency, and emotion. And a collection of user interests for relational chains. Through the network content ontology, interest groups are built from the user behavior record set through the ontology query. The user relationship and interest analysis module are the dominant feature module of the entire model. It uses user scores to analyze the sentiment orientation of the corresponding user set for each keyword, and at the same time, conducts an interest test for each user corresponding to the keyword group to analyze its emotional orientation. The user group module of similar interests mainly calculates the comprehensive effect of the user on the entire user group by calculating the average similarity weight of each user in the group and the weight of each user's rating frequency, so as to determine the preference of the entire group.

In the user group module, the item-based CF algorithm is used to generate the TOP-N recommendation set for the group [23]. The traditional interest group model is defined as follows:

$$u_1 = \{(Fq, \text{Confik}) | 1 \le k \le K\}. \quad (2)$$

Among them, Confik represents the interest degree of a user in this interest group, k is the time factor, and K is the maximum time length. The user interest cluster obtained by the Apriori algorithm in the concept interest string set in the user instant interest model.

$$Fq = \{\eta_n | 1 \le n \le N\}, \quad (3)$$

where η is the interest key words, n is the number of interests, and N is the total number of interests.

The alienated interest group model defined in this paper is

$$\mathrm{u}_j = \{(sq(i,i)), t_k | 1 \le k \le K\}, \quad (4)$$

where $sq(i,i)$ is the alienated interest group, and t_k represents the time when the alienated interest group is generated. The $sq(i,i)$ is calculated as

$$sq(i,i) = \{\eta_{kl} | 1 \le l \le L\}, \quad (5)$$

where η_{kl} is the key content of interests, the l is the number of the concept of interests, and L is the total number of the interests' concept.

$$\mathrm{u}_{\text{new}} = \{Fq_{\text{new}}, \text{confi}_k | 1 \le k \le K\}, \quad (6)$$

where Fq_{new} is the incremental user interest cluster.

With the continuous updating of traditional interest groups, some interests decline and another parts rise, indicating that users' interests are prone to change, and different interests grow and develop, thus forming alienated interest groups. The six modules of the whole model are linearly linked. The user relationship mining module and the user interest mining module are closely related user groups, the keyword interest degree, and the emotional tendency of each user in the group, as shown in Figure 5. The user relationship and interest analysis module finally derive user groups with similar interests through big data analysis. The affinity user group module performs internal computational analysis to determine the overall preferences of the group. In this process, students' information is input from here and recorded by Equation (1) and stored in data layer for processing. Then the information of user would be analyzed by using the method based on Equations (2)–(6) to build the relationship network among users. The user relationship and interest analysis module finally derive user groups with similar interests through big data analysis. The affinity user group module performs internal computational analysis to determine the overall preferences of the group. The user group interest model module adopts the CF algorithm to recommend relevant network content to the group. The paper draws on the following formulas to calculate and simulate interest groups:

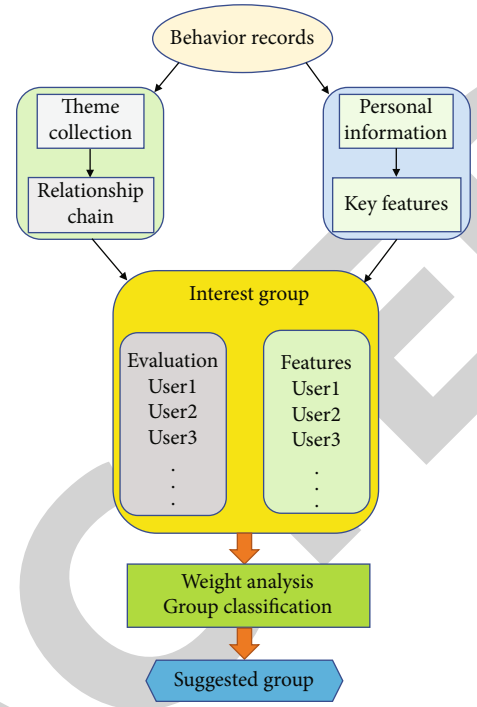


Figure 5: The CF algorithm flow adopted by the user group interest model.

$$\text{Confi}_{u_i} \left| Fq_{u_i} = T \times \text{Confi}_{u_i} \right| Fq_{u_i} + (1 - T)\text{Confi}_{u_{\text{new}}} \left| Fq_{u_{\text{new}}} \right., \quad (7)$$

where u_i and u_{new} represent the user long-term interest model and user interest incremental model, retrospectively. T is the attenuation factor.

At the same time, the precision rate P_{re} is used as the evaluation standard of system performance. The higher the precision rate, the closer the recommended resources

obtained by the user are to the user's interests. The evaluation formula is as follows:

$$P_{re} = \frac{1}{N}\sum_{i=1}^{N}\frac{P_i}{M}, \tag{8}$$

where N is the number of experiments, P_i is the number of resources that satisfy the user's interest among the M recommended resources, and i is the number of tests.

4. System of Evaluation

As a new media widely used by a big group of users, WeChat has the unique advantages of simple operation, timely interaction, rich content, and precise binding services for the running of ideological and moral education in colleges and universities. With the development and improvement of WeChat functions, WeChat official accounts have gradually become a platform for schools to release information, provide a platform for teachers and students to connect, and become an important tool for intelligent education. Based on user interests, and preferences, and intelligent content push, a two-way matching of online educational information is constructed. By making use of the intelligent matching of smart big data technique, online ideological and moral education could grasp the effect and value of its dissemination from the perspective of user needs. The audience's choice of content is usually reasonable. In the process of enjoying specific services, the audience's content needs are satisfied. According to user interest grouping, big data becomes an "untargeted release of information in the traditional sense and active search by users", which is the intelligent push for user interests and establishes a two-way matching of online ideological and moral education. It promotes users to actively obtain relevant information and improves the effectiveness of information release for online ideological and moral smart educational system, and then guides them to establish correct values and to express positive and positive remarks.

To this end, the data of WeChat public accounts of 20 representative universities is obtained for experimental verification. The pros and cons of the moral education platform based on the WeChat official account are not only directly relied on the communication effect of WeChat but also closely connected to the service functions and management provided by WeChat. Using the methods of big data mining analysis and quantitative research, we objectively analyze the implementation effect of 20 colleges' WeChat public accounts in the moral education system.

4.1. Evaluation of Objects and Steps. These 20 universities are all universities directly under the management of the Ministry of Education, including comprehensive universities and universities of science and technology, with large student groups that could create enough data for analyzing and use. These 20 universities selected in this paper have certain representativeness and advancement in their respective school categories, and their ideological and moral education work carried out on the WeChat public account has important reference significance and reference value to other universities. To this end, the thesis completed the collection of big data on the official WeChat public accounts of various universities from February 2018 to December 2019. Based on the research objects, the overall evaluation steps of the WeChat public accounts of universities are summarized in Figure 6.

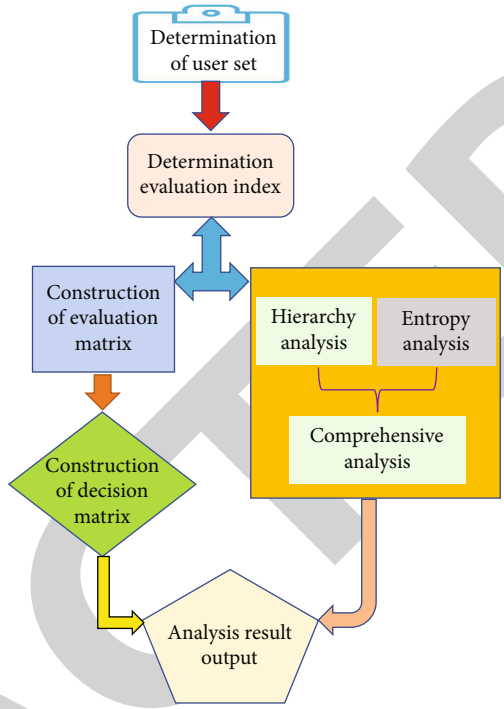
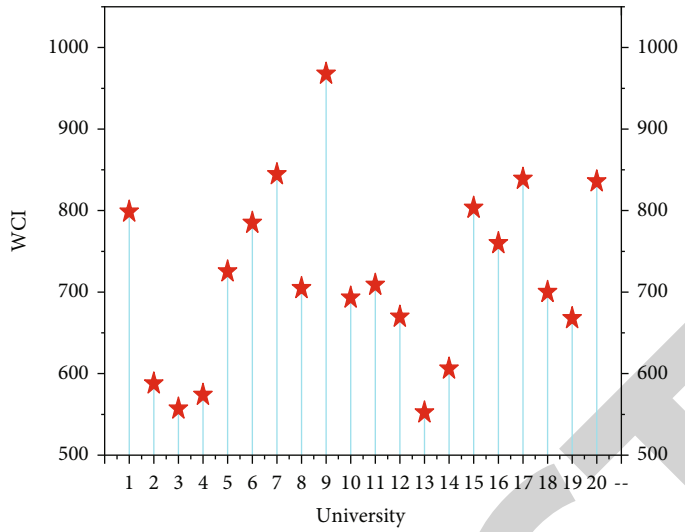


Figure 6: Design of evaluation model.

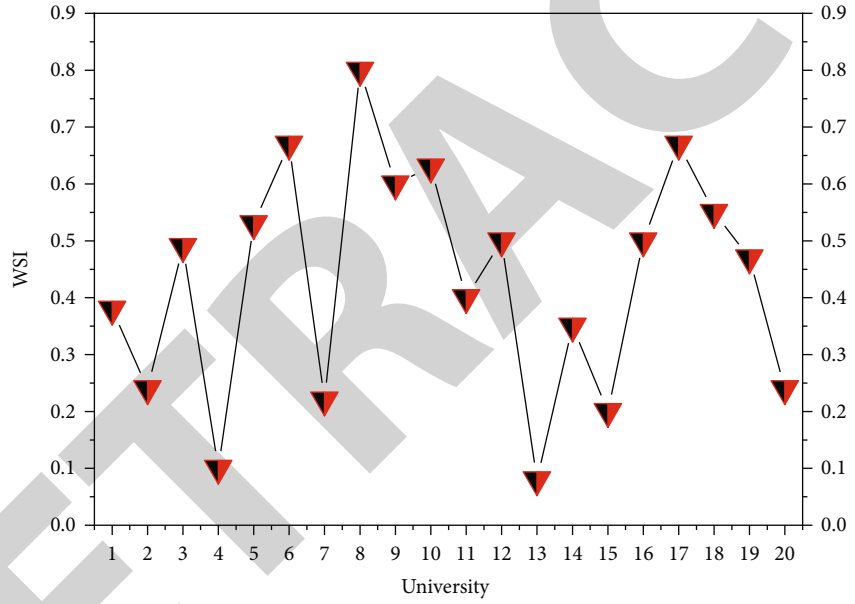
4.2. Evaluation Method

4.2.1. Data Normalization. Different evaluation indicators have different units and directions. Therefore, it is necessary to eliminate the incomparability caused by units and directions, and standardization is required during data processing.

4.2.2. Determination of Indicator Weights. The determination of evaluation indicators mainly exists in two forms, namely, subjective empowerment and objective empowerment. Subjective weighting determines the weights of indicators according to the experience of the evaluators, and the interpretation of the results is unlikely different from actual common sense, but because of subjective opinions, it may affect the quality of the final evaluation results. Objective weighting, on the other hand, calculates weights strictly based on mathematical models and has rigorous mathematical theoretical explanations, but it ignores common sense and experience, which may cause the decrease of accuracy of weight distribution. That is, the subjective analysis method focuses on personal opinions, which can better reflect the user experience, but cannot represent a large number of groups; objective analysis can better reflect the comprehensive performance of a large number of groups, and thus give a comprehensive conclusion. Considering the

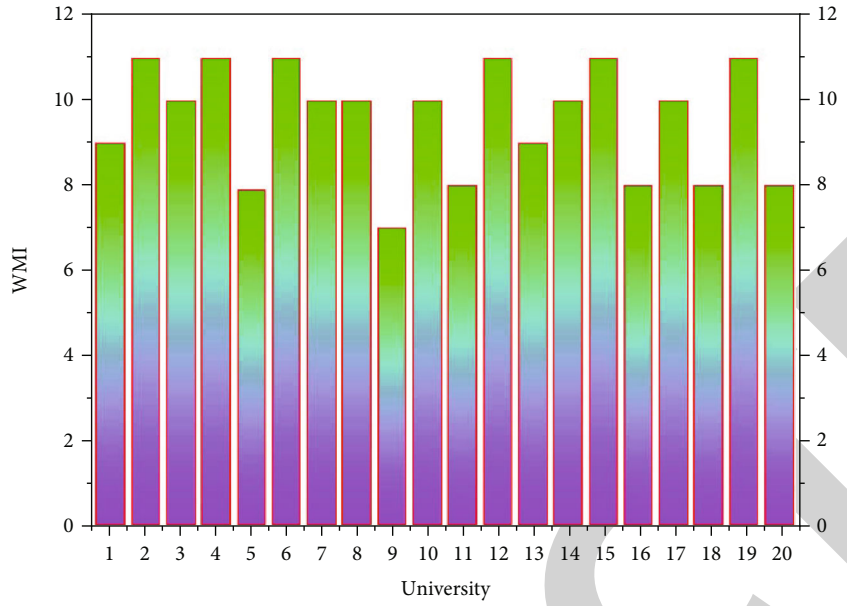


(a) WCI



(b) WSI

Figure 7: Continued.



(c) WMI

Figure 7: The results of WCI, WSI, and WMI.

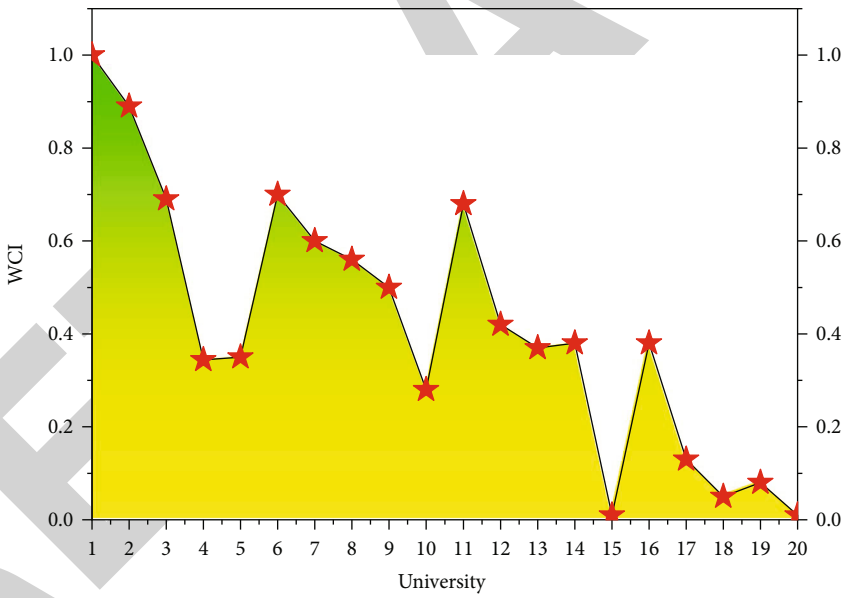


Figure 8: The standardized results of WCI.

disadvantages and advantages of above two manners, the analytic hierarchy process is used to objectively analyze the data and calculate the weight of indicators.

(1) Analytic Hierarchy Process. During the construction process of judgment matrix, the relevant indicators are scored by means of a questionnaire survey, and the corresponding judgment matrix is constructed. The subjective weight vector obtained by Analytic Hierarchy Process is

$$L' = \left(l_1', l_2', L, l_n'\right), \tag{9}$$

where L is the subjective weight vector, l_1', l_2', and l_n' are vector element.

(2) Combination Empowerment. The calculation formula of mixed weighting is

$$W = \alpha L + \beta L' = \left(w_1, w_2, L, w_j, L', w_n\right), \tag{10}$$

where L ' is the objective weight vector, $0 \le w_j \le 1$, $\sum_{j=1}^{n} w_j = 1$, α, and β represent the relative importance of subjective

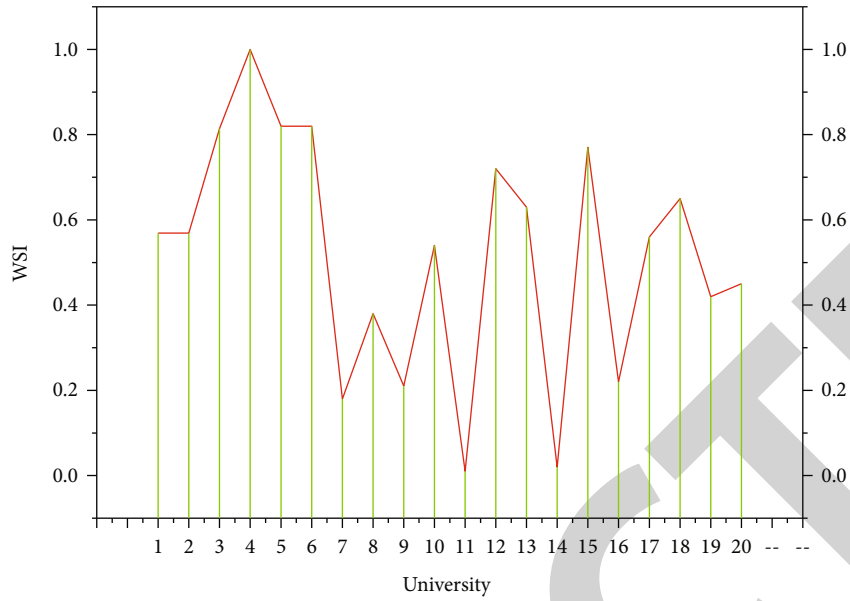


Figure 9: The standardized results of WSI.

weighting and objective weighting, respectively, and $0 \le \alpha \le 1$ and $0 \le \beta \le 1$.

(1) Conduct a Comprehensive Evaluation. The index weight vector can be computed by the combining the Analytic Hierarchy Process and the entropy analysis method, as shown in the following equation:

$$W = (w_1, w_2, L, w_n). \tag{11}$$

By weighted calculation of the index, the final result of evaluation is computed by

$$A = W\mathrm{g}R, \tag{12}$$

where R is the standardized index data matrix, and A is the final evaluation result matrix.

4.3. Evaluation Results and Analysis. Through the platform data collection, combined with the evaluation index system and scoring method, the WCI (WeChat Communication Index), WSI (WeChat Service Index), and WMI (WeChat Management Index) was calculated, and the WSI corresponding to the secondary index weight obtained by combining the mixed weighting are as follows: the teaching service function is 0.23, the logistics service function is 0.25, the library service function is 0.28, and the student affairs service function is 0.24: The evaluation index set of the WeChat public account of the university corresponding to the WeChat data is obtained. The specific data are shown in Figure 7.

After standardizing the data of each indicator in Figure 7, the weights of WCI, WSI, and WMI obtained by the mixed weighting are rounded, and the corresponding weights are 0.5, 0.3, and 0.2, respectively. The total score of the construction of the official WeChat public accounts of 20 colleges and universities is obtained by multiplying the standardized index data at all levels considering the corresponding weights. The scoring results are arranged in descending order, and the overall status of the construction of the official WeChat public account of each university is obtained as shown in Figures 8–10. Based on this, this paper conducts further comparative analysis and group analysis of the overall data and all universities can be divided into three types.

Category I colleges and universities have a high average WCI and are of the "communication-led" type, as shown in Figure 8. In this category, most of these colleges and universities belong to comprehensive universities. Such colleges and universities have a strong communication influence among user groups. This is due to factors such as a big group of users on the official WeChat account, the wide coverage of the articles pushed, and the cultural characteristics of the articles being pushed. The public accounts of such colleges and universities can provide a lot of information for different users, including the relevant content of the ideological and moral modules. At the meantime, "communication-oriented" colleges and universities have relatively complete WeChat management, so their WMI values are relatively high. However, when "communication-oriented" colleges and universities use WeChat to build network culture, they invest less or have poor results in the construction of official account service functions. Online psychological counseling and other services do not form quick feedback between information provision and students, so their WSI values are generally low; this also has a certain adverse impact on ideological and moral education.

Class II colleges and universities have a high average WSI and belong to the "service-oriented" type, as shown in Figure 9. This reflects that the second category universities have paid most of their attention to the provision services in the building process of the network of the WeChat official account. Such colleges and universities regard the official

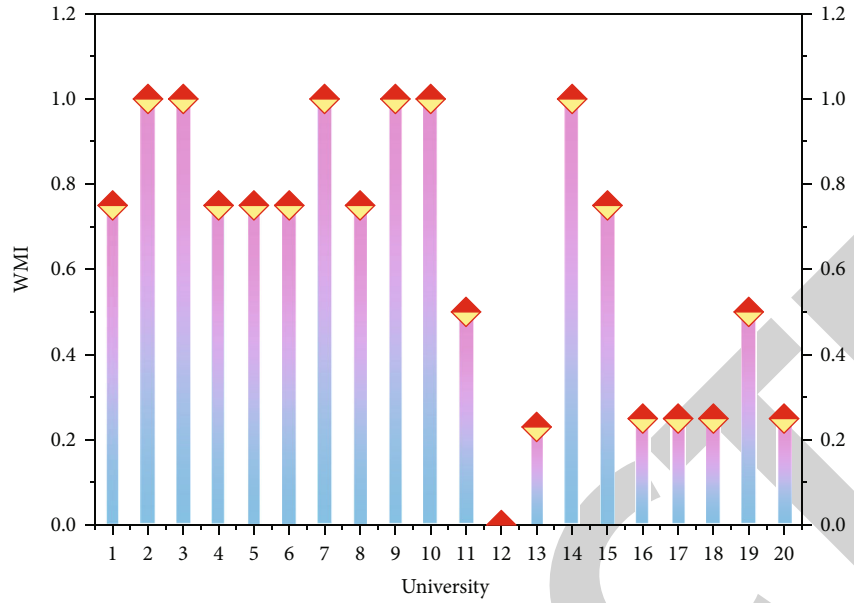


Figure 10: The standardized results of WMI.

WeChat official account as an integrated service platform. Through API interface technology, WeChat has become a service window, and to a certain extent facilitates the communication between teachers and students, helps students obtain guidance, and provides convenience for teachers to understand students' ideological conditions. However, although some "service-oriented" colleges and universities provide a variety of services on the official WeChat platform, there are problems that affect the user experience, such as the deep level of user access to services and the variety of functions, which is not conducive to the effective implementation and application of WeChat online functions. In addition, "service-oriented" colleges and universities are more standardized in WeChat management, so they have higher WMI values, as shown in Figure 10.

The third category of colleges and universities belongs to the "not obvious characteristics" type, namely, the general type, with moderate values in WCI, WSI, and WMI. This may be related to the different priorities of colleges and universities in the process of developing network. The average WCI value of such colleges and universities is relatively small, indicating that the dissemination influence of their WeChat official accounts is generally lower than that of the other two types of colleges and universities. The low WMI also indicates that the management level and effectiveness of such colleges and universities on the WeChat education platform are not good, and it is difficult to ensure the stable operation of the platform, and capital investment is required to improve their management level. However, the WeChat official account of "general" colleges and universities has certain service functions, so its WSI average is in the middle of these three types of colleges and universities.

Based on this, in order to improve the role of WeChat public accounts in moral and ideological education in all levels of universities, WeChat work accounts should take into account both the provision of information and the interaction between tutors and all levels of learners, so as to obtain a balance between provision and feedback. This is more conducive for teachers and schools to understand students' ideological and behavioral states in a timely manner and to provide timely and personalized guidance to improve the overall moral education level of students in colleges and universities.

5. Conclusion

Taking big data technology as the starting point, the characteristics of college education data are analyzed and the analysis technique of big educational data is developed, and the moral education system built on the analyzing and evaluation system are put forward. Then, using the data of college WeChat public accounts to analyze the role of college WeChat public accounts in the moral education system, the following conclusions are obtained:

(1) The "adaptive" data processing method has the characteristics of dynamic and active adaptability; while the educational big data has obvious diversity, and it is difficult to analyze and utilize by the same standard. Therefore, the "self-adaptive" method is introduced and combined various resources to obtain and meticulously grasp the ideological and behavioral states of educational objects

(2) Using the concept of "interest group" to classify a large number of users according to their interest preferences, form different interest groups, and then model the user groups, and use this as the core framework to build a smart application for ideological and moral smart educational system

(3) Using the WeChat education platform data of 20 colleges and universities to verify the establishment

of a moral education system based on big data analysis methods, and classify the WeChat platforms of 20 colleges and universities. The experimental results show that the WeChat public accounts of universities can be divided into three categories: communication-oriented, service-oriented, and general type universal according to their characteristics. These three types have different characteristics in the ideological and moral education in universities. Among them, the communication-oriented type can provide more educational information; the service-oriented type is conducive to the interaction between teachers and students, which can improve the effect of moral education system in different type of universities. According to this result, it is suggested that the provision of WeChat public account information and student feedback should be balanced to enhance the efficiency of the smart moral education system

Data Availability

The datasets used during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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