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Retraction

Retracted: The Architecture of College Psychological Teaching Management System Based on Data Mining Technology

Security and Communication Networks

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Security and Communication Networks has retracted the article titled "The Architecture of College Psychological Teaching Management System Based on Data Mining Technology" [1] due to concerns that the peer review process has been compromised.

Following an investigation conducted by the Hindawi Research Integrity team [2], significant concerns were identified with the peer reviewers assigned to this article; the investigation has concluded that the peer review process was compromised. We therefore can no longer trust the peer review process, and the article is being retracted with the agreement of the Chief Editor.

References

[1] L. Kang, J. Huang, and J. Lin, "The Architecture of College Psychological Teaching Management System Based on Data Mining Technology," *Security and Communication Networks*, vol. 2022, Article ID 7968756, 12 pages, 2022.

[2] L. Ferguson, "Advancing Research Integrity Collaboratively and with Vigour," 2022, https://www.hindawi.com/post/advancing-research-integrity-collaboratively-and-vigour/.

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Research Article

The Architecture of College Psychological Teaching Management System Based on Data Mining Technology

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In order to meet the requirements of the development of educational informatization, combined with data mining technology, this article studies the architecture of the college psychological teaching management system. To experience the benefits brought by the Internet age, in order to further improve performance and meet the needs of the Internet information age, many colleges and universities have begun to strengthen the development of teaching management. Based on this background, this article proposes a standardized mode of mental health management in colleges and universities based on information technology. With the help of data warehouse and data mining technology, the ID3 algorithm, organizational rules, and other algorithms are used to develop a psychology subject evaluation system. Based on the improvement of grades and the behavioral characteristics of college students, this article formulates cross-platform operation rules, determines the B/S type as the normal state, and solves the best problem through comparison and selection. Then, a more specific system architecture design is carried out. The architecture of the software system selects the classic three-tier structure, which makes the client independent of the use platform and meets the requirements of user diversity and system portability. The design of functional modules such as the system fully meets the requirements of the ideological education management system for college students in the above analysis, with reasonable structure and clear logic. Finally, the advantages of the designed system architecture are summarized, including clarifying the grading idea of ideological education and training. It expands the transplantation ability of the system in a cross-platform way.

1. Introduction

For a long time, the main role of colleges and universities is to improve the relationship between intellectual skills, ability, and justice, and ideological education is an important way to improve intellectual skills. Through scientific and efficient ideological education and psychological education, colleges and universities can better help cultivate students' good morality [1]. Since the beginning of the new century, the rapid development of industry, the prosperity of human beings, and the continuous improvement of information networks have promoted not only the cohesion and integration of society, but also the integration of society, culture, and school environment, where the students of modern colleges and universities live. Even the ideological education of students in colleges and universities and the thoughts of relevant managers at all levels of society have been impacted to a certain extent. In the face of the current internal and external environment, how to give better play to the functions of ideological education and mental health education in Colleges and Universities under the premise of correctly understanding the current economic, cultural and other social phenomena, and guide students to correct themselves in the increasingly complex society is the key to mental health teaching in Colleges and universities [2]. Thus, this article describes the design of college psychology instruction management based on information technology, as shown in Figure 1. The purpose is to establish control. Psychiatric screening in colleges and universities is carried out with the help of archives and records. Mining

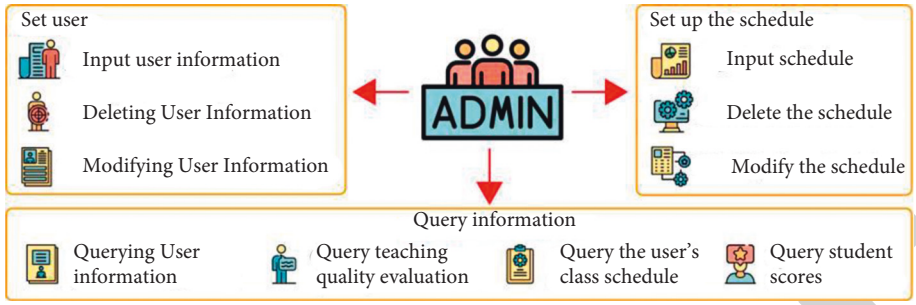

Figure 1: University psychological teaching management system.

technology, ID3 algorithm, organization policies, and other algorithms build a more perfect psychological health teaching management system in combination with the new algorithms, technologies, and the requirements of psychological health education in colleges and universities.

2. Literature Review

Lu et al. [3] said that the research of data mining technology has a history of many years, and many research institutes are often involved in data mining research; especially, more colleges have achieved remarkable achievements in this field [3]. Zhang [4] believed that data mining has also become a powerful tool for improving the quality of teaching and administration in colleges and universities. For example, schools in the United States can estimate the enrollment rate of students correctly, so that students who regularly attend school can be seen by the school [4]. Yosef et al. [5] said that a working group on educational data mining (EDM) has been established in the world, and many relevant working group meetings have been organized [5]. Narengerile and Di [6] believed that many organizations and universities have begun to focus their research on EDM, in both international conferences and academic journals, and have tried to apply data mining technology to education [6]. Li et al. [7] also developed some mining tools, such as EPRules, TADA-Ed, and BNT-SM. [7]. According to Liu and Zhou [8], data warehousing and data mining techniques are not widely used at the educational level. Educational measurement and teaching is one of the three major academic research fields in the world. Curriculum is an important indicator to measure the development level of a country. With the advancement of data science education, the application, guidance, and development of data storage and data mining technology in education have become an important research topic [8]. Lifang [9] believed that China's research on knowledge discovery and data mining is a little later than that of the other countries [9]. Huang [10] said the research project in data science is only the first to be supported by the National Natural Science Foundation of China. Since then, many universities and scientific research institutions in China have also competed to carry out the research on the application and basic theory of data mining, and achieved relatively rich research results, which has attracted great attention in the academic community, thus becoming a hot topic in the information science community [10]. Zhao-Yi et al. [11] said that despite this, the practice and application of data mining in various fields in China are not common [11]. Zheng and Zheng [12] said that most departments or enterprises are still under consideration and wait-and-see, and there is little application in college educational administration management, so it needs to be further studied [12].

3. Application of Data Mining Technology in Educational Administration Management System of Colleges and Universities

3.1. Decision Tree Algorithm

3.1.1. Definition and Representation of Decision Tree. Logging algorithms are used for classification and estimation. It is a job approximation. According to the classification, the deciduous tree is an acyclic expression tree. Now, various decision wood algorithms have been developed, such as CLS, ID3, CHAID, CART, and C4.5. Decision tree, also known as decision tree, is produced by analyzing and summarizing the attributes of a large number of samples using the principle of the information theory. It takes the behavior of the model as nodes and the values of the behavior as branches. The root node is the attribute with the most common data in each model, and the page is the value of the model [13]. A decision tree is a tree structure similar to the structure of the branches, in which each interior of the tree corresponds to the test of the determination of the structure in the form of milk (1). Its branch is the test result. A large number of sample attributes are analyzed and classified in turn, and finally, a binary or multifork tree will be constructed:

$$\text{if}\,(a_i = v_i). \tag{1}$$

3.1.2. Decision Tree Classification Algorithm. In the construction phase of the tree, the data are recursively divided into subsets, and all records in each subset belong to the same class or each subset is small enough to build a tree number. The bones of a tree are characteristic, and the edges of the tree are the result of characteristics [14]. The flowchart is shown in Figure 2.

The decision tree is constructed recursively from top to bottom, starting with the attributes that can best classify the samples as nodes, testing each known attribute value, establishing branches and dividing the samples in turn, and recursively forming the decision tree of the samples [15].

Figure 2: Flowchart of the decision tree algorithm.

The basic decision tree construction algorithm does not consider noise, and pruning is a basic technology to overcome noise. Currently, there are three main determinants of tree pruning strategies: cost complexity pruning, pessimistic pruning, and MDL (minimum description length) [16]. The pruning based on cost complexity uses an independent sample set for pruning. Pessimistic pruning, which uses all samples for tree construction and pruning, produces too large and inaccurate trees. MDL pruning is effective in practical application. This method is mainly used to induce decision trees.

3.1.3. ID3 Algorithm. The ID3 algorithm uses the behavior with the highest data rate as a measure of current. Use data entropy and data gain as metrics to achieve data induction and classification [17]. Data entropy: if there is a word n, the classification result is shown in the following equation:

$$P = (p_1, p_2, \ldots, p_n). \tag{2}$$

Then, the data entropy is shown in the following equation:

$$-\sum_{i=1}^{n} p_i \log_2^p. \tag{3}$$

Data gain: The difference between the two datasets is shown in the following equation:

$$\text{Gain}(X, T) = \text{Info}(T) - \text{Info}(X, T), \tag{4}$$

where

$$\text{Info}(X, T) = \sum_{i=1}^{n} \left(\frac{|T_i|}{|T|} \right) \text{Info}(T_i). \tag{5}$$

The ID3 algorithm calculates the incremental data of each behavior from the above model. Take the behavior with the highest gain as the base, establish a relationship branch for each value of the behavior as the basis, and redistribute the patterns back [18]. The ID3 algorithm is sensitive to noise, but the method is simple and the theory is clear.

3.1.4. Practical Application of ID3 Algorithm in Teaching Quality Evaluation System. The purpose of developing a tree decision evaluator based on the ID3 algorithm is to judge whether the coach is competent in order to provide decisions for the success of the coach. A monograph on tree-based decision analyzers in future coaching management. In the decision tree, the goal classification is "is a teacher excellent?". It has the following options.

In order to illustrate the construction of decision tree, only 15 records of teacher archives and the results of student evaluation are extracted as the training set. The extracted data table is shown in Figure 3.

Teacher evaluation results: Students' evaluation results of teachers' teaching quality are generally divided into five types: unqualified, qualified, medium, good, and excellent. Further simplify the evaluation results, and divide whether they are excellent into {"yes" and "no"}. Those that are not excellent include four types: good, medium, qualified, and unqualified. Therefore, the evaluation results of teachers can be simplified into two types: "yes" and "no" [19].

Teaching age of teachers: the value of teaching age is relatively scattered and needs to be processed in different areas. We divide it into {1–5, 6–10, 11–20, and >20} according to age. The converted data are shown in Table 1. Taking the converted data as the input training set of teacher evaluation decision tree, we will gradually establish teacher evaluation decision tree according to the ID3 algorithm.

The selection criterion of the root node is to see which attribute has the largest gain. The gain of the four attributes will be calculated below.

Step 1. Calculate the information entropy that determines the attribute "evaluation."

There are 15 data samples in Table 1, of which the "evaluation" attribute has {yes and no} two different values. The number of samples with "yes" and "no" is 7 and 8, respectively. Use formula (2) to calculate the information entropy of decision attribute "evaluation," as shown in the following formula:

$$\text{info}(\text{Evaluation}) = -\frac{7}{15} * \log_2\left(\frac{7}{15}\right) - \left(\frac{8}{15}\right) * \log_2\left(\frac{8}{15}\right) = 0.9969. \tag{6}$$

Step 2. Calculate the information entropy of conditional attributes

The sample set has four conditional attributes: {gender, professional title, educational background, and teaching age}, which are split according to the four conditional attributes to generate four trees, as shown in Figure 4. The attribute values are marked on the edge of the tree, and the leaf node of the tree is all the attribute values of the target class [20].

Information entropy of gender: According to two different values of gender, the decision tree is divided into two subsets {male and female}. Calculate the information entropy of men and women, respectively, according to the following formulas:

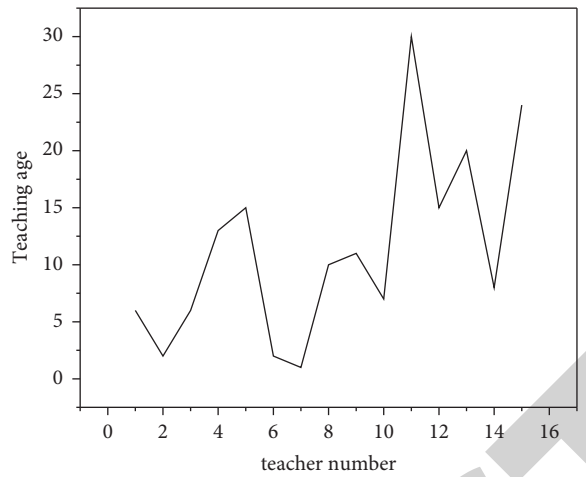

Figure 3: Some original teacher file data.

Table 1: Converted teacher profile data.

Teacher number	Gender	Title	Education	Teaching age	Evaluation (excellent or not)
1	Female	Assistant	Undergraduate	6–10	No
2	Male	Assistant	Undergraduate	1–5	No
3	Male	Lecturer	Undergraduate	6–10	No
4	Female	Lecturer	Undergraduate	11–20	Yes
5	Female	Associate professor	Undergraduate	11–20	Yes
6	Female	Assistant	Undergraduate	1–5	No
7	Female	Assistant	Master	1–5	No
8	Male	Lecturer	Undergraduate	6–10	Yes
9	Male	Lecturer	Master	11–20	Yes
10	Male	Lecturer	Master	6–10	No
11	Male	Professor	Master	>20	Yes
12	Male	Associate professor	Doctor	11–20	No
13	Male	Professor	Doctor	11–20	Yes
14	Male	Lecturer	Master	6–10	No
15	Male	Associate professor	Master	>20	Yes

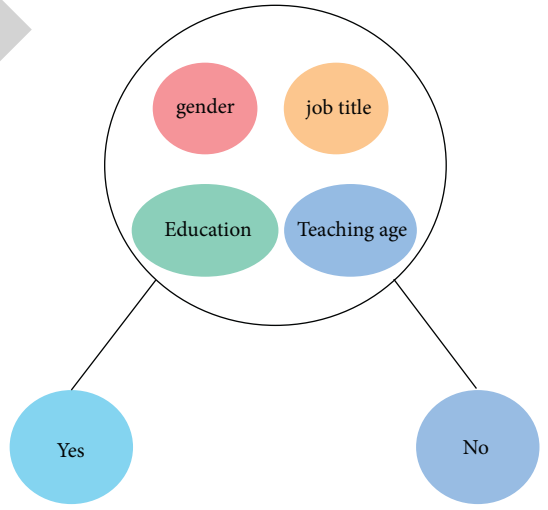

Figure 4: Four possible splits of decision tree for the first time.

$$\text{info}(\text{male}) = -\frac{5}{10} * \log_2\left(\frac{5}{10}\right) - \left(\frac{5}{10}\right) * \log_2\left(\frac{5}{10}\right) = 1.0000, \tag{7}$$

$$\text{info}(\text{Female}) = -\frac{2}{5} * \log_2\left(\frac{2}{5}\right) - \left(\frac{3}{5}\right) * \log_2\left(\frac{3}{5}\right) = 0.9709. \tag{8}$$

Then, calculate the information entropy of gender according to formula (4), which is shown in the following formula:

$$\text{Info}(\text{Evaluation}, \text{gender}) = \frac{10}{15} * \text{info}(\text{male}) + \left(\frac{5}{15}\right) * \text{info}(\text{Female}) = 0.9903. \tag{9}$$

Information entropy of professional title: The professional title has four different values {teaching assistant, lecturer, associate professor, and Professor}. The decision tree is divided into four subsets {teaching assistant, lecturer, associate professor, and Professor}. Calculate the information entropy of each subset according to formula (2), as shown in following formulas:

$$\text{info}(\text{teachingassistant}) = -\frac{0}{4} * \log_2\left(\frac{0}{4}\right) - \left(\frac{4}{4}\right) * \log_2\left(\frac{4}{4}\right) = 0, \tag{10}$$

$$\text{info}(\text{lecturer}) = -\frac{3}{6} * \log_2\left(\frac{3}{6}\right) - \left(\frac{3}{6}\right) * \log_2\left(\frac{3}{6}\right) = 1.0000, \tag{11}$$

$$\text{info}(\text{AssociateProfessor}) = -\frac{2}{3} * \log_2\left(\frac{2}{3}\right) - \left(\frac{1}{3}\right) * \log_2\left(\frac{1}{3}\right) = 0.9185, \tag{12}$$

$$\text{info}(\text{professor}) = -\frac{2}{2} * \log_2\left(\frac{2}{2}\right) - \left(\frac{0}{2}\right) * \log_2\left(\frac{0}{2}\right) = 0. \tag{13}$$

Then, calculate the information entropy of the title according to formula (4), as shown in the following formula:

$$\text{info}(\text{Evaluation}, \text{job title}) = \frac{4}{15} \times \text{info}(\text{teaching assistant}) + \frac{6}{15} \times \text{info}(\text{lecturer}) + \frac{3}{15} \times \text{info}(\text{Associate Professor}) + \frac{2}{15} \times \text{info}(\text{professor}) = 0.5837. \tag{14}$$

Information entropy of education: Education has three different values {undergraduate, master, and doctor}. The decision tree is divided into three subsets {undergraduate, master, and doctor}. Calculate the information entropy of each subset according to formula (2), as shown in the following formulas:

$$\text{info}(\text{Undergraduate}) = -\frac{3}{7} * \log_2\left(\frac{3}{7}\right) - \left(\frac{4}{7}\right) * \log_2\left(\frac{4}{7}\right) = 0.9853, \tag{15}$$

$$\text{info}(\text{master}) = -\frac{3}{6} * \log_2\left(\frac{3}{6}\right) - \left(\frac{4}{6}\right) * \log_2\left(\frac{4}{6}\right) = 1.0000, \tag{16}$$

$$\text{info}(\text{PhD}) = -\frac{1}{2} * \log_2\left(\frac{1}{2}\right) - \left(\frac{1}{2}\right) * \log_2\left(\frac{1}{2}\right) = 1.0000. \tag{17}$$

Then, calculate the information entropy of academic qualifications according to formula (4), as shown in the following formula:

$$\text{info}(\text{Evaluation}, \text{Education}) = \frac{7}{15} \times \text{info}(\text{Undergraduate}) + \frac{6}{15} \times \text{info}(\text{master}) + \frac{2}{15} \times \text{info}(\text{PhD}) = 0.9931. \tag{18}$$

Because there are four possible options for teaching age, the root node has four branches (1–5, 6–10, 11–20, >20). Since the entropy of 1–5 and >20 is 0, it does not need to be considered. Next, consider branches 6–10 and 11–20.

Selection of branch nodes with teaching age of 6–10 years: because the teaching age has been used as the root node, only the remaining three attributes of teachers, namely, gender, educational background, and professional title, can be used as the test attributes of nodes with teaching age of 6–10 years. There are five records with teaching age of 6–10 years, as shown in Table 2.

Selection of branch nodes with teaching experience of 11–20 years: According to the determination method of branch nodes with teaching experience of 6–10 years, the branch nodes with teaching experience of 11–20 years can be determined as professional titles, as shown in Figure 5.

The training should be continued according to the attribute of the same category, as shown in Figure 5. The training should be continued according to the attribute of the same professional title, but not according to the attribute of the same category. The training samples of associate professors' attribute branches do not belong to the same category and should continue to split according to gender and educational attributes [21]. After all the branch nodes are determined, the decision tree is generated. The final decision tree is shown in Figure 6.

According to the decision tree in Figure 6, a key attribute of teachers' teaching evaluation is teaching age, and the decision tree can also be expressed by the rule formula:

If the teaching experience is 1–5 years, the evaluation result is not excellent.

If the teaching age is 6–10 years, the key to classification is education. The evaluation of undergraduate education is classified by professional titles. Generally, there are more teaching assistants with no evaluation and more lecturers with excellent evaluation. The degree of master is rated as No.

If the teaching age is 11–20 years, most of them are evaluated, among which those with the title of associate professor are classified by academic degree. The teaching effect of those with the academic degree of undergraduate is excellent, while those with the academic degree of doctor are evaluated more.

If the teaching age is more than 20 years, the general evaluation is excellent, indicating that the teaching effect is good and recognized by students. This knowledge is helpful for decision-making, excavates the key factors affecting the teaching quality, and finds out the internal law of the data. We extract useful information from the analysis of mining results, which has better provided a scientific basis for management decision analysis [22].

3.2. Comparison between ID3 Algorithm and Apriori Algorithm. The ID3 algorithm and Apriori algorithm are two different data mining technology algorithms. They study the teaching quality evaluation system through different methods, compare and analyze the found rules and the key factors affecting the teaching quality, and guide the teaching with more correct, comprehensive, and objective analysis and application of various rules to improve the teaching level of teachers. It is a classical algorithm for establishing decision tree. It is a recursive process, mainly for induction, classification, and prediction, which is used for rule mining with clear attribute values. In the teaching quality evaluation system, for the attributes that do not have a clear value, such as teaching age, it is necessary to divide them into sections. Then, each character uses data entropy and data incremental measures to determine and distribute data, and finally creates a multifork hierarchical tree [23]. Each branch of the tree root corresponds to the correct dig. The root node and each branch node are key factors affecting instruction performance.

The Apriori algorithm is a classical algorithm in association rule mining. It is a self-learning process. The process of finding all frequent itemsets through multiple iterations to find rules that people do not know or are unexpected. For example, among the 30 rules generated after mining, "I02 $\geq i16$ support 56.4% confidence 89.9%," and "I02, i07 $\geq i16$ support 89% confidence 98%." From these two rules, we can get the information that most female teachers and students are qualified in the evaluation. Among them, 98% of female teachers with lecturer title are qualified in the evaluation, and students have high recognition [24]. These rules are not found in decision trees, so the Apriori algorithm is necessary to mine deep rules for goals that people have not yet mastered. It can affect the integration and interrelationships of one kind or another, reveal the ignorance of the progress of data, and be appropriate for mining policies with ambiguous concepts. This method quantitatively describes the degree of association through support and reliability and adopts the idea of two-stage mining. It first traverses the active objects and then creates the rules shared by the active objects. From these rules, we can find out the key points that affect the quality of teaching.

The ID3 algorithm provides simple, clear, simple, and clear details, but it is sensitive to audio files. The Apriori algorithm can mine without knowing the rules, but it will repeatedly traverse the database and produce a large number of candidate sets.

The ID3 algorithm requires more data than the Apriori algorithm. The ID3 algorithm should classify the behavioral values of all data models in stages until they are distributed according to the principle of least weight entropy [25]. In the Apriori algorithm, only rules greater than the minimum reliability provided by the user are output.

The ID3 algorithm has a higher data structure than the Apriori algorithm. The rules in the ID3 algorithm have a tree-like hierarchical organization relationship, while the association rules in the Apriori algorithm are determined by any combination of items.

The sample space of the ID3 algorithm must be complete, while the sample space of the Apriori algorithm is a dynamic change process of continuous improvement.

Table 2: Teachers with 6–10 teaching years.

Teacher number	Gender	Title	Education	Teaching age	Evaluation (excellent or not)
1	Female	Assistant	Undergraduate	6–10	No
3	Male	Lecturer	Undergraduate	6–10	No
8	Male	Lecturer	Undergraduate	6–10	Yes
10	Male	Lecturer	Master	6–10	No
14	Male	Lecturer	Master	6–10	No

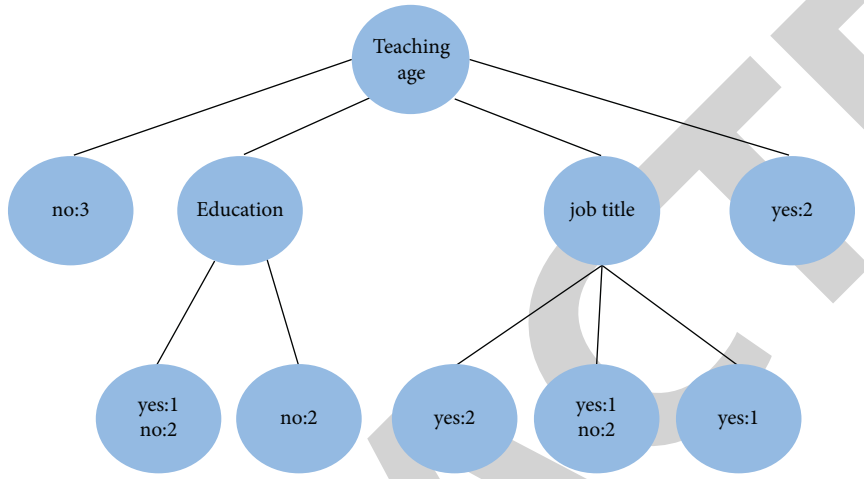

Figure 5: Generating decision tree.

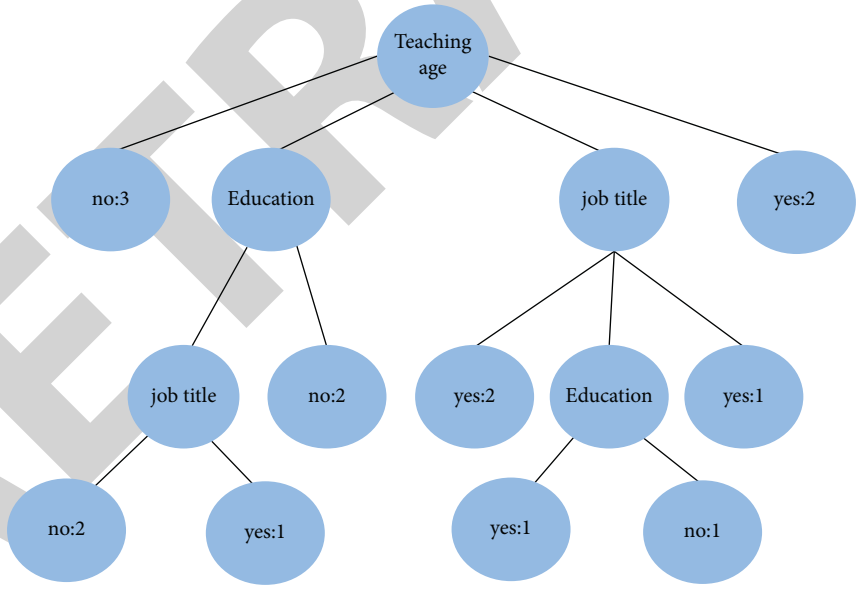

Figure 6: Final decision tree.

4. Build a Cross-Platform and Hierarchical Educational Administration System for Mental Health Education Management

4.1. System Development, Design, and Implementation. The educational administration management system is developed based on the hybrid structure of C/S mode and B/S mode and can run in the network environment. Therefore, the system should have a special database server, web server, web client, and client. Among them, the client of C/S structure must install the corresponding application program, while the client based on B/S structure does not need to install the corresponding application program. As long as the browser is installed on the user's machine, a large amount of educational administration data can be stored on the database server where it can access the Internet, mainly for the convenience of later control and management, such as course scheduling management and student status

management. Therefore, the requirements for the configuration of database server are relatively high. We should not only install the corresponding application, but also ensure the security and speed of data processing. The database server should not be directly connected to the Internet. It can only run in the campus network. The corresponding application should also be installed on the web server. It is the portal for information publishing and data collection, and the portal administrator should maintain and manage the portal through it. The system adopts three-tier mixed structure mode, net technology, and SQL server database. The operating environment of the education administrative management information system is shown in Tables 3–6.

4.2. System Features. Based on the principle of high standard, high starting point, considering future development and adapting to the current, the system has the characteristics of simple operation, safety, and reliability, easy to master, wide application, complete functions, friendly interface, and so on. The main features are as follows.

Allocate resources reasonably. Provide adequate and appropriate division and optimization of various teaching materials; effectively utilize and allocate laboratories, time, classes, and teachers; and solve various problems such as classroom settings.

Comprehensive software design: traditional instruction management software cannot adapt to changes in the credit system. Most home and university colleges have moved from the traditional academic year to the credit system, with a few colleges and universities adopting the credit system. The developer of the system takes into account the needs of the docking of instruction management software at various levels and takes into account the credit system, the academic year credit system, school year system, and schedule change, so as to solve all kinds of troubles caused by various key data migration.

Standardization of teaching management: when designing the curriculum, it complies with the requirements of the Ministry of Education, coding procedures for student math, mathematics, and numeracy, as well as the norms of university student status and academic record management, so as to avoid unreasonable phenomena, such as code duplication.

The embodiment of credit system management psychology: at present, most colleges and universities in our country adopt the credit system, but the loan process of each college is different. Therefore, the system is differentiated in design and development. In terms of management concept and management psychology, each student can independently choose courses and teach teachers through the Internet under certain conditions or choose the learning process, which is fully student-centered and people-oriented and improves the personalization and liberalization of students' learning [26]. On the basis of strengthening the commonality of professional students, the Department of Teaching Management attaches great importance to the individualized training of students and downplays administrative courses. The main line of management is the teaching process. In terms of student status management, in the credit system management, students can take different or the same courses for many times, and student status management only focuses on the courses they take or obtain credits. In terms of charging management, the management mode of charging by credit is realized.

4.3. System Realization

4.3.1. Overall System Design. By identifying the needs of the workforce, learning management can be divided into two models. One is the B/S model, that is, the output file and the part file, which generally work for users. The other is the C/S model, that is, the data processing and administration part, which mainly carries out massive data processing, teaching resource management and control, and daily work of teaching. The overall functional framework of the system is shown in Figure 7.

4.3.2. Functional Module Design. As can be seen from Figure 7, the main function of terminal *B* is to provide services for all users. It mainly includes portal maintainers, teachers, students, and public users. All users can carry out corresponding operations through web pages. Portal maintainers such as teachers enter grades and query information such as grades, classrooms, and timetables. Its specific functional framework is shown in Figure 8.

The *C*-end mainly manages, controls, and maintains the whole system and various functional modules. The main modules include teaching resources, teaching plan, student status, online course selection, timetable arrangement, student performance, examination affairs, teaching evaluation, textbook management, and system management.

4.4. Database Design. Databases are used to store data. Educational administration requires the collection and management of a large amount of information. Its design success is related to the function of the body, so data are an important element of the design. According to the analysis, the users of the educational administration management system mainly include four identities: system administrator, teacher, student, and public user. The permissions of each user are different. Among them, public users can query public information without logging in. Other users can operate with their own permissions only after logging in with borrowed account name and password. Therefore, password attributes should be included in each user information table.

4.5. Login Implementation. All models of educational management are divided into two sections. The functions of the two parts are different, and the objects they face are also different. The function of C-terminal is mainly for management control and data processing. Its users include system administrators and general teaching assistants. For our school, it refers to the teaching administration staff and teaching secretaries of colleges and departments. Their administrative authority is different. The system administrator has the highest authority, can set the initial password of other users and some parameters of system

Table 3: Web server requirements.

Name		Project	Minimum requirements
Web server	Network	Campus network	Smooth connection
		Internet	Prohibit connection
	Hardware	CPU	2.8 GHz
		Memory	2 GB
		Hard disk	36 GB
	Software	Web server	Microsoft IIS 5.0
		Operating system	Microsoft Windows 2000 Server
		The educational administration management system management system	Application database
		Net framework	Microsoft.NET Framework 1.1

Table 4: Special client requirements.

Name		Project	Minimum requirements
Web client	Network	Campus network or Internet	Smooth connection
		Browser	Microsoft Internet Explorer 6.0
Special-purpose client	Network	Campus network	Smooth connection
	Hardware	CPU	1.6 GHz
		Memory	51 MB
		Hard disk	40 GB
	Software	The educational administration management system management system	Application database
		Operating system	Microsoft Windows 2000 Professional

Table 5: Database server requirements.

Name		Project	Minimum requirements
Database server	Network	Campus network	Smooth connection
		Internet	Prohibit connection
	Hardware	CPU	2.8 GHz
		Memory	2 GB
		Hard disk	80 GB
	Software	Database management system	Microsoft SQL Server 2000
		Operating system	Microsoft Windows 2000 Server
		Database management system	Application database

Table 6: Web client requirements.

Name		Project	Minimum requirements
Web client	Software	Browser	Microsoft Internet Explorer 6.0
	Network	Internet	Smooth connection
		Campus network	Smooth connection

management, and can control all data management. General teaching assistants only deal with some data of daily teaching.

The B terminal is mainly used for data collection and information release. Its users include academic administrators, teachers, students, and public users. Educational administrators have the highest authority and can set the permissions of other users and the initial parameters of the system. Both teachers and students belong to general users, but their permissions are different. Teachers can query personal information and student scores, and enter test scores through the web page at the end of the semester. Students can query their personal information, course scores, and class schedule and can also select courses online. Public users do not need to log in. As long as they open the system home page, they can query the basic information of educational administration management, such as educational administration dynamics, management regulations, discipline construction, school calendar, and other contents. They can also download the shared resources provided by the school and query the teaching arrangement according to any condition such as curriculum, teacher, classroom, and time.

However, you need to set up a login interface to identify the user and improve the security and reliability of the system. The process of getting into it is a good start. After the user logs in to the login interface, he first needs to enter his

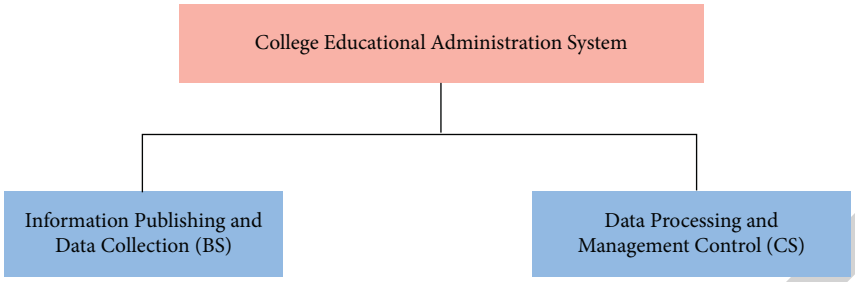

Figure 7: System function framework.

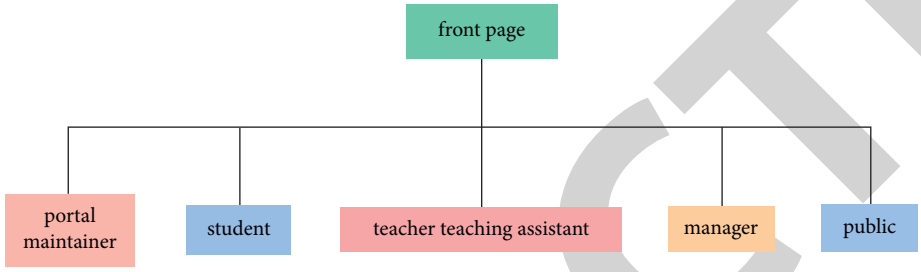

Figure 8: Functional framework of data acquisition and information release.

user name and password. The permissions assigned by the system are the same as the user's own permissions.

Now, in the development of higher education, more and more colleges and departments have begun to use new technologies to research and develop new education models that adapt to the new problems of education, college structure, and the continuous development of data industrialization in colleges and universities. The data in the educational administration of colleges and universities are a huge and complex library. It involves various party and mass organizations in colleges and universities, such as party office, organization department, Discipline Inspection Commission, publicity department, United Front Work Department, Youth League Committee and trade union, administrative teaching assistance, including college office, archives office, personnel office, academic affairs office, scientific research office, finance office, audit office, supervision office, student office, enrollment office, employment guidance center, equipment office, infrastructure office, logistics management office, security office, retirement management office, journal editorial department, library, international education and exchange center, modern educational technology center, quality education center, basic education training center, college of continuing education, network management center, logistics service center, school newspaper, and Department of Education, such as School of Computer and Information Engineering, School of Business, School of Art, School of Foreign Languages, School of Chemistry and Chemical Engineering, School of Management, Department of Physical Education, Department of Art and Design, Department of Physics, School of Social Science, School of Mechanical and Electrical Engineering, Department of Political Science and Law, Journalism and Media Department, Department of History, Department of Life Science and Technology, Department of Public and Foreign Affairs, Department of Educational Sciences, Department of Music Performance, Department of Mathematics, and Department of Architectural Engineering and Individuals. Therefore, in the process of mining, we first need to carry out a detailed investigation, data collection, and data sorting of the data warehouse, and its establishment and improvement cycle is relatively long. However, colleges and universities are still critical to the development of archival data and are willing to make efforts to do so, because they can dig out all kinds of valuable information resources and use them to guide teaching, so as to improve the education and teaching level of the whole school.

5. Conclusion

The analysis of college students' unique characteristics of the times starts from two angles. On the one hand, through the analysis of college students' behavior characteristics, we can indirectly obtain their way of thinking; on the other hand, we can directly analyze their ideological characteristics and then get the ideological characteristics of college students. In terms of ideals and actions, they not only have lofty dreams and hope to make brilliant achievements in a certain field or industry, but also have a full understanding of social laws and adjust their goals for better work or income. Between self-awareness and independence, most of them not only have strong self-awareness and fully understand their rights and obligations but also lack independence due to their special growth process; that is, they are admitted to the university under the full arrangement of their parents and schools, which makes them more dependent on society and parents in case of trouble. At the same time, they have an open mind and a greater sense of frustration. With the improvement of extensive contact with the Internet, TV media, and family environment, they have more understanding of the outside

world and can face all kinds of ideas outside, but they are easy to exceed their due response to failure in life and study. Between moral standards and self-behavior, we can not only understand the social moral standards, but also make it difficult to demand ourselves in practice. Educational administration management information system is a comprehensive management system. The mining content in the system is still relatively single, and there are a large number of other relevant data to be mined. Due to the limitation of time and author's ability, this article has the value of further research in both the algorithm design and software design. Data mining technology can mine valuable data from a variety of sources and is widely used in a variety of fields. This article is a preliminary test to study the quality of teaching in colleges and universities based on data and information mining technology. In this paper, we use cooperative research and tree decision-making to make good standards and strategies for our college students' evaluation data and teachers' teaching materials, and examines standards and policy findings. The use of data mining technology in education is rare. The update of this document is that the decision tree and organization policy algorithm in the data mining algorithm is combined with good data analysis, and data mining technology is accessible to educational evaluation, which not only improves the scientific nature of educational management, but also enhances the benefits of digital education development. Research in this area has some potential. This article needs to be further improved both in theory and in practice. Therefore, we sincerely hope that all experts and scholars will not hesitate to give advice and give more valuable opinions, with a view to more in-depth research in the future.

Data Availability

No data were used to support this study.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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