

Research Article

Construction of College Aesthetic Education Quality Improvement Model under Big Data Network

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In view of the importance and urgency of college aesthetic education, this paper constructs a quality improvement model of college aesthetic education under the big data network. Firstly, it puts forward the characteristics of planning, step-by-step, scientific, and centralized aesthetic education in colleges and universities and then expounds the importance of aesthetic education in colleges and universities, including the importance of aesthetic education in spiritual education and in the construction of socialist spiritual civilization. Integrating the functions of data mining under the big data network, using the analytic hierarchy process to construct the improvement index, and carrying out the consistency test at the same time, we can get the improvement index system of aesthetic education quality in colleges and universities. The fuzzy judgment matrix is constructed to obtain the final improvement result. The experimental results show that the constructed model verifies the importance and urgency of aesthetic education in colleges and universities, has a high degree of freedom, and reduces the complexity of quality improvement.

1. Introduction

Colleges and universities are the cradle of cultivating talents in China. Under the background of the new era, colleges in our country are required to actively cultivate college students with all-round development who go hand in hand with aesthetic quality and humanistic quality, organically integrate rational thinking and perceptual thinking, and coordinate the operation of the right brain and the left brain [1, 2]. For college students, aesthetic education plays a positive role in promoting their growth and accomplishment. In carrying out aesthetic education in an all-round way, colleges should follow Marxist thought, focus on aesthetic education for students, make a progressive analysis of Marxist concept of aesthetic education from shallow to deep, and grasp the characteristics and connotation of Marxist concept of aesthetic education. This paper combs the historical development and context of aesthetic education in China since 1979 and summarizes the role of aesthetic education in the healthy growth of college students, so as to enable college students to complete the organic unity of truth, goodness, and beauty cognition and establish the human ideal of

implementing the concept of aesthetic education [3, 4]. Its task is to impart aesthetic knowledge and improve students' perception, appreciation, and creativity of beauty, so that students can form a good aesthetic concept in the fields of art, society, and nature [5]. The ways of implementation include the teaching of music, art, aesthetics, literature, and other disciplines and corresponding extracurricular activities, the activities of guiding students to appreciate and create beauty in relevant teaching and various educational work, and the role model of teachers, good school spirit, beautiful campus, which permeate all kinds of work such as education, teaching, and management.

Aesthetic education in colleges and universities clearly requires high attention to the important role of aesthetic education in talent cultivation, actively improves and comprehensively strengthens the aesthetic education in colleges and universities, adheres to cultural and aesthetic education, and commits to cultivating students' humanistic quality and aesthetic quality in aesthetic education [6, 7]. It also emphasizes the importance of aesthetic education in colleges and universities, including taking aesthetic education as the main means of college education and attaching importance to its

role of moral cultivation. Chinese aesthetic education spirit should be taken as the core idea of aesthetic education in colleges and universities, and Chinese cultural confidence should be established by using Chinese aesthetic education spirit [8]. As well as using the Spirit of Chinese aesthetic education to nourish the Chinese youth and establish the national belief in the new period of China. Therefore, with the Chinese aesthetic education spirit as the reference, this paper studies the construction of the model for improving the quality of aesthetic education in colleges and universities under the big data network. While the concept of big data is closely associated with Hadoop deployments, it has become synonymous with clustered environments. The requirements of these clustered environments vary according to the characteristics of different applications. In short, to support multiapplication and multitenant, a big data network must be able to distinguish its own workload and correctly handle the load of improving the quality of aesthetic education in various universities. The results show that the model is effective.

2. Improvement of College Aesthetic Education under Big Data Network

2.1. Main Characteristics of College Aesthetic Education. The following are the main characteristics of college aesthetic education:

- (1) Planned: According to the requirements of cultivating talents and the law of education, colleges and universities organize aesthetic education activities in a purposeful and planned way to guide students to study and receive training, so as to ensure the specification of cultivating talents [9, 10].
- (2) Step by step: the so-called step-by-step means that aesthetic education activities are required to be carried out in accordance with the scientific logical system and the order of the development of students' cognitive ability [11]. Not only from primary school, middle school to university, the requirements and contents of aesthetic education are arranged in a planned way at different levels. Even for every course, every topic, and every aesthetic practice activity, teaching should be organized in accordance with the principle of step-by-step, so as to be coherent, complete, and systematic.
- (3) Scientific: scientificity is not only the basic requirement of college education but also the basic requirement of college aesthetic education. Teachers' teaching must strictly conform to scientific conclusions and cannot follow their own inclinations [12, 13]. What is beautiful, what is not beautiful, why it is beautiful, and why it is not beautiful should be scientifically explained. Colleges and universities should also educate students to establish progressive and healthy aesthetic ideals, master correct aesthetic standards, and enable students to accurately discover, feel, and create beauty.

- (4) Concentration: as the main place to cultivate talents, colleges must build a centralized aesthetic education environment; they can not only provide students with more opportunities to receive aesthetic education but also promote the free expansion of students' emotional activities and cause strong emotional experience in their aesthetic feelings.

2.2. The Significance of Developing Aesthetic Education in Colleges

2.2.1. The Importance of Aesthetic Education in Colleges and Universities at the Spiritual Level. Implement the fundamental task of Building Morality and cultivating people, so as to cultivate excellent socialist successors and builders with all-round development of morality, intelligence, physique, art, and labor. Therefore, we must pay attention to the importance of aesthetic education in colleges and universities to the spiritual level [14]. College aesthetic education is an emotional education aimed at cultivating students' sentiment and purifying students' soul. It can cultivate students' aesthetic creativity and aesthetic ability. The purpose of aesthetic education in colleges and universities is not to cultivate artists or stimulate students' inspiration for artistic creation, but to enable students to grasp the perceptual image of beauty in the appreciation of beauty, so as to encourage students to use their ability to discover beauty to transform and recognize the world [15].

Improve aesthetic education teaching, and improve students' aesthetic quality and humanistic quality. Improving aesthetic education teaching has become the educational requirement of the new era [16, 17]. Improving students' aesthetic and humanistic quality is related to the quality of the whole people. Humanistic quality mainly refers to people's internal quality and people-centered spirit. It can be seen that the current aesthetic education includes diversified education, such as aesthetic appreciation, moral quality, thought and emotion, and personality shaping [18, 19]. In addition to classroom teaching, college aesthetic education can also be realized through campus cultural activities such as lectures, community activities, literary and artistic activities, and competitions. The intertwined relationship of the importance of College Aesthetic Education at the spiritual level is shown in Figure 1.

It can be seen from Figure 1 that the intertwined relationship of the importance of college aesthetic education in the spiritual level can help students form a correct world outlook, outlook on life and values, edify students' reason and feelings through aesthetic education, develop students' consciousness by using aesthetic education, cultivate students' sentiment, enable students to master knowledge and develop aesthetics in aesthetic education, and apply what they have learned, and enhance their competitiveness through comprehensive aesthetic education.

2.2.2. The Function of Aesthetic Education in Building Socialist Spiritual Civilization. The construction of socialist spiritual civilization with Chinese characteristics includes construction of ideological moral and scientific culture [20]. Among them, ideological and moral construction is the key to the construction of socialist spiritual civilization, plays a key role in

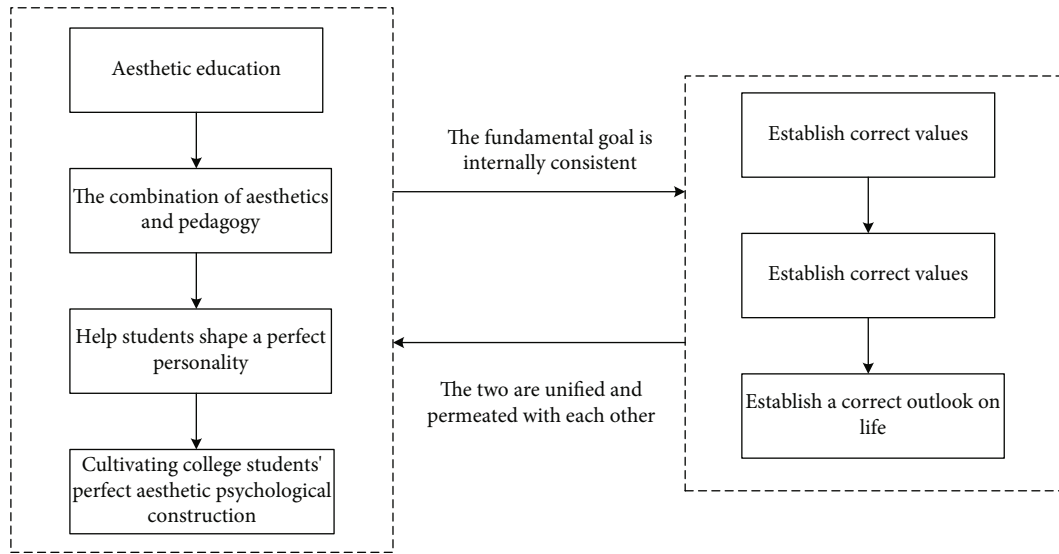


FIGURE 1: Intertwined relationship of the importance of aesthetic education in colleges and universities at the spiritual level.

promoting the development of all aspects of society, and determines the direction and nature of the construction of socialist spiritual civilization. The main contents of ideological and moral construction include discipline construction, moral construction, and ideal construction, among which ideal construction is the soul of the whole process, and the popularization of ideal construction is inseparable from the higher aesthetic education [21, 22].

The ultimate goal of strengthening socialist spiritual civilization construction is to cultivate and cultivate “comprehensive people” by comprehensively improving citizens’ values, cognitive ability, and moral level. Actively carrying out aesthetic education in colleges, enhancing the integration and penetration of aesthetic education in colleges, deepening students’ moral understanding, and stimulating students’ moral emotion can truly turn colleges and the whole society into a place for aesthetic education [23, 24]. In addition, at present, the educational field of Chinese society and the international community is undergoing transformation and upgrading. Only by meeting the quality needs of the public for education can we fully achieve the goal of building socialist spiritual civilization. By observing the educational ideas of western advanced countries, we find that China needs to further promote college aesthetic education. Only by promoting the orderly development of higher aesthetic education can quality education be truly realized. Thus, it can be seen that aesthetic education occupies a key position in the process of strengthening the construction of national spirit and promoting the construction of social morality [25].

2.3. The Urgency of Higher Aesthetic Education. According to the current situation of higher education, educators’ aesthetic ability and aesthetic quality are generally low, and they are not fully aware of the importance of aesthetic education, which leads to the generally low quality of aesthetic education and affects the efficiency of talent training [26, 27]. In the traditional college education, the “teacher-centered

theory” still occupies the main position. However, colleges have not created a sound aesthetic education teacher team, and the overall professional level of teachers is low. This is because at present, colleges generally lack the awareness of carrying out aesthetic education in an all-round way. Today, when ideological and political education has been very popular, aesthetic education has not been popularized in many backward areas. Even some teachers are in a state of disdain for aesthetic education, thinking that aesthetic education has little effect, unilaterally emphasizing the importance of theoretical knowledge education, and ignoring the aesthetic education of students [28, 29]. In the classroom, some teachers often ignore the display of students’ internal beauty, including teachers’ aesthetic emotion, cultural literacy, and moral quality. Under the traditional teaching concept, educators and teachers think that higher aesthetic education only requires students to watch movies and enjoy music. They lack of in-depth understanding of aesthetic education and carry out aesthetic education as art education, which inevitably leads to the low quality of aesthetic education. This cognition artificially reduces the educational scope and field of aesthetic education [30]. The model of teacher professional development management has comprehensively innovated the traditional teacher training model, and the specific innovation dimensions are shown in Figure 2.

According to Figure 2, the first problem to be solved is the positioning of teacher training; that is, teacher professional training and development management is a task that must be implemented and completed by the school, rather than going through the motions. The formulation of the overall objectives of teacher training, the formulation of specific training plans and training schemes, the implementation of training assessment, and data statistics need to be in the charge of specific departments and responsible persons. Only from the strategic perspective of the future development of the school and the construction of teachers, colleges can build an aesthetic education teaching team with strong professional ability, so as to better guarantee the quality of aesthetic education. This requires

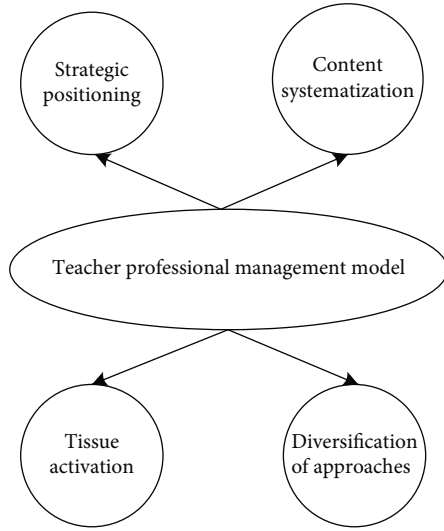


FIGURE 2: Innovation dimension of teacher professional development management training mode.

colleges to vigorously carry out microtraining activities for aesthetic education teachers under the current Internet environment, comprehensively improve teachers' professional ability and comprehensive quality, and provide guarantee for the better implementation of aesthetic education [31, 32]. The key to the training of teachers' professional development based on various micro platforms is to systematize the specific training contents and training courses and scientifically arrange the training time and design the training courses. For the content of teacher training, we should not excessively pursue the large and comprehensive but design short and concise training courses to highlight the timeliness and pertinence of the training courses, so as to improve the actual effect of teacher professional training.

In college education, aesthetic education plays an important role in the whole teaching process in colleges, which can be regarded as a teaching goal rather than an independent subject course. It is an educational concept naturally permeated in the educational process. It is oriented to all educatees and is committed to cultivating high-quality citizens with both adult literary literacy and aesthetic literacy. Aesthetic education in colleges is an open large space and platform. Its position is side by side with morality, intelligence, physical education, and labor and can be integrated with social practice, scientific research, and various disciplines [33]. Colleges and universities need to develop an open education model in order to enable educators to devote themselves to aesthetic education and cultivate high-quality and high-quality college students with both broad mind and broad vision [34]. At present, campus culture is increasingly divorced from aesthetic education; teachers and administrators lack the correct cognition of aesthetic education, which hinders the effective implementation of aesthetic education and is not conducive to the cultivation of students' aesthetic consciousness. It is urgent to strengthen college aesthetic education. Therefore, we must actively cultivate educators' aesthetic concept and aesthetic ability and improve educators' aesthetic quality.

Although many colleges and universities have carried out aesthetic education, they still stay at the level of knowledge education of aesthetic education. The contents involved in the curriculum are relatively simple and not deep enough. The contents of aesthetic education are often far away from the actual thoughts and needs of the students. Moreover, the contents of aesthetic education are relatively scattered and lack systematic teaching methods. It is necessary to recruit and train professional college aesthetic educators and set up independent. Proposals such as professional aesthetic education courses are not paid enough attention [35].

As can be seen from Table 1, aesthetic education curriculum is an important form of higher aesthetic education. However, from the perspective of the current situation of aesthetic education curriculum, there are still some problems that can not be ignored, which reduces the quality of aesthetic education. From the survey data and relevant reports, it can be seen that when carrying out aesthetic education, some colleges only set up independent aesthetic elective courses, and the course arrangement is less, which can only accommodate the study and registration of a small number of students. Many students are unable to study the course freely, which makes the aesthetic education not popularized and is not conducive to comprehensively improving the aesthetic level of college students, which further shows the necessity and importance of strengthening aesthetic education in colleges.

2.4. Basic Flow and Function of Data Mining in Big Data Network. Big data network applications need to deal with large-scale information, and the scale of information becomes larger and larger when data is copied to multiple locations for flexibility. However, the key feature of big data network is that it can subdivide the work, not the size of the scale. It can decentralize the processing of large tasks in the network and support parallel processing on different computers. At present, data mining technology has been widely used in different disciplines by virtue of its advantages, which has significantly improved the work efficiency in different fields [36]. Data mining technology, namely, knowledge discover in database (KDD), can help people to mine and extract potentially valuable knowledge and information from massive fuzzy, incomplete, and random data. Data mining operations can be expressed through knowledge discover in database. The application of this technology to higher aesthetic education can significantly improve the quality of aesthetic education. Data mining process in the improvement of higher aesthetic education quality is shown in Figure 3.

According to Figure 3, the overall operation process of improving the teaching efficiency of higher aesthetic education under data mining can be divided into the following three steps: collecting and processing data information, mining data information, and researching and analyzing the results of data mining. In the process of deep mining data information, with the help of different statistical analysis tools, such as prediction model, cluster analysis, association analysis, and classification model, we can find the data information with high value in the mass data. At the same time, after pattern evaluation, useful knowledge can be screened

TABLE 1: The current situation of higher aesthetic education.

Sequence	Existing problems	Aesthetic education environment	Cause of problem	Measures
1	The aesthetic education consciousness of teaching staff is not high	Not aware of the importance of building a good campus environment	Impact of social factors	Attach importance to campus reputation and environment
2	The higher aesthetic education' content is relatively monotonous	Social environment chaos	Impact of educational reform	Attach importance to social reputation and environment
3	The form of aesthetic education is relatively single	Insufficient attention to aesthetic education in family environment	Imperfect education mechanism and insufficient attention of relevant departments	Attach importance to family reputation and environment

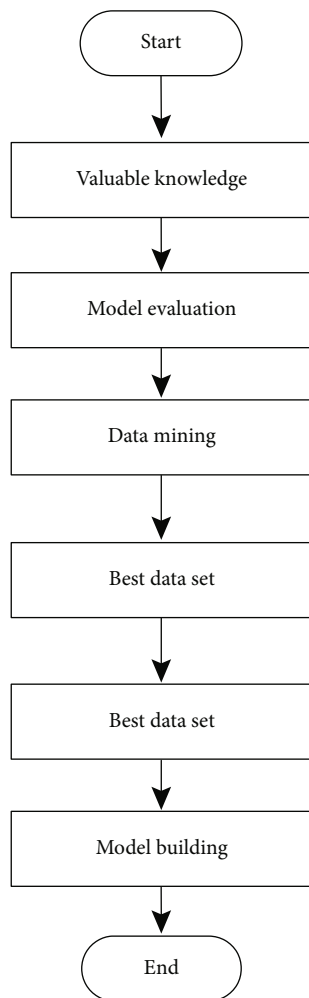


FIGURE 3: Data mining process in the improvement of higher aesthetic education quality.

out so that teachers can make scientific decisions and better implement aesthetic education.

The main function of data mining mainly refers to the use of predicting the future development trend and making decisions based on valuable knowledge. The main task is to find valuable knowledge or information from relevant data-

bases. Its main functions are reflected description function, classification prediction function, clustering analysis function, and evolution analysis function.

2.4.1. Description Function. The so-called description refers to associating data with classes or concepts and describing each category in an accurate, concise, and summarized way. The description methods used mainly include data characterization, data partition, and data feature comparison. Data characterization is the summary of general features or features of target data. Collect the data of user specified classes through database query, and realize data characterization and summary in various ways. You can also provide data output in various forms or describe the results in the form of rules or generalized relations.

2.4.2. Classification Prediction Function. Classification is to find out the models that describe and distinguish data classes or concepts, so that model prediction classes can be better used to mark unknown object classes. The derived model based on the analysis of training data set can be expressed in many forms, such as decision tree, mathematical formula, classification rules, and neural network. The decision tree is a tree structure similar to the flow chart. In this tree structure, leaves represent class distribution or classes, branches represent an output of the test, and each node represents a test on an attribute value. The decision tree can be easily transformed into classification rules. The class mark of data object can be predicted by classification. Prediction usually refers to that the predicted value is the data value.

2.4.3. Cluster Analysis Function. Clustering is the process of grouping a collection of physical or abstract objects into multiple classes composed of similar objects. The first is to group data objects into multiple clusters or classes. The objects in different clusters are very different, while the objects in the same class or cluster are very similar. In terms of data mining, cluster analysis is used to obtain the data distribution. Each cluster can be observed, and some clusters that need further analysis can be selected. At the same time, cluster analysis can also be used as a preprocessing step of other algorithms.

2.4.4. Evolution Analysis Function. Data evolution analysis describes the object or trend of behavior changing over time and establishes a model for it. Evolution analysis may include

clustering, correlation, differentiation, and characterization of time-related data. The different characteristics of these analyses include data analysis of sequence or periodic pattern matching, time series data analysis, and data analysis based on similarity.

2.5. Data Mining and the Improvement of College Aesthetic Education Quality. An association rule algorithm is the most widely used method in data mining technology, which also plays an important role in improving the quality of aesthetic education in colleges. As a tedious work, the quality management of aesthetic education in colleges involves many aspects, such as courses and improvement indicators. Large-scale data will be generated in the process. Extracting knowledge from such data can effectively improve teachers' teaching quality and promote teachers to improve their own teaching strategies. Through the association rule algorithm, useful information can be found from massive data, so that teaching management staff can make scientific management decisions and ensure the quality of aesthetic education teaching management. The selection of evaluation indicators of teaching level is the key to constructing the quality improvement model of higher aesthetic education. Combined with the constructed index system, it can effectively integrate the aesthetic education teaching objectives and teaching activities and clarify the aesthetic education teaching level.

In the process of scientifically constructing the quality improvement model of higher aesthetic education, a hierarchical and multiobjective improvement index system is constructed by using analytic hierarchy process. Select the analytic hierarchy process to obtain the improvement indicators, thus to ensure that the aesthetic education quality improvement system is relatively sound and perfect. The operation of analytic hierarchy process is divided into four links: designing and constructing the hierarchical model, building the comparison matrix, calculating the weight value, determining the combination weight vector, and carrying out the consistency test.

Comprehensively analyze each improvement index; take the course preparation, teaching effect, teaching content, professional ethics and ethics, and teaching methods as the primary index; and divide each primary index into several secondary indexes. Among them, the course preparation is divided into mastering the detailed teaching content, being familiar with the teaching process, mastering the teaching plan, and controlling the teaching progress. The final effect of aesthetic education teaching in colleges is to complete teaching tasks, exercise students' ability to analyze and solve problems, and enhance students' practical ability. The teaching content is divided into clear lectures, further expanding and extending the knowledge according to the previous knowledge, perfect and focused teaching content, reasonable arrangement of students' homework, and in-depth teaching content. Professional ethics and ethics education includes responsible and patient problem solving, scientific and fair application of examination methods, maintaining loose discipline, effective interaction between teachers and students, and timely solution of student feedback problems. Teaching

methods are divided into scientific and appropriate teaching methods, vivid course explanation, and neat teaching-related facilities.

According to the above contents, it is urgent to construct judgment matrix according to each standard and use 1 to 9 as the scale of the corresponding judgment matrix. The scale of the judgment matrix is described as follows: scale 1 represents the consistency of importance between m and n ; scale 3 indicates that m is important than n slightly; scale 5 indicates that the importance of m is significantly greater than that of n ; scale 7 represents that m is more important than n ; when the scale is 9, m is more important than n ; when the scales are 2, 4, 6, and 8, m and n are in the middle of two adjacent judgments.

Through comparing the importance of the two indicators in the index system, experts can obtain the judgment matrix.

By calculating the weight and carrying out the consistency test, the eigenvector and the maximum eigenvalue of the interpretation matrix can be obtained, and the consistency index C_I can be obtained by using formula (1) according to the maximum eigenvalue:

$$C_I = -\frac{1}{n-1} \sum_{i=2}^n \lambda_i. \quad (1)$$

In formula (1), λ_i represents eigenvalue and n represents positive integer.

To sum up, the average random consistency index R_I values are given: 1 corresponds to 0, 2 corresponds to 0, 3 corresponds to 0.58, 4 corresponds to 0.9, 5 corresponds to 1.12, 6 corresponds to 1.24, 7 corresponds to 1.32, 8 corresponds to 1.41, and 9 corresponds to 1.45.

To obtain the consistency ratio C_R ,

$$C_R = \frac{C_I}{R_I}. \quad (2)$$

If C_R is less than 0.1, it means that the judgment matrix is very reliable. On the contrary, the judgment matrix needs to be given until better consistency is obtained, and the corresponding vector obtained is the criterion weight coefficient. Once again, in the same way, we can judge the secondary weight value and judge whether it passes the consistency test, so as to obtain the corresponding weight value of all secondary indicators, that is, the proportion value occupied in the corresponding primary indicators.

According to the above steps, the weight values of each criterion domain and index domain are obtained by MATLAB. The research on the purpose level of aesthetic education has raised the research on aesthetic education to a new level and improved the educational value of aesthetic education. On this basis, the research of aesthetic education pedagogy can move towards the realm of "aesthetic education view." Educational beauty is both an end and a means. As an end, there is a problem of how to realize it; as a means, education and teaching activities themselves do not directly provide aesthetic value and can realize true aesthetic education.

2.6. *Construction of College Aesthetic Education Quality Improvement Model.* Combined with the relevant parameters such as the evaluation index and index weight of aesthetic education teaching level in colleges, the fuzzy limits of each factor and factor fuzzy limits are described and analyzed through the membership degree under the principle of fuzzy set transformation, which can create a fuzzy matrix and clarify the grade of the evaluation object after multilayer compound operation.

It is set that there are a promotion levels and b primary promotion indicators. Each primary indicator contains several secondary indicators. Represented by the level domain D and the primary indicator domain L , there are

$$\begin{aligned} D &= \{d_1, d_2, \dots, d_n\}, \\ L &= \{l_1, l_2, \dots, l_n\}. \end{aligned} \quad (3)$$

According to the definition of fuzzy correlation E between the above-mentioned hierarchical domain D and primary index domain L , the fuzzy matrix is as follows:

$$E = \begin{bmatrix} L_1 \\ L_2 \\ \vdots \\ L_m \end{bmatrix} \times \begin{bmatrix} e_{11} & e_{12} & \dots & e_{1n} \\ e_{21} & e_{22} & \dots & e_{2n} \\ \vdots & \vdots & \dots & \vdots \\ e_{m1} & e_{m2} & \dots & e_{mn} \end{bmatrix} = [e_{ab}]_{mn}. \quad (4)$$

In the above formula, the membership degree of a level promotion index to the b level promotion index is expressed as e_{ab} .

According to the above calculation and analysis, the quality improvement model of college aesthetic education is obtained, which can be expressed as

$$M_z = D \times L \times E. \quad (5)$$

The above method of fuzzy comprehensive improvement is used to build the higher aesthetic education quality improvement model, which can ensure the fault tolerance of the improved model, make the model construction operation more simple, and significantly improve the construction effect and realize the application value of the aesthetic education quality improvement model.

3. Experimental Analysis

In the process of verifying the application effect of college aesthetic education quality improvement model under big data network, three colleges and universities are selected as experimental and simulation objects, and the subindicators and teacher information table in their teaching improvement system are used as data mining sources. The database is constructed through the steps of collecting original data, merging and integrating data, data cleaning, and discretization of continuity attributes. The questionnaire was designed according to the above promotion indicators and distributed to students of different genders and sections in three colleges. The hardware facilities of this verification experiment are as follows: the operating system which is Microsoft Win-

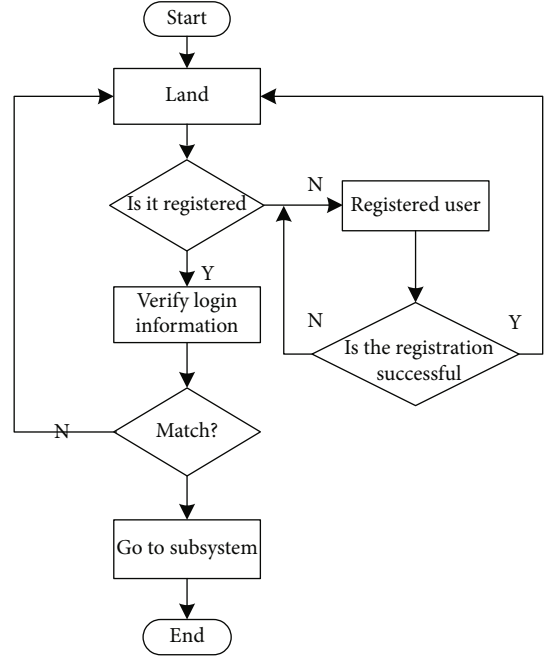


FIGURE 4: The specific experimental login process.

dows XP SP2, the hardware which is P41.8GHz/512M memory, and 20G hard disk. The results of the database and questionnaire are input into the experimental operating system, and the fitting degree of actual situation and improved results and the degree of freedom of modeling are used as experimental indicators to verify the model. Before entering the experimental operating system, the user needs to obtain permission; that is, through the login program, when the user enters the corresponding user name and password, if the matching is successful, the system will allow the user to enter; otherwise, the system will prompt the word “input error” and need the user to reenter.

According to the experimental login process in Figure 4, since the system is oriented to a variety of user roles, such as teachers, students, and administrators, users with different identities have different access rights, when the user logs in successfully, the system must traverse the permission entries owned by the user role and then load the interface that the user has the right to access, so as to prevent access beyond the permission and affect the system service quality. According to the above process, the results of the importance and importance of college aesthetic education teaching quality under big data technology, the degree of fit with the actual situation and the degree of freedom of college aesthetic education quality improvement model are verified, and 500 students are randomly selected for investigation, including 100 freshmen and sophomores and 150 junior and senior students. Investigate the importance of aesthetic education in colleges and universities, respectively, so as to demonstrate the importance of the quality improvement model of aesthetic education in colleges and universities. The percentage is used to express the importance and importance of aesthetic education in colleges and universities. The results are shown in Table 2.

TABLE 2: Results of importance of higher aesthetic education.

Student classification	The importance of aesthetic education in colleges		Importance of aesthetic education in colleges	
	Very important	Not very important	Higher	Lower
Freshman	98.5%	1.5%	5.3%	94.7%
Sophomore	98.9%	1.1%	3.8%	96.2%
Junior	99.4%	0.6%	3.3%	96.7%
Senior	99.9%	0.1%	2.1%	97.9%

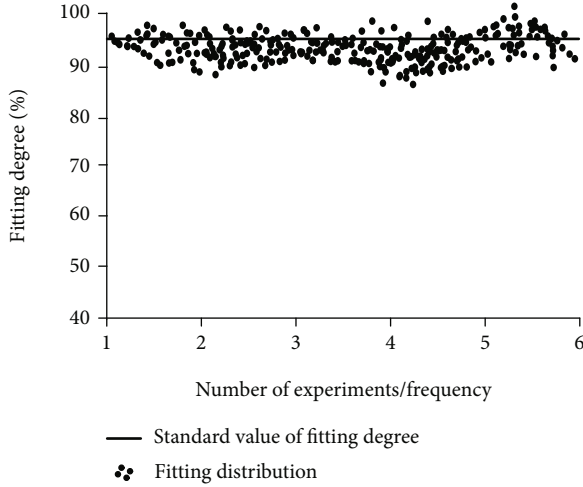


FIGURE 5: Comparison results of the fitting degree between college aesthetic education quality improvement model and actual situation.

According to the results in Table 2, college students generally believe that college aesthetic education is very important, which proves the importance of college aesthetic education quality improvement model under the big data network, and college students generally believe that college aesthetic education is less valued, which proves the urgency of college aesthetic education.

Based on the above experimental environment and data, there is a positive correlation between the improvement accuracy and the fitting degree between college aesthetic education quality improvement model and actual situation. The comparison results of the fitting degree between college aesthetic education quality improvement model and actual situation are as follows:

In Figure 5, the aesthetic education quality improvement model constructed by this study has a high degree of fitting with the actual situation. The model constructed in this study is based on data mining technology, and accurately extracts the useful data information to improve the teaching quality from the massive data through association rules; this guarantees the aesthetic education management decision-making to be scientificity and rationality, so that the improvement results of the model show a high fitting degree with the actual situation. In the process of constructing the improvement mode of aesthetic education teaching quality in colleges, a hierarchical and multiobjective improvement index system is constructed by using analytic hierarchy process. This study uses analytic

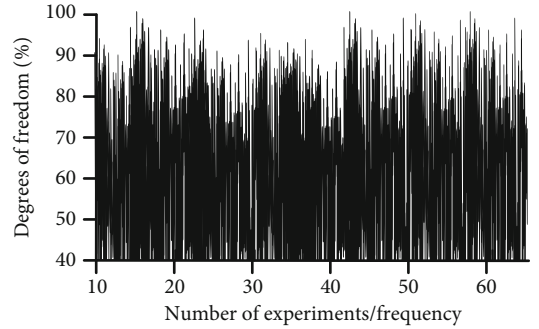


FIGURE 6: Results of degrees of freedom of college aesthetic education quality improvement model.

hierarchy process to clarify the improvement indicators of aesthetic education quality, which can make the improvement system more perfect and improve the accuracy of the final results. The degree of freedom and complexity of the improvement model of aesthetic education teaching quality in colleges are inversely proportional. The specific situation is shown in Figure 6.

Combined with the above figure, it can be seen that in the verification process, the teaching quality improvement models of aesthetic education in colleges at different times all show a high degree of freedom. The reason is that this model constructs the teaching quality improvement model by using the method of fuzzy comprehensive improvement. Therefore, the constructed model takes into account the improved fault tolerance and greatly enhances the freedom of model construction, thus reducing the complexity of improvement.

To sum up, the model for improving the quality of aesthetic education in colleges and universities constructed under the big data network plays an important role, and its degree of fitting is close to the actual situation, and it has a high degree of freedom under different experimental times.

4. Conclusions and Prospects

4.1. Conclusions

- (1) The importance of the model for improving the quality of aesthetic education in colleges and universities under the big data network and college students generally believe that aesthetic education in colleges and universities is not valued enough, which

proves the urgency of aesthetic education in colleges and universities

- (2) The fitting degree of the constructed model is close to the actual situation, which improves the accuracy of the results to some extent
- (3) The model constructed in this paper has a high degree of freedom under different experimental times, which effectively improves the degree of freedom of modeling and reduces the complexity of promotion

4.2. Prospects. In the process of rapid social development, people's demand for material and spiritual has been constantly increasing, which is in great contradiction with the actual unbalanced and incomplete development situation. "A better life" fully reflects people's yearning and pursuit for a rich spiritual world and beauty. Beauty is an important source of enriching the spiritual world, and aesthetic quality has also become an indispensable and important quality. Aesthetic education in colleges is the key to ensure the growth of students and plays an important role in the cultivation of students' moral sentiment. It is an important stage to significantly improve students' thought and develop their moral sentiment. However, the existing aesthetic education teaching resources and teachers cannot cater to the learning needs of students, which affects the quality of aesthetic education teaching. The wide sharing of high-quality college aesthetic education network teaching resources meets the needs of students in all aspects of aesthetic education. However, high-quality online teaching activities of aesthetic education in Colleges are still lacking. The aesthetic education in colleges generally exists the problem of becoming a mere formality, and the actual teaching effect is not ideal. A reasonable, effective, stable, and reliable network teaching promotion system of college aesthetic education can not only establish the requirements and standards of college aesthetic education network teaching but also diagnose the problems in teaching activities and their implementation, so as to build a scientific, effective, and aesthetic high-quality college aesthetic education network teaching activities.

In the future, we need to continue our efforts to expand the sample size selected by expert survey and college aesthetic education network teaching activities and enhance the theoretical depth of research. At the same time, continue to increase expert interviews and student surveys, and improve the content and methods of improvement. Online higher aesthetic education in China has developed for a short time, facing many challenges, which needs in-depth research with more college aesthetic education researchers and practitioners. I believe that with the promotion of college aesthetic education reform, the continuous construction of intelligent college aesthetic education network teaching platform, and the continuous efforts of all colleagues who care about and love aesthetic education, high-quality college aesthetic education network teaching resources will continue to increase, and the improvement of college aesthetic education network teaching will be more scientific and effective.

Data Availability

The author can provide all the original data involved in the research.

Conflicts of Interest

The author indicate that there was no conflict of interest in the study.

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