The Practice Teaching Model of "Workplace" in Environmental Art Design Education

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Objectives: With the rapid development of our country, the pace of reform has never ceased, and the work of all walks of life is clear and clear. **Methods:** The market has gradually improved the professional level of technical requirements, and it is a preferred choice for real technicians. In recent years, the state has paid more and more attention to the environmental art design industry, and the environmental art design education industry has also developed.**Results:**This paper put forward the practice teaching mode of "workplace", which is based on the data mining algorithm and considers from many aspects. First, we need to consider the market's demand for this industry,**Conclusion:** then train talents in this area according to supply and demand, innovate and reform the curriculum system mode, make art education more innovative and more characteristic, and cultivate talents that the society needs.

Keywords:data mining algorithm; environmental art design; workplace; teaching mode
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Art education began to rise at the end of the twentieth Century. After more than 20 years of continuous development, it is now very popular[1]. With the development of the times, modern art and design education is constantly updated and perfected. Art education is different from traditional education. It pays more attention to professional education, and needs teaching and training according to market demand. We should not only study theories, but also pay more attention to practice[2]. "Workplace" teaching from the enterprise to get inspiration and experience, enterprises and schools together to teach students, the designation of qualified models and standards, pay attention to students ' professional thinking training, the basic theory and skills are cultivated teaching, pay attention to the comprehensive training of students, for students ' expression ability and team consciousness requirements higher. With the constant attention of the central government to the environment in recent years [3]. Environmental problems have been paid more and more attention by society, environmental art design education as a new educational model gradually in universities. The object of environmental art design is very clear and specific; the use of art form will be the substantive design, while taking into account environmental protection and science two aspects. Environmental art design is the combination of modern development and traditional art, the cultivation of environmental design of practical technical personnel, conducive to economic development, but also conducive to environmental protection[4]. Meet people's needs for the environment and life. For environmental art and design education, it is historical, it needs

to change according to the Times to make corresponding changes to meet the requirements of the development of the Times [5]. Nowadays, the workplace education of environmental art design needs to be perfected, and the mode of education needs to be further updated and practical education should be paid attention to, so that students ' professional knowledge and practical ability coexist[6].

With the popularization of computer, a large number of data needs to be stored, the traditional data analysis technology cannot meet the requirements of the development of the Times, the data mining algorithm is in this case developed[7]. Data mining algorithm began in the end of 20th century, after several years of development to form a basic form; its core idea is too quickly and accurately in a large number of data mining the required data of a calculation process, especially in artificial intelligence received favor. The United States attaches great importance to data mining algorithms, which are considered by American scientists as one of the ten emerging technologies in the future[8]. Today, data mining algorithms have been well developed and used in many fields, such as business, aviation, electronics and other industries. Data mining algorithm is the result of the mixed knowledge of many disciplines[9]. There is no early start to the data mining algorithm because of the technical reasons, but after the data mining algorithm has been introduced into China, some scholars have paid attention to the data mining algorithm, and published the paper for discussion in 1997[10]. The research of data mining algorithm mainly has the research of theory and practice, but no matter which kind of research has made some contribution to the application of this algorithm in China. This paper was based on the technology mining algorithm for environmental art design Education "workplace" practice teaching model, through research to optimize our education model.

METHODS

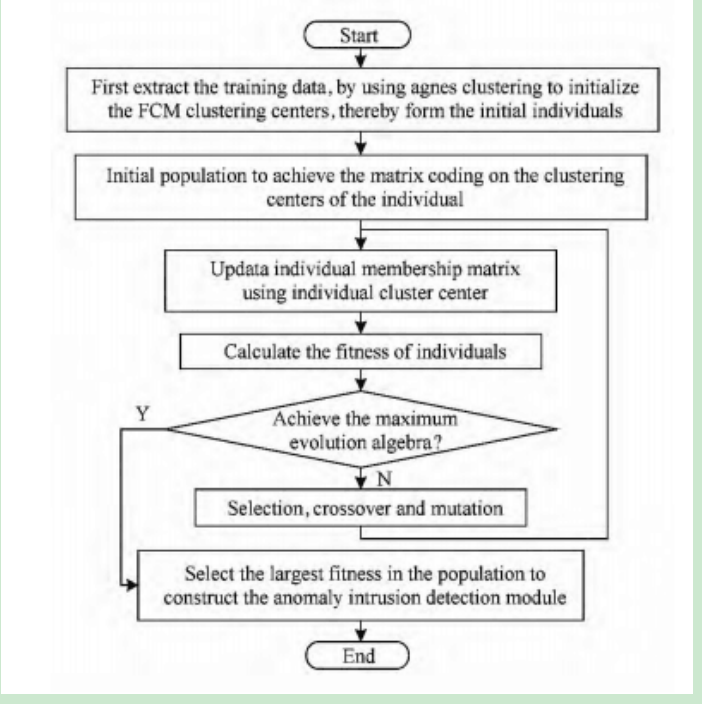
The Basic Introduction of Data Mining Algorithm and the Running Process of the Algorithm

In the development of data mining algorithm, we can understand that the origin of data mining algorithm is not smooth, but through a lot of rough. When we start to apply the data mining algorithm to the actual computing process, we need to analyze and understand the computing function of the data mining algorithm in detail, only when we understand the data mining algorithm, we can use the data mining algorithm rationally. Based on our years of refinement and analysis, we can divide the data mining algorithm into the following stages using the decision tree model, the first part is the use of data mining algorithm for the selective use of data. The second part is the use of our selected data processing and processing of data. The third part is the process of constructing the data mining algorithm model by using the data we processed. Under the condition of satisfying the model construction, we detect the model based on the data mining algorithm and see if it can meet our actual needs, after the construction of the operation model system based on the data mining algorithm is completed. The fourth part, we need to do the actual test of data mining algorithm operation model system. After completing the test, we can know whether the system model of our data mining algorithm can really complete our computing membrane table. The data mining algorithm is then integrated into the overall Internet database for storage so that we can use it later. The fifth part of what we need to do is to introduce some of the computing processes of the data mining algorithm. We must first determine the calculation range calculation model of our data mining algorithm based on the design, according to the calculation range of selected data calculated using the calculated data we need, these choices must be accurate, and otherwise it will greatly affect our final results. In order to ensure that we can actually solve the problem, we must carry out a number of screening works to select the appropriate data.

The second part of our work to be carried out is the expression of test data, a part of model based on data mining algorithm is successfully

constructed on the finish, we need is the main calculation steps of data mining algorithm, the calculation steps will affect our final results.When we build a system model based on data mining algorithms, the first problem we face is the problem of computing the data mining algorithm. After solving the calculation problem of data mining algorithm, we can summarize the final work, after the summary of the work done, we can use the computer network database for testing work of the computing model of our design, after the inspection is completed, we can start the actual calculation process. After the construction of the model of the teaching model of the environmental art design education based on the data mining algorithm we designed. What we need to do is to calculate the actual optimization based on the basic calculation process of data mining algorithm. With the help of actual optimization, we can control the overall accuracy of our data bowl fern algorithm by comparing the quality of data. In the expression process of data mining algorithm, the selection of some parameters and expression data is particularly important. These parts will not only affect the accuracy of our actual computation models, but also affect the results of our operations. The calculation results are correct and can be in strict control range, so we practice work to analyze and integrate the rigorous, and according to the analysis and results to use the formula, it can ensure the final results by designing a data mining algorithm based on the model of our environmental art design teaching the exact. After integrating the data, we can get the following expression system. In the expression system, we can sum up the whole computing process of the data mining algorithm. The calculation steps are shown in the following diagram.

Figure1
Data Mining Calculation Process



Construction of Educational Practice Model of Environmental Art Design Based on Data Mining Algorithm

After analyzing the calculation steps of data mining algorithm, we can get that data mining algorithm is very helpful for Internet computing, which can greatly simplify our practical operation steps and improve our computing efficiency. In the 90s of last century, the American mathematicians put forward the original model of data mining algorithm. According to the continuous optimization of data mining algorithm, data mining algorithm became more and more perfect, and we could use more and more. In this paper, mainly on a data mining algorithm for analysis and processing, after processing improvement, improvement and treatment according to the actual operating situation of data mining algorithm. In this algorithm the introduction, we mainly complete the calculation process of the work. Before we introduce the steps of data mining algorithm, we first need to analyze and explain the factors that influence data mining algorithms, and we can identify the advantages and disadvantages of data mining algorithms based on the introduction of influencing factors. And according to optimization and correction for the influence factors such as a very important function is data extraction, data extraction function is a function of the overall controllability of the data in the calculation process of choice, he is a calculation expression data index can be obtained by various modes of operation. Now we begin to introduce the overall calculation procedure.

Set D is a class tagged tuple training set with a class label attribute with n different values.n different types of Ci= (i=1,2,... N), CiD is a collection of tuples of the Ci class in D. ID and CID are the number of tuples in D and CiD, respectively. The information gain is actually a measure of attribute selection in the ID3 algorithm. It selects the attributes with the highest information gain as the split attribute of the node N. This property minimizes the amount of information required for the group of tuples in the result partition. The expected information needed for the taxonomy of the tuples in D can be obtained by the lower formula:

$$Info(D) = -\sum_{i=1}^{n} P_i \log P_i \quad (1)$$

And $Info(D)$ we call it entropy. To measure consensus, we use the next formula for computing and analysis.

$$Info_A(D) = -\sum_{j=1}^{v} \frac{|D_j|}{|D|} * Info(D) \quad (2)$$

The information gain is the difference between the two, and the formula is as follows:

$$Gain(A) = Info(D) - Info_A(D) \quad (3)$$

In addition to the association rule data mining algorithm we need the calculation and analysis formula of the confidence, support and interest.

Support and Confidence: The support of the project set X in the transaction set T is the ratio of the number of transactions with X in the T and the number of all transactions in the T. The support degree $Support(X)$ of the project set X in the transaction set T is calculated as follows:

$$Suppert(X \Rightarrow Y) = \frac{Sup(X \bigcup Y)}{|D|} \quad (4)$$

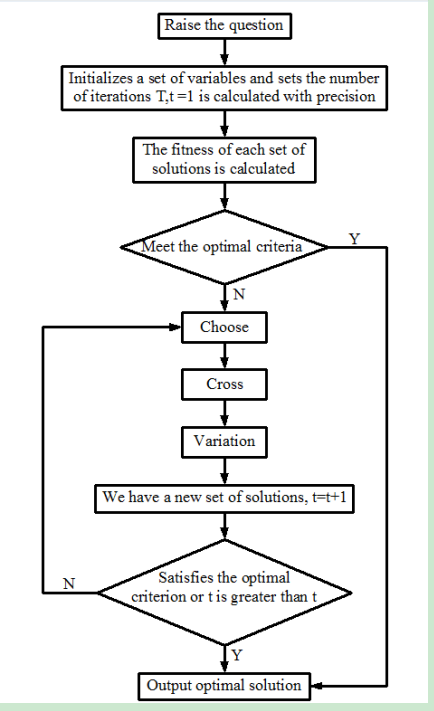
For association rules where x and Y are all project sets, the confidence of the association rule is the ratio of the number of transactions in the transaction set T that contain both the project set X and Y and the number of transactions with X in T, that is, the formula:

$$Confidence(X \Rightarrow Y) = \frac{Support(X \bigcup Y)}{Support(X)} \times 100\% \quad (5)$$

How much is the probability of the occurrence of Y in the same transaction when a transaction of confidence describes a transaction that appears X.

After introducing the calculation formula and data of data mining algorithm, we can start setting up the model of workplace practice teaching mode based on data mining algorithm for environmental art design education. The actual operation of the network model we set is as follows. In the actual operation, we can start the actual operation through the combination of the system model and the data mining algorithm.

Figure2
Data Mining Calculation of Computer Computing Model Diagram



RESULTS

After analyzing the calculation process of data mining algorithm, we will research and test the teaching mode of workplace art teaching based on data mining algorithm. And according to the test results of our model to optimize the work of the model, in the proof of our data mining algorithm designed by the actual calculation model can get the results of our calculation, we can grasp the calculation of data mining algorithm and test. After the analysis and optimization of the general data formula, we can compare and select the results of our calculation, and find out the optimal solution in the algorithm according to our actual calculation results. Such a process we need to operate not only one or two times, but need to go through a lot of operation and contrast, to find the data to meet the needs of our information, so that the calculation results can be guaranteed. Based on the model we set up, we can start the first step of the comparative analysis process; we first design the system model initial expression of 0.5, and then based on the initial expression of the design table.

Table1
Original Record Sheet

Label	Business
1	A2, A4, A6
2	A1, A3
3	A1, A2
4	A2, A4, A6
5	A2, A3

In the expression of the above initial calculation table, we carry out the data storage processing according to the selection of the data in the table. After the storage processing of the prior data is completed, we can extract the information that we started to store in the database, and after the extraction is done, we can enter the data model into the actual alternatives of our design, and express the data according to the actual alternatives.

Table2
First Calculated Candidate Set Table

Item set	Support
A1	0.35
A2	0.34
A3	0.15
A4	0.23
A5	0.78

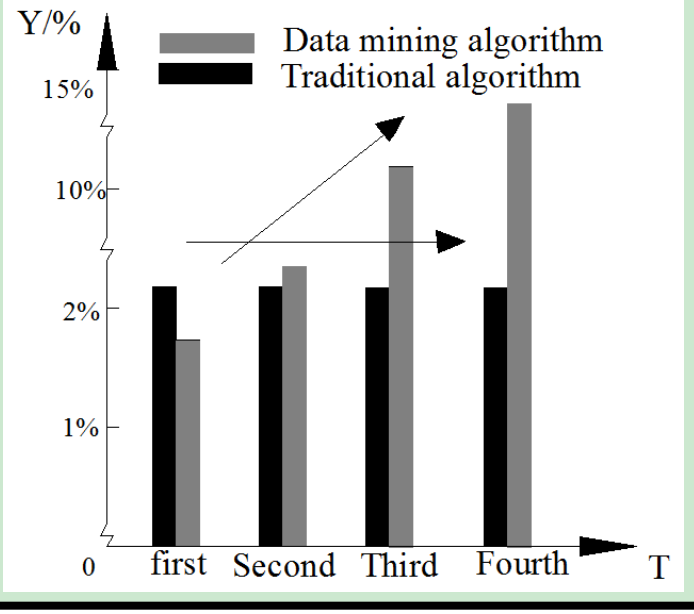
After observing the above data support, we can get our test data, this part of the information can be reflected in the table. Based on the feedback from the test data, we can get the actual results of our calculations without errors, and we can quickly and correctly find the final results we need.

Table 3
Second Calculated Candidate Sets Table

Item set	Support
A1, A2	0.53
A1, A3	0.23
A1, A5	0.43
A2, A3	0.67
A2, A4	0.11
A2, A5	0.26

We calculate the data in the table above, we can calculate the support of each item to the right side of the table, for us to test the identification of the use. Based on our calculations, we can see that all the calculated items in the table above are not less than the original support we set. Therefore, the data in the table above and the items are not required for us to cut and reprocessing, can be directly used for the next phase of the calculation analysis.

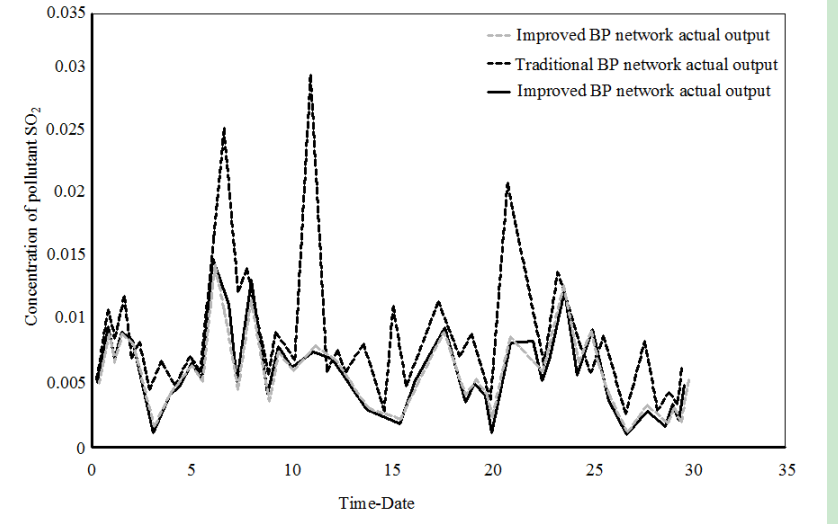
Figure 3
Optimization Comparison of Algorithm Testing



So, we proceed to the next phase of the computational analysis directly according to our computational steps. Using the computer model we built, we directly carried out the next calculation analysis. To sum up, the data mining calculation model established in this paper can calculate the calculation results we need. But in order to prove the efficiency of the algorithm. Also contrast experiments are set up to compare the computational time of the two algorithms to

prove the efficiency of our optimized algorithm. The calculation time comparison of the two algorithms is shown in Figure 3 below.

Figure4
Comparison of Two Algorithms for Calculating Time



Through the observation and analysis of the data in the picture above, we can see that for the two data mining efficiency, our optimized algorithm has considerable advantages. From the beginning of the calculation time difference 5 seconds, to the last computing time difference 45 seconds, it shows that the optimized algorithm not only has more advantages in computing time, but also has smaller computation time.

DISCUSSION

Environmental art design education has broad prospects for development. It is different from traditional environmental education and art theory education, but pays more attention to the combination of theory and practice. After decades of development, China's art education has matured. The school's training of environmental art talents also pays more attention to the needs of the market, pays more attention to "workplace", and trains technological, scientific and innovative talents. Nowadays, the ecological problem is becoming more and more serious. Nowadays, the world not only pays more attention to the development of economic science, but also pays more attention to the protection of the ecological environment. For environmental art design, the trained personnel should not only have good quality and professional skills, but also have certain scientific knowledge and use science and technology to combine environmental design with art. Environmental art and design education needs to keep pace with the times, carry out practical education for students, design feasible and feasible programs according to the specific circumstances of society, and not just stay in theory, but "workplace" is also a similar meaning. This paper used data mining algorithm to store and analyzed a large number of data, and excavated the most suitable scheme in a large number of data. From the perspective of global consideration, we can take a more comprehensive consideration of many aspects, reduce a lot of negative effects for the later revision work, and is also the best tool for studying the appropriate plan of "workplace oriented" practical education in environmental art design.

Human Subjects Approval Statement

This paper did not include human subjects.

Conflict of Interest Disclosure Statement

None declared.

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