



Generation and Optimization of Ideological and Political Teaching Learning Route Based on Evolutionary Algorithm

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Abstract:

Ideological and political education is an important knowledge point in China's higher education, which covers the whole process of higher education teaching, and is an important institutional carrier for universities to cultivate socialist successors. At present, great achievements have been made and there is a certain influence in the whole country. As a new educational concept, the learning path of ideological and political teaching based on evolutionary algorithm still needs long-term development and further research and verification. This paper mainly describes the generation and optimization of ideological and political teaching learning path based on evolutionary algorithm, aiming at speeding up the process of ideological and political education, expanding the influence of ideological and political education in China, constantly exploring in concrete practice, and constantly improving and making progress in the process., strive to build a comprehensive, multi-level, three-dimensional ideological and political education system.

Keywords: *Evolutionary algorithm, ideological and political teaching, system early warning*

1 INTRODUCTION

With the continuous development of the Internet era, it is one of the important aspects of college curriculum teaching to adopt new teaching mode in information teaching [1]. It carries out the exploration and practice of ideological and political course teaching and education "course" teaching in order to fulfill the common fundamental task of colleges and universities, and tries to put ideological and political work through the process of education and teaching. Among them, "curriculum ideological and political" teaching has become a hot topic of curriculum reform [3]. "Curriculum ideological and political" teaching refers to the exploration of ideological and political education elements contained in each curriculum, and the use and play of these ideological and political elements of education, so as to realize the whole process of education, all-round education, to serve the fundamental task of moral education [4]. This prompts university teachers to actively explore the ideological and political elements in the curriculum, and update the teaching content, teaching mode, teaching cases and teaching evaluation methods.

2 DIFFICULTIES FACED BY IDEOLOGICAL AND POLITICAL TEACHING

First, the lack of educational resources. Ideological and political teaching can impart professional knowledge and skills in the teaching process [5]. In the process of teaching, teachers combine ideological and political knowledge with demonstration algorithm to achieve seamless connection. In the traditional teaching process, teachers generally rely on a good understanding of the textbook, and then impart knowledge to students [6]. In different courses, the subject background and knowledge structure are different, and ideological and political courses also contain differences in educational resources and forms of expression [7]. In the traditional ideological and political education professional course practice teaching, the teachers only pay attention to imparting knowledge to students, the lack of related mental health guidance, if affected by the teaching effect of ideological and political education courses, damage to the ideological and political education course knowledge system also can produce certain effect, also can cause the

student to the knowledge absorption rate, destruction of the students' interest in learning.

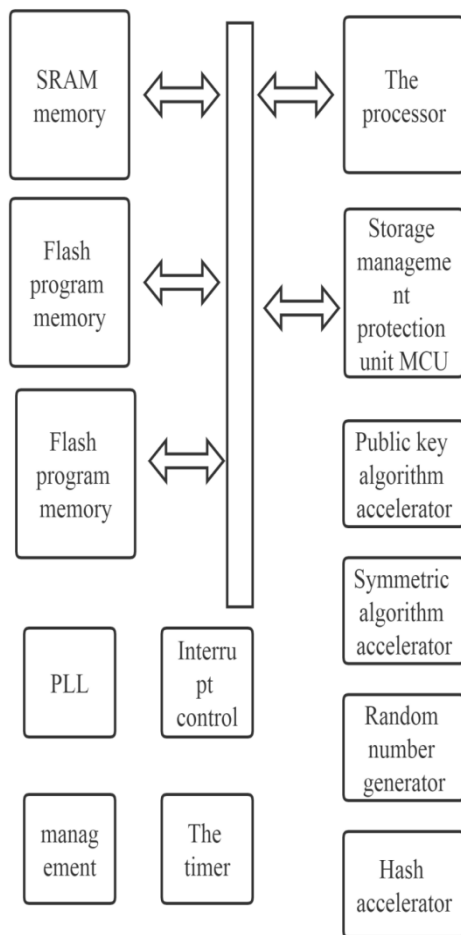


Figure 1. Evolutionary algorithm logic block diagram

Second, it relies too much on teachers' ability. Teachers are the primary responsibility for classroom teaching, and their personal concepts and values will have the most direct impact on curriculum teaching. In the process of educational practice, how teachers choose educational content and how to use educational methods will directly affect students. Education and teaching have higher requirements for teachers, but in the actual operation process, most of the education and teaching teachers do not have relevant discipline background [2]. Therefore, it is difficult to sort out the knowledge of the curriculum system, which ultimately leads to the ideological content only remaining on the surface and guides students to establish correct values and political views.

Third, lack of relevant scientific evaluation. The implementation effect of ideological and political education is mainly reflected in the teaching quality of teachers in class and the learning effect of students. Among them, effective supervision mode and evaluation mechanism can effectively promote the improvement of curriculum ideological and political system, so as to better improve the curriculum ideological and political teaching system [8]. Therefore, students lack a certain degree of investment in the evaluation of emotion, attitude and value, and there are certain conflicts in this aspect, which can be solved by the following methods [9].

Table1: The dilemma of ideological and political teaching

The dilemma of ideological and political teaching		
Lack of educational resources	Too much reliance on teacher ability	Lack of relevant scientific evaluation
<p>Ideological and political teaching can impart professional knowledge and skills in the teaching process. In the process of teaching, teachers combine ideological and political knowledge with demonstration algorithm to achieve seamless connection.</p>	<p>In the process of educational practice, how teachers choose educational content and how to use educational methods will directly affect students. To education teaching for teachers have higher requirements, but in the actual operation process, most of the education teaching teachers did not have relevant disciplines background, so knowledge of curriculum system of difficult comb, eventually lead to ideological content merely superficial, guides the student to set up the correct values, political view</p>	<p>The implementation effect of ideological and political education is mainly reflected in the teaching quality of teachers in class and the learning effect of students. Among them, effective supervision mode and evaluation mechanism can effectively promote the improvement of curriculum ideological and political system, so as to better improve the curriculum ideological and political teaching system. Therefore, students lack a certain degree of investment in the evaluation of emotion, attitude and value, and there are certain conflicts in this aspect, which can be solved by the following methods.</p>

1. Circular approach

Bool check(int j,int I)/bool check(int j,int I) forl int k=1:k < i: k ++)

if(abs(j-i) =abs(x[k]-k) orx[k] =j) return true; / conflict return false: / No conflict

Bool check(int j, int I)

if (b[i] =1 and c [i +j] =1 and d [i-j+n] =1)

return true; The else/conflict

Return false: / Does not conflict

Nodes: M Output: Allocation scheme

Initialization: Podinitis (), nodelnitos allocates Pod

Method:

For Pod=0to N-1 do:

For VM=0 to M-1 do

Porpriorityos/filters nodes by the constraints of the formula

Scorenodem ()/Score the nodes by the formula

End/End of the loop

Bestnodetoplayos/Find the maximum value of the formula, maWS

11 is Pod, and the node is assigned to the highest node T

End/All Pod scheduling ends

End of the program

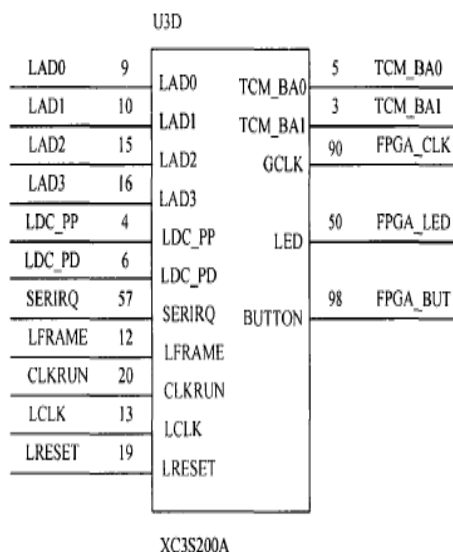


Figure 2. Diagram of evolutionary algorithm

3 SPECIFIC FLOW OF DA-BP ALGORITHM

BP neural network is mainly composed of input layer, hidden layer and output layer. Because the prediction result of BP neural network is easily affected by the connection weight, it is easy to fall into the problem of local weight.

The basic flow of the algorithm can be divided into the following steps:

First, need to determine the initial neural network model, to determine the network structure, according to the number of data samples to determine the BP neural network layers, to transfer function of the training function type and number of nodes in the between training at all levels, thus to evaluate college ideological instruction classroom teaching quality data, and to read the information [11]. After reading the information, the quality of ideological and political classroom teaching in colleges and universities needs to be processed and pre-processed to classify the data into training set and test set.

Do the encoding work. DA algorithm generally uses real coding, connecting each weight, and then the overall coding. Where, the search space of the algorithm is m , assuming that the input layer, implicit layer, and output layer are R , 1, and 2, respectively, so the encoding can be expressed by the following formula:

$$S = RS + S_1S_2 + S_1 + S_2 \tag{1}$$

Third, the DA algorithm parameters are initialized, where the population size is N and the maximum iteration number is T [12].

Fourthly, the initial positions of randomly initialized vectors and randomly generated individuals are assumed.

Fifthly, input the training set into the algorithm, calculate the individual's degree of adaptation according to the formula, and sort it, so as to record the most appropriate solution at present. The following formula can be used:

$$fitness = \frac{1}{k} \sum_{i=1}^k (y_1 - y_i) \tag{2}$$

Sixth, calculate S , A , C , E , and F according to the formula.

Seventh, calculate step length vector and position vector according to the formula.

Eighth, the corresponding weights and thresholds of the optimal solution are calculated, and the BP neural network is predicted.

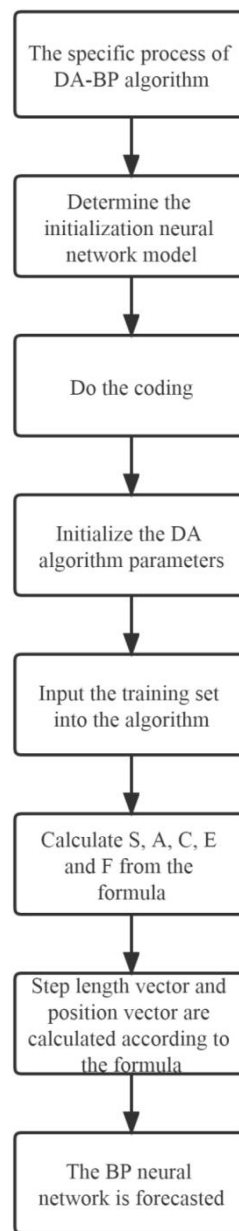


Figure 3 Specific process of the D A-BP algorithm

4 ADVANTAGES OF ALGORITHM IN IDEOLOGICAL AND POLITICAL TEACHING

The algorithm has a certain precision boost effect, which can help teachers to carry out technical changes

and innovations towards the main value of the algorithm. The algorithm generally emphasizes the setting of corresponding modes for information. When the teacher clicks and browses, certain browsing records will be generated [13]. Users' preferences are remembered through browsing records, and ideological and political content is accurately integrated into the algorithm [10].

Table2.Advantages of algorithm in ideological and political teaching

Advantages of algorithm in ideological and political teaching		
<p>The precision production of ideological and political education can be realized. Ideological and political education can use the algorithm to detect the vagrancy of the system and make precise customization by using the algorithm analysis</p>	<p>It can promote accurate formulation of ideological and political education. In the process of using the precise determination method, it is necessary to set specific conditions for teaching scenes and carry out targeted teaching according to the preferences of college students, so as to maximize the optimal teaching effect</p>	<p>The algorithm generally emphasizes the setting of corresponding modes for information. When the teacher clicks and browses, certain browsing records will be generated. Users' preferences are remembered through browsing records, and ideological and political content is accurately integrated into the algorithm</p>

First, the precision production of ideological and political education can be realized. Ideological and political education can use the algorithm to detect the vagrancy of the system and make precise customization by using the algorithm analysis.

Through the computer to coordinate the development of personalized education programs, in-depth analysis of learning technology to reduce errors as far as possible. In addition, ranking method can be used to select learning programs, and big data relevance algorithm can be used to analyze educational programs and students' preferences [14].

Second, it can promote accurate formulation of ideological and political education. In the process of using the precise determination method, it is necessary to set specific conditions for teaching scenes and carry out targeted teaching according to the preferences of college students, so as to maximize the optimal teaching effect.

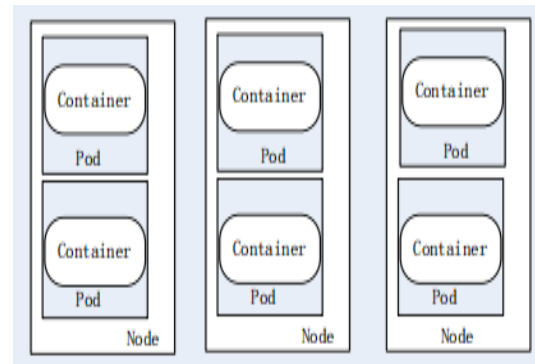


Figure 4 Basic structural framework

5 CONCLUSION

By deep analysis of college students semi-structured and unstructured algorithm of original data, and translating structured correlation data, the ideological and political workers can accurately grasp the overall situation and change tendency of college students, so as to grasp the effect of the panoramic view of the ideological and political education, realize the all-round, multi-angle digital integrity evaluation. Links with the algorithm of quantitative data, platform of real-time monitoring data, digital indicators related to data link, through accurate induction, depth of huge amounts of

data integration, ideological and political workers can be either on the overall analysis of the students, the correlation of the data and can through the rule of data correlation mining hidden behind.

To fully grasp the evolution trajectory of college students' ideas after receiving education, and timely track the state of college students' ideology, so as to achieve a virtuous cycle between accurate evaluation and educational optimization.

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