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*Retraction*

# Retracted: Application Analysis of Multi-Intelligence Optimization Decision-Making Method in College Students' Ideological and Political Education System

**Security and Communication Networks**

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope
(2) Discrepancies in the description of the research reported
(3) Discrepancies between the availability of data and the research described
(4) Inappropriate citations
(5) Incoherent, meaningless and/or irrelevant content included in the article
(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

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

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

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

## References

[1] B. Tian, Z. Xie, and W. Peng, "Application Analysis of Multi-Intelligence Optimization Decision-Making Method in College Students' Ideological and Political Education System," *Security and Communication Networks*, vol. 2022, Article ID 8999757, 9 pages, 2022.

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*Research Article*

# Application Analysis of Multi-Intelligence Optimization Decision-Making Method in College Students' Ideological and Political Education System

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Today's society is a society with diversified information. The rapid change of information also affects the ideological and political education in universities. Therefore, the fixed thinking of ideological and political education in universities tells students, which is an educational way in line with the development of the times. We should follow up with the rapidly changing times at any time, change with the times, and update the thinking and systematic way of the ideological and political education system at any time. In the ideological and political education of college students, diversified teaching methods and multiobjective recommendation systems are implemented and then combined with traditional ideological and political teaching methods. The two ways complement each other and promote each other so as to achieve higher learning efficiency and better learning effect. The optimization algorithm of multiobjective recommendation should be used to further improve the ideological and political education system. By analyzing the optimization results and performance comparison of various algorithms, we find the most suitable algorithm model for optimizing the ideological and political education system. The multiobjective-recommended ideological and political education system for college students needs to fully improve the teaching tasks of teachers and students in two stages. A reasonable and scientific system recommendation mechanism should take into account students' own learning preferences, subject types, ideological and political teacher information, curriculum information, curriculum evaluation, curriculum relevance, and other multiobjective data. This paper achieves the highest performance and the lowest time cost of the ideological and political education system through multiobjective evolutionary optimization method.

## 1. Introduction

Under the new social background and the environment of network development, the extreme imbalance of social development leads to an insufficient imbalance of human development, which makes how to make people develop in a balanced way become the focus of this era. As a course of ideological and political education guiding people's ideological development, people's balanced development guides a new direction and injects new blood into its reform in this era. Lon et al. [1] verified the application of this algorithm through a case study of a numerical high road construction project and proves its ability to generate nondominated solutions. Compared with the nondominated sorting genetic algorithm (NSGA-II), multiobjective particle swarm optimization (MOPSO), multiobjective differential evolution (MODE), and previous results, it verifies the efficiency and effectiveness of the proposed algorithm. A multiobjective mixed-integer linear programming (MOMILP) model is proposed in [2], which is used to assign a group of flights to different runways and determine their actual arrival and departure times. Chattopadhyay and Banerjee [3] compare the performance of the heuristic method with that of the optimal method, and through experiments on WSC-2009 and ICEBE-2005 data sets, they show the effectiveness of our proposal compared with other classical methods for the same problem setting [4]. These pre-Pareto solutions of MOP have various characteristics, such as convex,

nonconvex, and discrete, and can also be used to solve multiobjective design applications with unique functions. In the stratified random survey for multispecies abundance index estimation in reference [5], the differences and seasonal changes in the stratigraphic abundance of different species should be comprehensively considered in the sampling work distribution of each stratum. Fang et al. [6] realize multiobjective and ultrahigh reliability control scheme, which is suitable for LCL grid-connected inverter systems with input series output parallel connection. Stanojevic et al. [7] introduce two clear linear models to solve the fuzzy multiobjective linear fractional programming problem. Niquepa et al. [8] propose a fuzzy multiobjective optimization method for planning independent power generation systems. Obloj and Sengul [9] show that multiple goals can bring costs to organizations, but it also provides benefits to reduce the trade-off of achieving higher performance in multiple dimensions. Lin et al. [10] use fast SoRting strategy (FSR) and prelarge concepts to find optimal deletion transactions and speed up the iterative process. In the developed NSGA2DT, several sets of Pareto solutions can be easily found, thus avoiding the local optimization problem of the single-objective method. Ciripoi et al. [11] use multiobjective linear programming to solve the polyhedral projection problem. Hahn et al. [12] prove that the multiobjective synthesis problem is PSPACE-hard and provides a decision-making algorithm based on value iteration to approximate the Pareto set of realizable points. Huang et al. [13] modeled the feature selection process as a multiobjective optimization problem in order to obtain the optimal number of selected features reasonably and automatically. Zaman and Shehu [14] balance multiple targets in conformational sampling to control bait diversity in template-free protein structure prediction. Mohammed et al. [15] optimize multiple conflicting goals through controlled and directional morphological changes in urban structure. Prayogo and Kusuma [16] studied the optimization of resource balance problems under a multiobjective standard based on symbiotic organism search. In reference [17], the effectiveness of the proposed method is explained by taking the industrial case study of a two-way nonbackward drivable roller clutch as an industrial case, and the results are compared and discussed and verified. Lovison and Miettinen [18] propose an accurate and as realistic direct method for multiple objectives, provides proof of global convergence and tests the efficiency of the algorithm on nonlinear and non-convex vector functions. The multiobjective model developed in reference [19] can meet the operational production requirements of a fleet using 85% of the required fleet size of the deterministic calculation. Habibe and Fatemeh [20] introduces the multiobjective programming method of linear bilevel multifollower programming. Duc and Luong [21] propose an effective and efficient adaptive multiobjective algorithm called AMODE, which is used to optimize the schedule by considering time, cost, and risk at the same time. The spiral model provided in the literature [22] shows the continuity of content and overcomes the gap in programming knowledge between high school and higher education. Iva et al. [23] emphasize the importance of reducing educational inequalities and the desirability of improving access to higher education, expanding access to complete education later in life and promoting and supporting lifelong learning. Sabuncuoglu and Halayqeh [24] investigated EFL learners' views on learner autonomy and the extent to which their views on their responsibilities, abilities, motivation, and their activities and behaviors in and out of the classroom are actually applied. Parkes et al. [25] state that universities must resist the assumption that the "problem" of student retention rate and performance can be solved only by numbers and algorithms; rather, the work in Los Angeles must be based on a reconnection with agreed values related to the purposes of higher education, including democratic participation, recognition of diversity and personal experience, and the process of becoming.

## 2. Current Situation of Ideological and Political Education at Home and Abroad

*2.1. Attach Importance to Ideological and Political Education in China.* People's ideas are always influenced by living environment, social status, national beliefs, and cultural traditions. Pure education of cultural knowledge and scientific and technological knowledge is not enough to make people establish a correct idea. Many scholars and experts still have different ideas and opinions on the internal significance of the ideological and political education environment. At present, there are mainly the following three concepts: first, the environment of ideological and political education refers to the sum of all non-self-factors that have an impact on the formation and development of ideological and political education activities and the ideological and moral character of ideological and political education objects. On the one hand, concept 2 refers to the total environment of all external factors that lead to ideological and political education and changes in people's ideological and moral character. On the other hand, it refers to the environment as an educational factor in the process of educational activities. The ideological and political education environment here includes both spontaneous ideological and political education environment and conscious environment of the educated's activities, which is constructed according to the ideas, requirements, and purposes of the impactors. From the living environment, social environment, and learning environment, in-depth analysis of the macroenvironment on the ideological impact of college students is performed. From five aspects such as family environment, school environment, social organization environment, community environment, and peer environment, this paper discusses the influence of microenvironment on ideological and political education. The contemporary college students' environment and network environment bring new blood to the ideological and political education system of college students. This paper explores and updates the effective ways and methods to enhance the ideological and political education of college students in the computer age from the aspects of network age construction, educational culture construction, family self-construction, and college students' self-quality. Scholars put forward different opinions on the optimization of the

environmental system in which college students' ideological and political education is located, which has positive guiding significance for educators and educatees to optimize and update the system together and expand the rich system.

*2.2. Attach Importance to Ideological and Political Education Abroad.* Foreign countries have not put forward the concept of "ideological and political education," but quietly carry out ideological and political education under the banner of "moral education, religious education, history education," so there are very few research results on improving their own ideological education environment. Foreign scholars' research on the educational environment in which education is really located mainly focuses on two aspects: on the one hand, the influence of environment on people; on the other hand, the influence of environment on education. Piaget's epistemology and Bandura's interactive determinism are the most representative ones in the discussion of the relationship between environment and human beings. Piaget pointed out in "Principles of Genetic Epistemology" that biological development is an interactive process of two behaviors: individual living environment and how to adapt to the environment. He emphasizes the relationship and function between subject and object, and this interaction is regulated by individual willpower. Bandura emphasizes that while the environment transforms people, people can also react to the environment in the theory of interactive deterministic relationship. Thus, Bandura's interactive learning theory not only shows that the environment can transform people but also shows that you should pay more attention to your own willpower.

*2.3. System Structure of Ideological and Political Education for College Students.* According to the system theory, every system has its own internal structure. "Structure refers to the relatively stable contact mode, organizational order, and the internal manifestation of its time-space relationship among the various components of the system." The structure of the environment in which college students learn ideological and political education refers to the mutual influence of the major factors in the system, which is the structured social existence of its internal elements and reflects the interrelation and mutual restriction of the elements in the system. The systematic result of the learning environment in which the educated live is not to make a simple set of each element variable of the system, it is a structural organic unity formed by entering the relationship of elements. College students are in the environment of ideological and political education, and the specific relationship and order among the major elements constitute the systematic structure of the ideological and political environment for the educated to learn themselves. Every system has its internal structure, and its internal structure can be regarded as a system. College students should understand the basic structural levels of their own environment for learning education and their interrelationships, and know what important guiding significance it has for optimizing the system. The environment structure is shown in Figure 1:

## 3. Correlation Algorithm

*3.1. Multiobjective Evolutionary Algorithm of Ideological and Political System*

(1) The initialization stage is similar to the genetic algorithm. In the MOTLBO algorithm, a population is a class, and every student in the class is randomly generated in the feasible region of decision variables. Then, the initial class group $x^0_{(i,j)}$ can be expressed as

$$x^0_{(i,j)} = x^{\min}_j + \text{rand} \times \left(x^{\max}_j - x^{\min}_j\right). \tag{1}$$

The ideological and political scores of the first student after $g$ iterations are

$$x^g_i = \left[x^g_{(i,1)}, x^g_{(i,2)}, \ldots, x^g_{(i,D)}\right]. \tag{2}$$

Objective function:

$$\begin{bmatrix} Y^g_{a,i} \\ Y^g_{b,i} \end{bmatrix} = \begin{bmatrix} f_a\left(X^g_i\right) \\ f_b\left(X^g_i\right) \end{bmatrix}. \tag{3}$$

(2) The teaching stage of ideological and political teachers.

Average achievement:

$$M^g = \left[m^g_1, m^g_2, \ldots, m\right]. \tag{4}$$

System update in the teacher stage:

$$X^g_{\text{new},i} = X^g_{\text{old},i} + \text{rand} \times \left(X^g_{\text{teacher}} - TF \times M^g\right). \tag{5}$$

Learning mechanism of students in the learning stage:

$$X^g_{\text{new},i}|a = \begin{cases} X^g_{\text{old},i} + \text{rand} \times \left(X^g_i - X^g_h\right), & \text{if}\left(Y^g_{a,i} < Y^g_{a,h}\right), \\ X^g_{\text{old},i} + \text{rand} \times \left(X^g_h - X^g_i\right), & \text{otherwise}, \end{cases}$$

$$X^g_{\text{new},i}|b = \begin{cases} X^g_{\text{old},i} + \text{rand} \times \left(X^g_i - X^g_h\right), & \text{if}\left(Y^g_{b,i} < Y^g_{b,h}\right), \\ X^g_{\text{old},i} + \text{rand} \times \left(X^g_h - X^g_i\right), & \text{otherwise}. \end{cases} \tag{6}$$

*3.2. Multiobjective Simulated Annealing Algorithm for Ideological and Political System.* Objective function:

$$\min f_1\left(y^m_j\right) = \left(\frac{f_3\left(y^m_j\right)}{f_3(\partial)}\right),$$

$$\min f_2\left(y^m_j\right) = \left(\frac{f_2(\partial)}{f_2\left(y^m_j\right)}\right), \tag{7}$$

$$\min f_3\left(y^m_j\right) = \left(\frac{f_3\left(y^m_j\right)}{f_3(\partial)}\right).$$

Multiobjective initial solution:

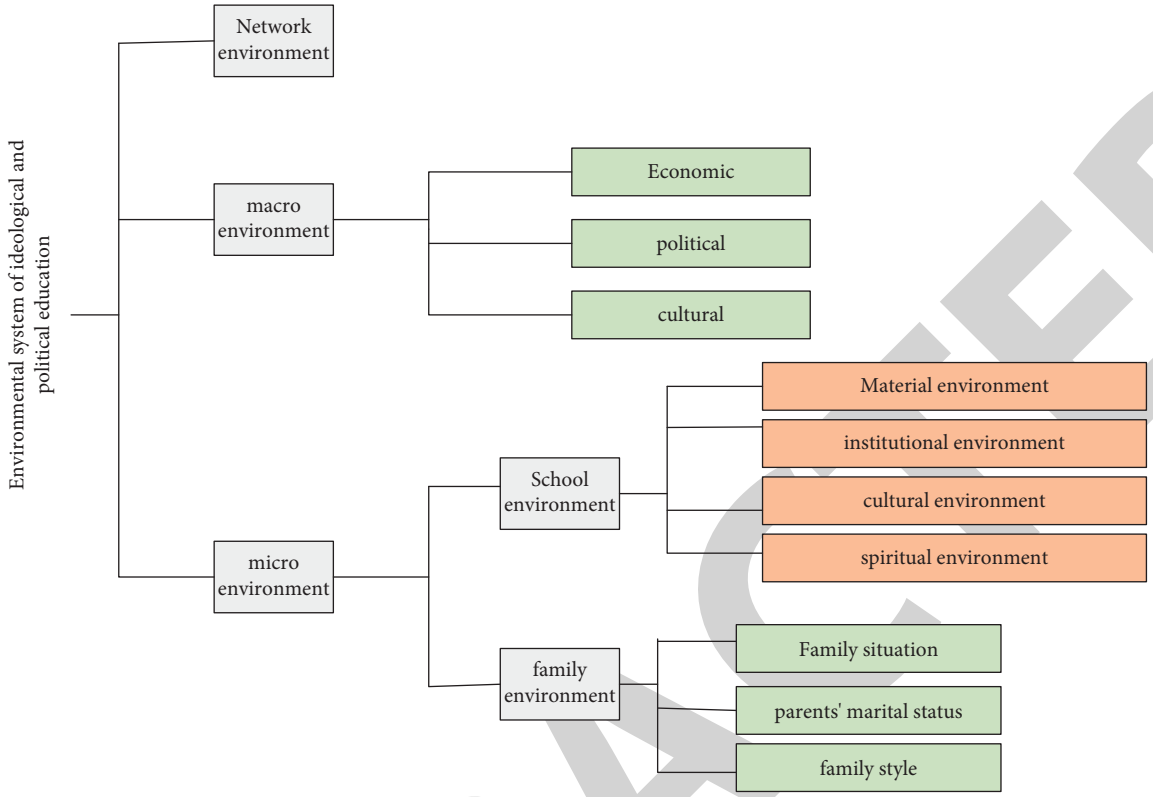


Figure 1: Environment structure.

$$\min f = \omega_1 * f_1\left(y_j^m\right) - \omega_2 * f_2\left(y_j^m\right) + \omega_3 * f_3\left(y_j^m\right). \quad (8)$$

Take the largest subtarget for annealing, expressed by $f(y)$:

$$f(y) = \max\left\{f_1(y_i), \left|f_2(y_i)\right|, f_3(y_i)\right\}. \quad (9)$$

Update variables:

$$y_{i+1} = y_i - \eta + 2 * \eta * \text{rand}. \quad (10)$$

*3.3. Multiobjective Ant Colony Optimization Algorithm for Ideological and Political System.* The moving formula of students' liking for ideological and political courses is as follows:

$$j = \arg\max\left\{\left[\tau_{ij}(t)\right]\left[\eta_{ij}^1(t)\right]\left[\eta_{ij}^2(t)\right]^{(1-\lambda)\beta}\right\}. \quad (11)$$

Probability of degree change:

$$p_{ij}^k t = \frac{\left[\tau_{ij}(t)\right]\left[\eta_{ij}^1(t)\right]\left[\eta_{ij}^2(t)\right]^{(1-\lambda)\beta}}{\sum_{s\in allowed}\left[\tau_{is}(t)\right]\left[\eta_{is}^1(t)\right]\left[\eta_{is}^2(t)\right]^{(1-\lambda)\beta}}. \quad (12)$$

Information update:

$$\tau_{ij} = (1-\rho)\cdot\tau_{ij} + \rho\cdot\tau_0. \quad (13)$$

Global update:

$$\tau_{ij} = (1-\rho)\cdot\tau_{ij} + \frac{\rho}{\left(Z_1(S)\cdot Z_2(S)\right)}. \quad (14)$$

*3.4. Multiobjective Particle Swarm Optimization Algorithm for Ideological and Political System.* Normalization function:

$$f'(x) = \left(\frac{f(x) - f_{\min}}{f_{\max} - f_{\min}}\right) - \sin\left(2\pi\frac{f(x) - f_{\min}}{f_{\max} - f_{\min}}\right). \quad (15)$$

The evaluation function is obtained:

$$Fp_{pri}\ ,\ p_{pri} = \omega_1 M'\left(p_{pri}, p_{\text{sec}}\right) + \omega_2 MIRR'\left(p_{pri}, p_{\text{sec}}\right) + \left[-\omega_3 S'\left(p_{pri}, p_{\text{sec}}\right)\right]. \quad (16)$$

Location update:

$$\text{Position}_{i+1} = \text{position}_i + v_i. \quad (17)$$

*3.5. Constraints of Multiobjective Algorithm.*

$$\begin{cases} \min f = F(x) = \left(f_1 x, f_2 x, \ldots, f_M x\right)^T, \\ s.t, g_i x \geq 0 \quad i = 1, 2, \ldots, q, \\ h_j(x) = 0 \quad j = 1, 2, \ldots, p. \end{cases} \quad (18)$$

Introducing the penalty factor, the original problem is

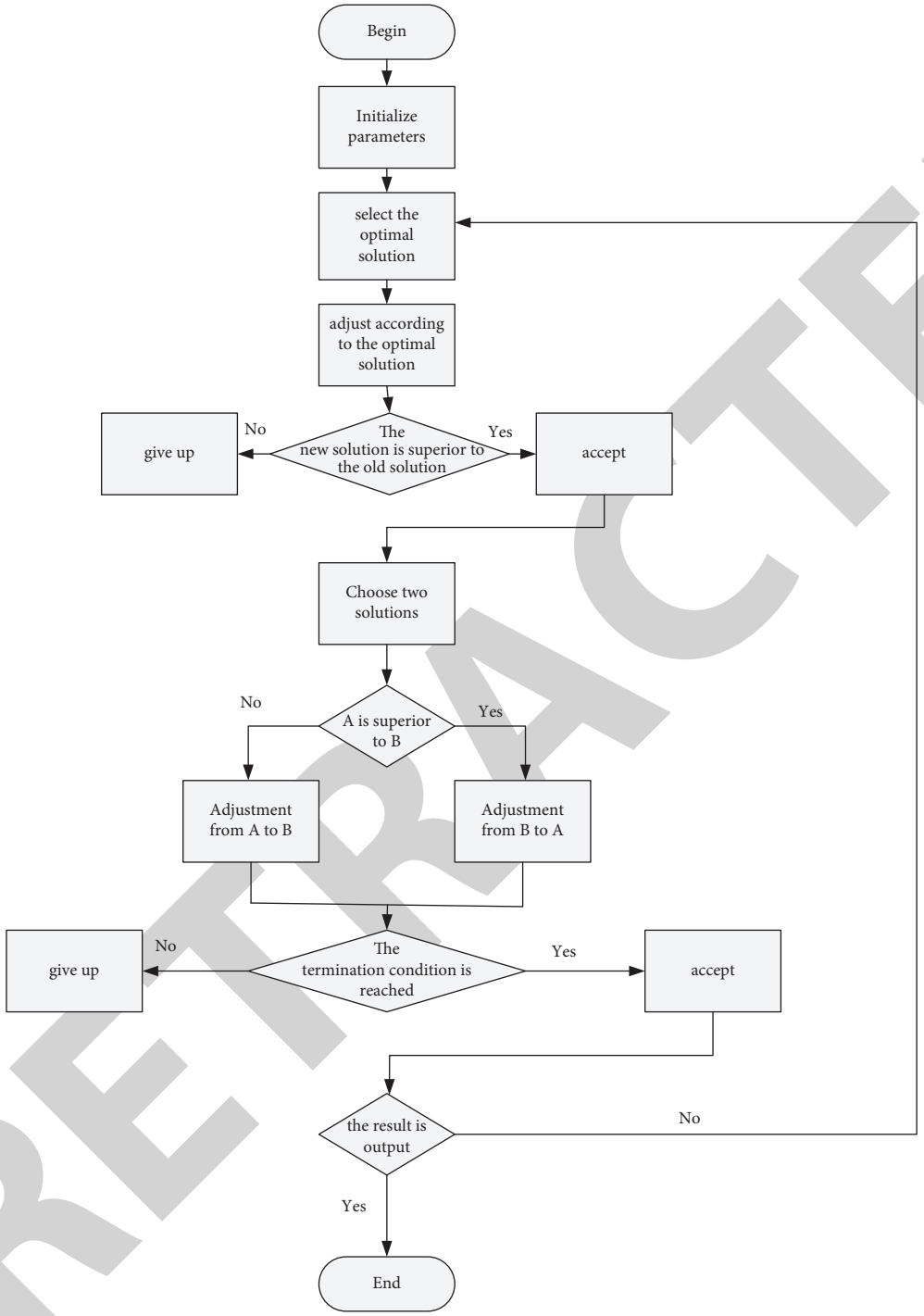


Figure 2: Algorithm flow.

$$\min T(x,\sigma) = F(x) + \sigma P(x). \tag{19}$$

The penalty function is

$$P(x) = \sum_{i=1}^{q} \varnothing(g_i x) + \sum_{j=1}^{p} \varphi\left(h_j(x)\right). \tag{20}$$

Functions $\varnothing$ and $\varphi$ satisfy the following continuous function:

$$\varnothing(g_i x) = \begin{cases} 0, g_i x \geq 0, \\ \left[\max\{0, g_i x\}\right]^2 g_i x < 0 \end{cases} \left(\omega_1 + \omega_2 + \omega_3 = 1\right).$$

$$\varphi\left(h_j(x)\right) = \begin{cases} 0, h_j x = 0, \\ \left[h_j x\right]^2 h_j x \neq 0. \end{cases} \tag{21}$$

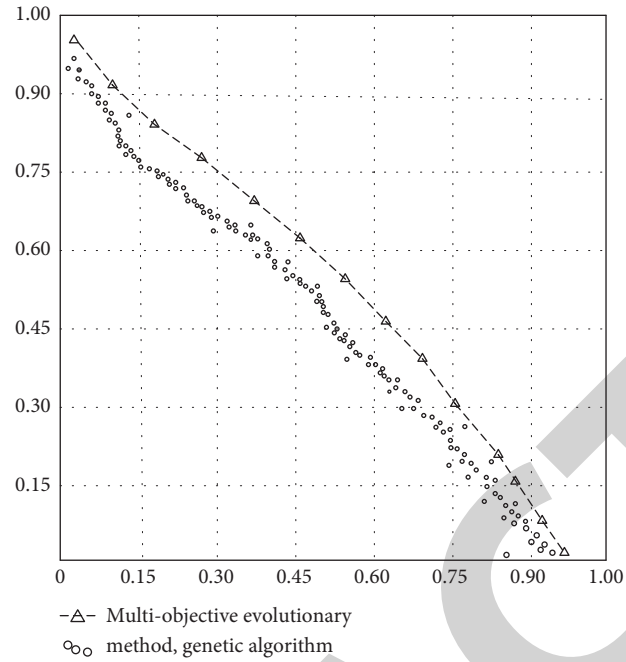


Figure 3: Result distribution map.

## 4. Experiment

According to the MOTLBO algorithm, the environmental system for educators to teach ideological and political courses is optimized at the teacher stage and the student stage respectively. The process is shown in Figure 2.

*4.1. Simulation Experiment.* The initial conditions are set as follows: set the population size to 100, and test the distribution of the results of the multiobjective evolution method and ant colony algorithm when dealing with constraints, as shown in Figure 3:

The results obtained by these two methods are tested, and the result distribution of the genetic algorithm is more dispersed than that of the multiobjective evolutionary method. The formula is as follows:

$$S - \sqrt{\frac{1}{|p|-1}\sum_{i=1}^{|p|}\left(\overline{d}-d_i\right)^2}, \tag{22}$$

$$GD^*\left(P,P^*\right) = \frac{\sqrt{\sum_{v\in P}\mathrm{d}\left(v,P^*\right)}}{|P|}.$$

According to the evaluation index of the multiobjective optimization algorithm, three samples are selected to further evaluate the performance of the two algorithms, and the running time, convergence index, and distribution index of the algorithms are calculated. In order to avoid randomness, each algorithm is run independently 10 times according to the same initial conditions, and the mean value and variance of 10 runs are counted. The data results are shown in Table 1.

From the data in the table, we can know that the system of ideological education for imparters uses the multiobjective evolution method to run less time than the genetic algorithm, and its convergence and distribution are also better than the genetic algorithm.

*4.2. Model Comparison.* Considering the comparison of recommendation accuracy, recommendation recall, F value, and AUC value of four multiobjective algorithm models in recommending ideological and political education, the recommendation performance of the fusion model is verified as follows.

The accuracy of the four algorithm models is compared with different recommended numbers, as shown in Table 2:

The statistics data in the above table is given in a bar chart, as shown in Figure 4.

The ideological and political education system conducts recall rate pairs for four algorithm models at different recommended quantities, as shown in Table 3:

The statistics data in the above table is given in a bar chart, as shown in Figure 5.

Pair the $F$ values of the four algorithm models at different recommended quantities, as shown in Table 4.

The statistics data in the above table is given in a bar chart, as shown in Figure 6:

AUC value pairs are performed for the four algorithm models at different recommended quantities, as shown in Table 5.

The statistics data in the above table is given in a bar chart, as shown in Figure 7:

It can be seen from the chart of model comparison that the accuracy, recall, F value, and AUC value of the multiobjective evolution model are always higher than those of the

Table 1: Experimental data.

| Algorithms | Performance parameters | Multiobjective evolutionary method | | Genetic algorithm | |
|---|---|---|---|---|---|
| | | Mean value | Standard deviation | Mean value | Standard deviation |
| *Sample1* | Runtime | 15.012 | 12.014 | 10.011 | 9.031 |
| | Convergence | 2.352 | 3.669 | 5.769 | 4.569 |
| | Distribution | 8.341 | 6.342 | 5.342 | 4.352 |
| *Sample2* | Runtime | 15.323 | 14.582 | 9.982 | 9.082 |
| | Convergence | 2.713 | 2.431 | 6.451 | 4.411 |
| | Distribution | 9.584 | 5.439 | 5.439 | 4.519 |
| *Sample3* | Runtime | 15.37 | 14.111 | 10.111 | 9.812 |
| | Convergence | 2.936 | 2.618 | 5.628 | 4.128 |
| | Distribution | 3.753 | 2.192 | 1.142 | 0.998 |

Table 2: Data comparison table.

| Model | Quantity | | | | | | |
|---|---|---|---|---|---|---|---|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| Evolutionary algorithm | 0.41 | 0.39 | 0.38 | 0.38 | 0.39 | 0.37 | 0.37 |
| Genetic algorithm | 0.29 | 0.26 | 0.24 | 0.26 | 0.25 | 0.27 | 0.21 |
| Simulated annealing algorithm | 0.31 | 0.24 | 0.25 | 0.27 | 0.28 | 0.22 | 0.24 |
| Particle swarm optimization algorithm | 0.33 | 0.22 | 0.25 | 0.28 | 0.25 | 0.23 | 0.23 |

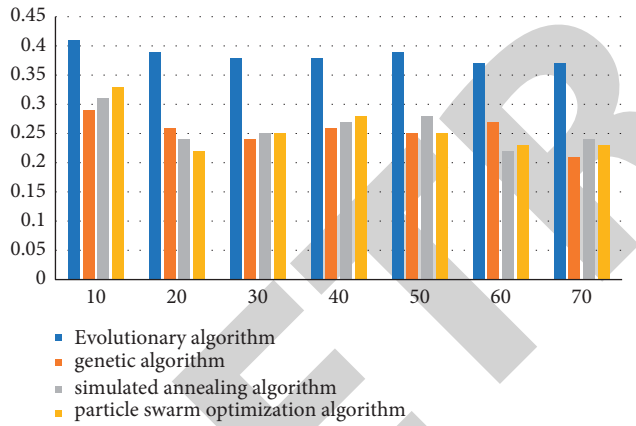


Figure 4: Comparison of the algorithm accuracy.

Table 3: Data comparison table.

| Model | Quantity | | | | | | |
|---|---|---|---|---|---|---|---|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| Evolutionary algorithm | 0.21 | 0.29 | 0.33 | 0.38 | 0.45 | 0.47 | 0.49 |
| Genetic algorithm | 0.12 | 0.16 | 0.20 | 0.26 | 0.31 | 0.33 | 0.35 |
| Simulated annealing algorithm | 0.14 | 0.15 | 0.25 | 0.27 | 0.28 | 0.32 | 0.34 |
| Particle swarm optimization algorithm | 0.13 | 0.16 | 0.25 | 0.28 | 0.30 | 0.33 | 0.36 |

other three algorithm models when the number of recommendations is different.

*4.3. Contrast Experiment.* There is an exponential relationship between the attenuation factor and the test times of the solution, and the search step will decrease with the

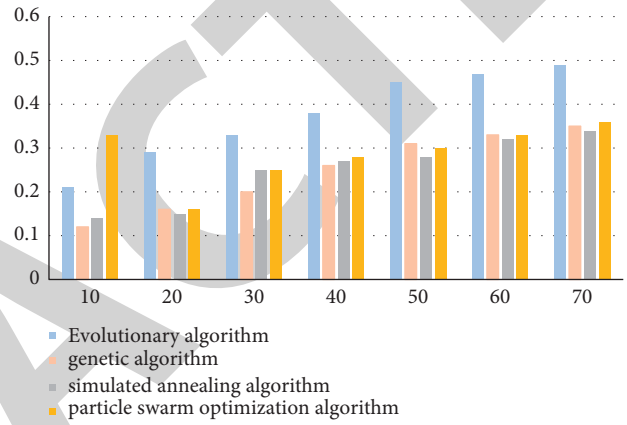


Figure 5: Comparison chart of algorithm recall rate.

Table 4: Data comparison table.

| Model | Quantity | | | | | | |
|---|---|---|---|---|---|---|---|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| Evolutionary algorithm | 0.171 | 0.239 | 0.353 | 0.381 | 0.451 | 0.472 | 0.491 |
| Genetic algorithm | 0.121 | 0.216 | 0.260 | 0.262 | 0.311 | 0.334 | 0.353 |
| Simulated annealing algorithm | 0.142 | 0.195 | 0.253 | 0.271 | 0.282 | 0.324 | 0.344 |
| Particle swarm optimization algorithm | 0.132 | 0.196 | 0.256 | 0.268 | 0.302 | 0.336 | 0.365 |

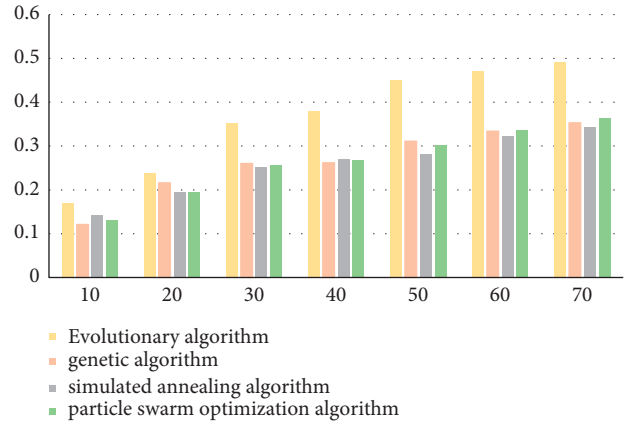


Figure 6: Comparison diagram of algorithm $F$ value.

Table 5: Data comparison table.

| Model | Quantity | | | | | | |
|---|---|---|---|---|---|---|---|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| Evolutionary algorithm | 0.271 | 0.339 | 0.453 | 0.581 | 0.651 | 0.772 | 0.891 |
| Genetic algorithm | 0.221 | 0.316 | 0.360 | 0.462 | 0.511 | 0.634 | 0.753 |
| Simulated annealing algorithm | 0.242 | 0.295 | 0.353 | 0.471 | 0.482 | 0.524 | 0.644 |
| Particle swarm optimization algorithm | 0.232 | 0.296 | 0.356 | 0.468 | 0.502 | 0.636 | 0.735 |

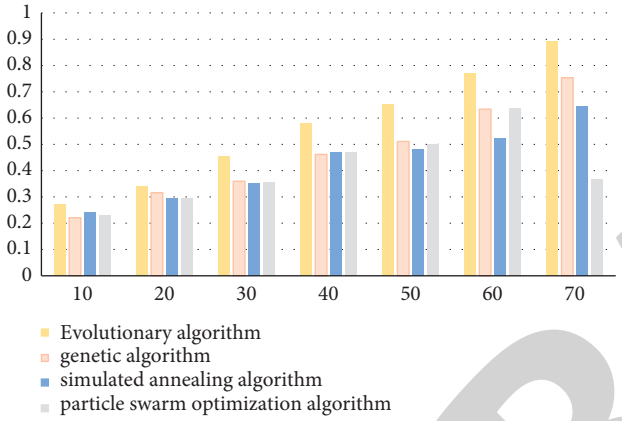


Figure 7: Comparison of AUC values of algorithms.

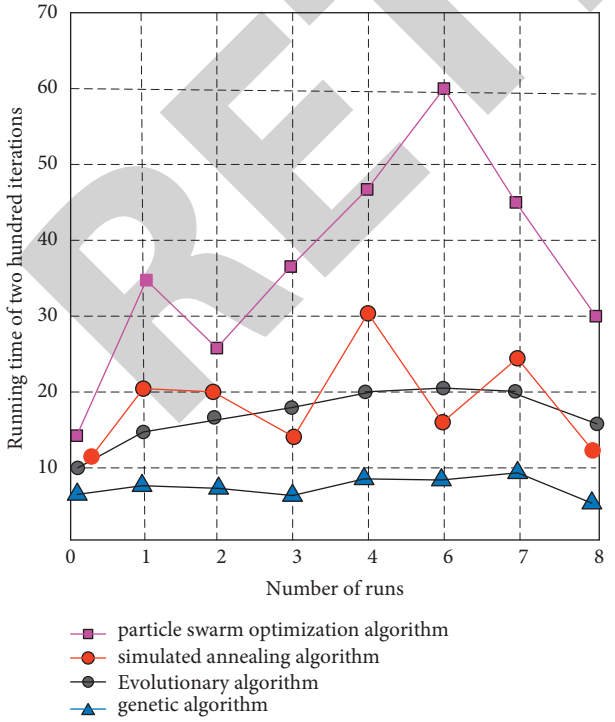


Figure 8: Comparative performance chart.

increase of algebra. If the attenuation factor is selected too large, the convergence speed of the algorithm will be reduced, and the performance of the algorithm will also be affected. We compare the performance of different algorithms, as shown in Figure 8.

## 5. Conclusion

The core of ideological education for college students is to deeply shape students' psychology and spirit, which is very critical for students' life. In college teaching, we should not only pay attention to the teaching of specialized courses but also pay attention to the important role of ideological politics in the formation of people's three views. Dare to innovate and reform, and constantly optimize the ideological and political teaching system in colleges and universities, not only to follow the law of the formation and development of college students' ideological and moral character but also to innovate and reform constantly so as to fundamentally improve the scientific and effective educational environment of colleges and universities, respect the dominant position of college students, and serve the healthy growth of college students. By comparing various recommendation algorithms, this paper draws the following conclusions:

(1) In the data table of recall rate and $F$ value for the four algorithms, the more the number of recommendations, the greater the recall rate and $F$ value, which is more practical.

(2) In the comparative experiment, the genetic algorithm and multiobjective evolutionary algorithm are the most stable among the four algorithm models due to the interference of the attenuation factor, but the performance of the multiobjective evolutionary algorithm is higher.

(3) Compared with the genetic algorithm, the results obtained by the multiobjective evolution method are more aggregated in convergence and distribution and have better performance.

## Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

## Conflicts of Interest

The authors declare that they have no conflicts of interest regarding this work.

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