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Retraction

Retracted: Discussion on Innovative Methods of Higher Teacher Education and Training Based on New Artificial Intelligence

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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) Manipulated or compromised peer review

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.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

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] H. Deng, W. Jia, and D. Chai, "Discussion on Innovative Methods of Higher Teacher Education and Training Based on New Artificial Intelligence," *Security and Communication Networks*, vol. 2022, Article ID 3899413, 10 pages, 2022.

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Research Article

Discussion on Innovative Methods of Higher Teacher Education and Training Based on New Artificial Intelligence

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In Chinese colleges, teachers' teaching level and proficiency in business knowledge are an important part of maintaining the knowledge system of colleges and universities. Therefore, in order to improve the teaching level of Chinese colleges and improve the knowledge reserve of college students, we should spare no effort to develop and improve the professional level of each teacher. The research on teacher training mode based on the development of teachers' teaching ability is of great significance to the development of colleges and the improvement of teaching quality. The new generation of artificial intelligence plays a pivotal role in the training of college teachers. This paper randomly selects 897 undergraduate teachers from 10 private colleges in a certain region of China who participate in higher teacher training for research. It mainly studies the application effect of several typical artificial intelligence technologies in evaluating higher teacher education and training. Specifically, the paper uses artificial intelligence as a carrier to predict the performance indicators of the three main modules involved in higher teacher education and training. The prediction results of several artificial intelligence techniques show that the support vector machine method based on immune algorithm optimization corresponds to the largest coefficient of determination and the smallest root mean square error. Therefore, it predicts the best. Furthermore, the comparison results between the predicted data and the measured data show that the artificial intelligence technology has a better prediction effect on the three module indicators. At the same time, there is a good exponential function relationship between the prediction data corresponding to the two main modules of organization and personnel.

1. Introduction

As we all know, colleges have always assumed the important functions of people training and scientific research. The cultivation of innovative talents depends on the continuous innovation of teachers. As an important factor in ensuring the quality of higher education, the teaching level of college teachers [1, 2] is directly related to the level of future education and the quality of people training. There is a close positive correlation between college teachers and higher education [3, 4]. The development of teachers is independent development and improves the intellectual support and power guarantee for the development of higher education. Furthermore, higher education is a platform for teachers to achieve independent development.

As we all know, college teachers are the first resource for educational development. A high-quality teaching team is a fundamental guarantee for improving the quality of education [5, 6]. Facing the ever-changing new situation of higher education reform [7, 8], the importance of college teacher training has become increasingly prominent. The original training system, concepts, and policies have obviously not been able to meet the needs of the development of teachers, so it is necessary to explore innovative teacher training models. This requires us to realize the transformation from the three aspects of training direction, training mode, and training method, improve the quality of training, and promote the development of teachers' teaching ability. Only by giving full play to the "hematopoietic" function of teacher training can we develop the unlimited creativity of teachers, which can promote the sustainable development of colleges.

Since the 1960s, with the continuous changes in educational theories and methods of education, significant changes have taken place in the guiding ideology, training form, and training content of college teacher training in developed countries. Countries in Europe and the United States have carried out practical explorations of training and formed a variety of teacher training models [9, 10]. These teacher training modes mainly include curriculum-based training mode, teacher-based training mode, school-scale training mode, collaborative training mode, and network training mode. Among them, the network training mode makes full use of modern high-tech media means, such as TV courses and teaching, telephone courses and teaching, network courses and teaching, and satellite communication courses and teaching. All in all, improving teachers' independent development level through teacher training is an effective measure to promote the reform and development of higher education.

Teacher training is conducive to grasping the direction of higher education reform. The direction of higher education reform is the vane of higher education development. Teacher training can improve teachers' awareness of higher education reform and development and better grasp the direction of higher education reform. Only by continuing to adhere to the teacher training in colleges can we continue to adapt to this direction and requirements, avoid detours, and promote the timeliness and effectiveness of higher education reform. Moreover, teacher training promotes the reform goal of the connotation development of higher education.

The connotation construction with quality improvement as the main content is the value demand of higher education reform. The fundamental purpose of teacher training is to improve the teaching and educating level of teachers; that is, it refers to the level of talent training. From this perspective, teacher training is a powerful driving force for the realization of higher education reform goals. On the one hand, teacher training is conducive to improving teachers' professional ethics, enhancing their sense of mission in teaching and educating people, and guiding teachers to take cultivating talents as their primary responsibility. This requires college teachers to take teaching as their first priority and concentrate on teaching and educating people. On the other hand, teacher training is conducive to improving the teaching level of teachers.

The establishment of teacher training process in colleges needs to consider the controllability of results and the evaluability of training results. The government and colleges should formulate specific measures to strengthen the control and inspection of the training process, attach importance to the evaluation of training results, and establish a dynamic and long-term evaluation mechanism. At the same time, colleges should track and evaluate the effect of teacher training, focusing on whether teachers have good results in terms of education and teaching ability, scientific research ability, and so on.

Through the above research demerits, we get the following insights. Teacher training in colleges and universities has a long way to go, and it is necessary for colleges and universities to establish teacher teaching development centers and establish a sound teacher training system. Such policies and reforms are of great significance to the improvement of teachers' teaching ability.

2. The Practice of Artificial Intelligence Technology in Higher Teacher Education and Training

The rapid transformation of the economic development model and the "education supply-side structural reform" will have a profound impact on the teaching concepts, teaching content, and teaching models of college teachers. Furthermore, these reform measures have put forward unprecedented new requirements for the professional knowledge reserve ability and comprehensive business quality of the teaching staff.

Studies [11, 12] have shown that the training of teachers in colleges generally includes four main modules: network training, general training, school sample training, and special customized training. Figure 1 shows the four important components of teacher education and training in colleges. As shown in Figure 1, the reform and innovation of teachers based on artificial intelligence requires practitioners to understand the training content, training form, and assessment and evaluation of the target school's teaching staff. Moreover, this reform model requires that the development model of college teacher training be explored from the perspective of artificial intelligence. Among them, general training is the main component of teachers in colleges at present. Various private colleges mainly use this training mode. School training is a training model based on the general environment of school education. Special customized training is a type of training for different needs obtained according to different training needs. Network training is a new training mode. It is a way of dealing with problems based on the Internet super platform.

Figure 1 also shows that school sample training is the basis of the entire professional training. Secondly, different training contents can be carried out for different groups through special customized training.

The current mode of college teacher training in China can be summarized into four aspects. They are government-led, training organization and coordination, and university implementation. At present, China's college teacher training has made great adjustments and improvements in the structure and operation mode. The concept and connotation of "teacher development" in universities are gradually established and become clearer. Teacher development and teacher training are distinct and closely related. Teacher training pays more attention to the requirements of external organizations. Teacher development is more focused on internal self-requirements. For teachers themselves, the development of teachers is not simply the improvement of teaching skills but more concerned with the improvement of teachers' own abilities and career planning. For schools, the development of teachers aims to promote their faster integration into school development through the improvement of teachers' abilities. The ultimate goal of promoting the

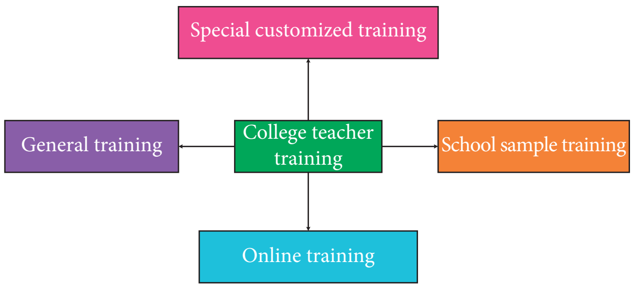


Figure 1: The main components of college teacher training.

development of the entire college education can be achieved through the individual professional development of teachers.

As the core resources of applied colleges, teachers' professional ability and literacy directly affect the quality of people training and the development potential of colleges. Therefore, it is an inevitable choice for colleges to accelerate the transformation and development of improving the effectiveness of teacher training and enhancing the professional ability and quality of teachers' teaching. However, at present, colleges, especially applied colleges, are still facing many difficulties in teacher training. These difficulties are mainly reflected in the insufficiency of training work, training guarantee, and training evaluation. Therefore, teacher education and training in colleges must also optimize training work, training guarantee, and training evaluation based on demand analysis theory.

Artificial intelligence has once again become the focus of the whole society. At present, the application of the new generation of artificial intelligence in the field of higher education is becoming more and more extensive. This requires us to actively carry out research on the training of college teachers from the perspective of artificial intelligence, analyze the new requirements and challenges faced by the training of college teachers, and propose strategies and implementation paths for the reconstruction of college teacher training. Only in this way can a new development momentum be injected into the creation of a high-quality and innovative teaching team in the new era.

Faced with the new situation and new tasks, on the basis of the successful practice of online teaching [13, 14], colleges need to continuously reform the system and mechanism of teacher training and establish new forms such as "Internet + training" and "artificial intelligence + teaching." This innovative model can promote the deep integration of next-generation artificial intelligence technology and training content.

Various application fields are inseparable from the assistance and blessing of artificial intelligence technology. The innovation and development of teacher education and training in colleges are no exception. Artificial intelligence is not limited by time and space. In addition, it has the unique advantage of being fast in replication and dissemination and can present rich effects. It can bring a new experience of intelligent "teaching" and "learning" to teachers and students and provide a wide range of intelligent tools and information service platforms for the training of college teachers. This paper introduces a general training performance evaluation system, which is referred to as the OTP model. At the same time, the paper selects 10 undergraduate colleges in a certain region of China as the research target and comprehensively understands the training situation and training performance of teachers in each college. Among them, OTP determines training requirements based on Organization, Task, and People. It determines the basic requirements of training on the basis of Organization, Task, and People. In order to quantify the evaluation indicators of higher teachers, the follow-up part of this paper mainly conducts prediction research on the performance data involved in three aspects: Organization, Task, and People.

In order to enable readers to grasp the structure of the paper, we introduce the writing ideas of the paper to everyone. First, we introduce several commonly used artificial intelligence techniques and introduce their arithmetic and application scope, respectively. Then, we take 10 undergraduate colleges in a certain region of China as the research target and conduct a systematic study on the performance evaluation indicators involved. Finally, through the introduction of artificial intelligence technology, predictive analysis and comparison are carried out.

3. Introduction to Artificial Intelligence Technology

In order to express each intelligent algorithm more conveniently, we make the following provisions in the paper. MSV stands for multidimensional support vector prediction based on immune optimization. LS-SVM-PSO stands for particle swarm optimized support vector machine. SVM stands for simple support vector machine.

3.1. Multidimensional Support Vector Prediction Based on Immune Optimization. Simple support vector machines [15, 16] reflect the functional relationship between two variables. This algorithm defines a series of calculation modes about two unknowns and achieves the prediction of the function of the dependent variable through multiple nonlinear calculation processes. In fact, a simple support vector machine can be simplified to a problem of solving the optimal solution of a function.

$$O(\varphi, \xi_i, \xi_i^*) = \frac{1}{2}\|\varphi\|^2 - D(\xi_i + \xi_i^*), \quad (1)$$

where ω is the control parameters involved in the fitting process; D represents the loss parameter that should be taken into account if miscalculation is encountered during the prediction process; O represents the number of whole datasets involved in the regression vector machine.

Researchers usually solve quadratic optimization problems involved in simple support vector machines by means of superposition multiplication. The equation form of the superposition multiplication can be expressed as (2).

$$P(\varphi, C, \phi_i, \phi_i^*, \beta_i, \beta_i^*, \gamma_i, \gamma_i^*) = \frac{1}{2}\omega \times \omega + C\sum_{i=1}^{k}(\phi_i + \phi_i^*) - \sum_{i=1}^{k}\beta_i[\phi_i + \varepsilon - y_i + g(x_i)]. \quad (2)$$

The basic kernel function of simple vector machine is the soul of the whole algorithm. This kernel function is shown in equation (3).

$$J(\lambda_i, \lambda_i^*) = -\frac{1}{2}\sum_{i,j=1}^{k}(\lambda_i - \lambda_i^*)(\lambda_j - \lambda_j^*)(y_i \cdot y_j) + \sum_{i=1}^{k}(\lambda_i - \lambda_i^*)y_i - \sum_{i=1}^{k}(\lambda_i + \lambda_i^*)\varepsilon. \quad (3)$$

The basic algorithm of multidimensional support vector regression machine is calculated as above. In addition, through the method of theoretical model derivation, we can obtain the expression of the overall multidimensional support vector machine.

$$g(y) = \sum_{i=1}^{k}(\beta_i - \beta_i^*)(y, y_i) + B, \quad (4)$$

where y represents the output value of the entire support vector machine system and B represents the intercept of the linear fit function.

It can be seen that the above analysis is aimed at the solutions of linear equations and has not been elaborated for the nonlinear situation. We introduce the concept of feature space to solve it. In the process of using feature space, we should first determine the concept of a kernel function.

$$l(y_i, y_j) = \varphi(y_i) \cdot \varphi(y_j). \quad (5)$$

In the formula, L and φ represent the mapping function of the input variable.

Traditional support vector machines are prediction algorithms set for one-dimensional variables. However, in practical applications, computational problems involving multiple variables are often encountered. This requires us to optimize the traditional algorithm so that it can better serve multivariate problems.

We address the above problem by defining the concept of loss function.

$$L(u_i) = \begin{cases} 0, & u_i < \varepsilon \\ (u_i - \varepsilon)^2, & u_i \geq \varepsilon \end{cases}, \quad (6)$$

where $\eta_i = \|\mathrm{d}_i\| = \sqrt{d_i^T d_i}; d_i^T = x_i^T - \pi^T(y_i)\alpha - B^t$; $\alpha = [\alpha^1, \cdots, \beta^N]$; $B = [B^1, \cdots, B^N]^T$; ϕ is the nonlinear mapping kernel function.

The piecewise function mentioned above can be transformed into the following form:

$$H_P(\varphi, B) = \frac{1}{2}\sum_{j=1}^{Q}\|\varphi^j\|^2 + CH(u_i), \quad (7)$$

where B and ψ represent two variables of the function vector space. Q represents the geometric size of the vector space. C represents the regression constant associated with the vector space.

By derivation of formula (8), we can get

$$H_P' = \frac{1}{2}\sum_{j=1}^{Q}\|\omega^j\|^2 + C\left(\sum_{i=1}^{n}L(u_i^k) + \frac{dL(u_i)}{du_i}\Big|_{u_i^k}\frac{(e_i^k)^T}{u_i^k}[e_i - e_i^k]\right). \quad (8)$$

In addition, the transformation from one-dimensional to multidimensional can be realized by constructing the matrix quadratic form of the above formula. Some scholars have found the mathematical relationship between multiple independent variables and dependent variables.

$$H_P'' = \frac{1}{2}\sum_{j=1}^{Q}\|\omega^j\|^2 + C\left(\sum_{i=1}^{n}L(u_i^k) + \frac{dL(u_i)}{du_i}\Big|_{u_i^k}\frac{u_i^2 - (u_i^k)^2}{2u_i^k}\right) = \frac{1}{2}\sum_{j=1}^{Q}\|\omega^j\|^2 + \frac{1}{2}\sum_{i=1}^{n}a_i u_i^2 + CT, \quad (9)$$

where $L_P''(\mathbf{W}, \mathrm{b})$ represents the second derivative of the vector space of the entire variable.

The immune system, as we know it, is a computational modality that produces irritable changes in response to changes in external stimuli [17, 18]. The animal antibody system receives the stimulation of external antigens, produces corresponding antibodies, and has a certain memory function for the unique antigens of the outside world. Similar to an animal's immune system, we can develop a computational model. In this mode, the independent variable corresponds to the antigen, and the dependent variable corresponds to the antibody. That is, one independent variable corresponds to one dependent variable.

In immune algorithm, the number of populations is a key physical quantity. In the actual operation process, the appropriate population number can control the reproduction speed of the population and increase the global optimization ability.

A typical multipeak function is used to enhance the application of the immune algorithm. The specific expression of this multimodal function can be expressed as

$$n(z) = \sum_{i=1}^{m-1}\left(100\left(z_{i+1} - z_i^2\right)^2 + (1 - z_i)^2\right). \quad (10)$$

In the calculation process, the multidimensional support vector machine needs to determine several necessary engineering parameters in advance to complete the subsequent calculation tasks. The purpose of this operation is to find the necessary time nodes required for the function to converge in the shortest possible time.

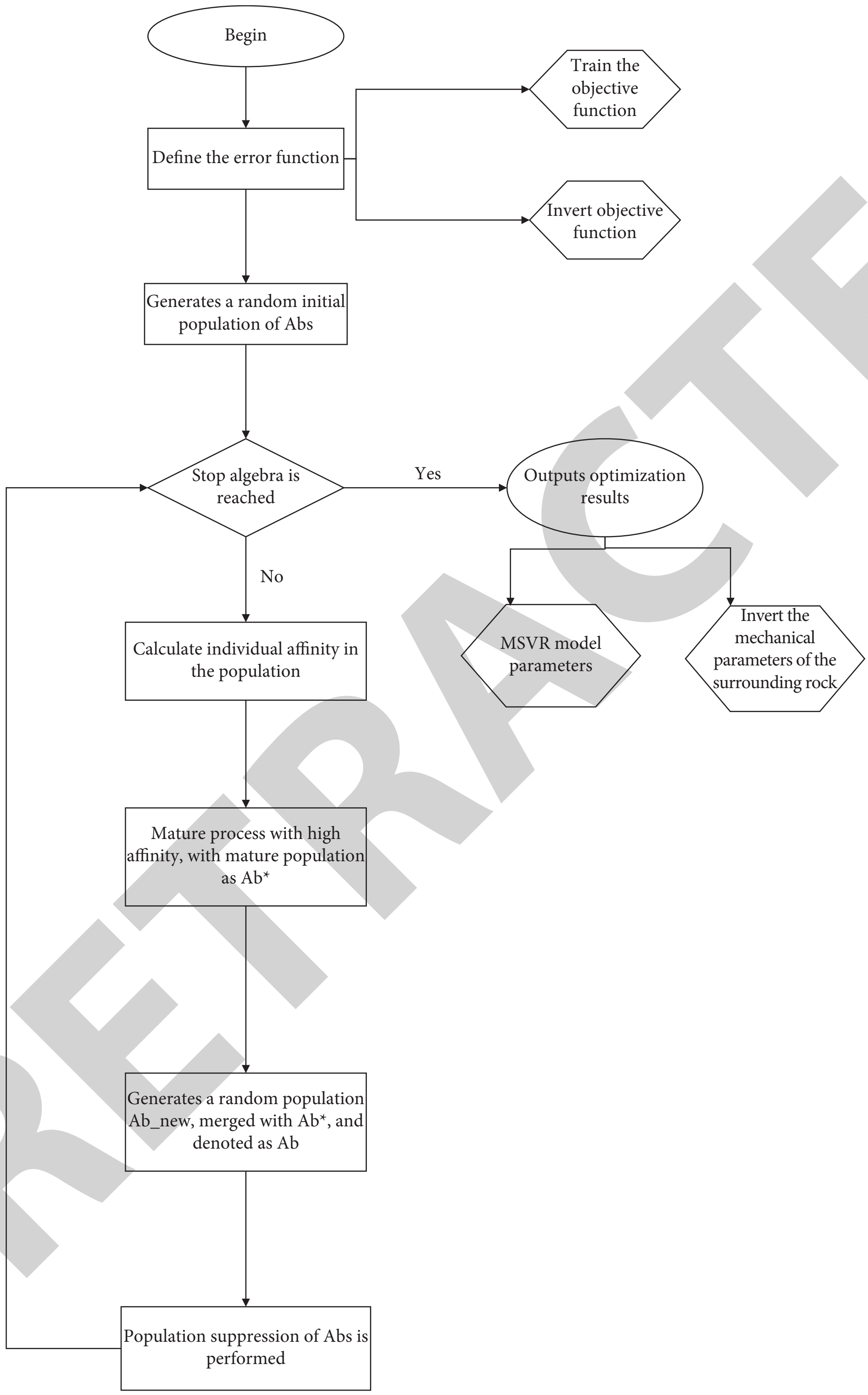


FIGURE 2: Computational process of multidimensional support vector machine combined immune algorithm.

During the training data phase, we use the same control function to reduce the relative error value of the overall function.

After the optimal multidimensional support vector machine model parameters are obtained through the optimization of immune algorithm or particle swarm algorithm, the calculation process of the entire artificial intelligence coupling algorithm is completed. Figure 2 shows the overall calculation process of the multidimensional support vector machine optimized by the immune algorithm.

3.2. Based on Particle Swarm-Least Squares Support Vector Machine Model. The LS-SVM algorithm is an optimization of the standard support vector machine algorithm. Its main optimization feature is the addition of equality constraints. In this way, we use the solution of the linear equation to solve the resulting solution of the inequality constraints.

The final optimization function of LS-SVM is

$$g(z) = \sum_{i=1}^{n} \xi_i \cdot K(z, z_i) + B. \tag{11}$$

In the formula, B is the bias constant; ξ_i is the Lagrange multiplier.

The kernel function selected in this paper is the Gaussian kernel function, and its expression can be expressed as follows:

$$h(z_i, z_j) = \exp\left(-\frac{\left\|z_i - z_j\right\|^2}{2\sigma^2}\right), \tag{12}$$

where z_i and z_j represent the collected value and average value of the research samples, respectively. $h(z_i, z_j)$ represents the linear distance of the sampled data point from the sampled mean z_j. This function mainly indicates the degree of dispersion of the distribution of the collected samples. That is, the function is similar to the concept of data variance. σ is the kernel width of the Gaussian kernel function.

In previous studies, we mostly choose the control parameters of the LS-SVM model empirically, and the obtained model is often not optimal. We use the particle swarm algorithm to iteratively optimize these two parameters of the LS-SVM model. This can improve the computational efficiency of the entire algorithm.

PSO [19, 20] is mainly used to simulate various social behaviors such as reproductive inversion between populations and birds looking for food. It is another form of expression for evolutionary algorithms. However, it is undeniable that it is simpler than the calculation rules of the genetic algorithm.

These particles automatically search for a single best position and a global best position according to the optimal problem solution, according to the optimization criteria found in nature.

During the calculation of PSO, we need to update the relative position and relative velocity of each calculation example in real time. In fact, we can complete the realization process of the above calculation principle through an iterative function.

$$\begin{cases} \theta_i = \omega \times \theta_i + c_1 r_1 (o_{best} - \lambda_i) + c_2 r_2 (k_{best} - \lambda_i). \\ x_i = x_{i-1} + \nu_i \end{cases} \tag{13}$$

In the formula, θi and λi represent the relationship between the speed and displacement of each particle, ω is the inertia weight, reflecting the real-time impact of the speed of the previous example on the current particle speed, and c represents the gradual learning and development of particles during the calculation process. It can be thought of as a learning process. o_{best} represents the information of the local optimal position. k_{best} represents the information of the global optimal position.

As shown in Figure 3, we can clearly identify the relationship between the computational performance of the algorithm and the computational time, that is, the number of iteration steps, as the intelligent algorithm progresses. Among them, 1–10 represent the process of 10 trials. It can be found that the sixth trial calculation takes the longest time to converge.

In the actual calculation and application process, the square sum of errors can be used as the optimal function expression for optimization of particle swarm advanced optimization

4. Practical Operation of Intelligent Algorithms in Higher Teacher Education Training

This paper randomly selects 897 teachers from grades 1 to 4 in 10 private colleges in a certain region of China who participate in higher teacher training for research [21, 22]. The sources of these sample data are mainly distributed in the following aspects. Among them, the first-year teachers account for 30%, the second-year teachers account for 25%, the third-year teachers account for 30%, and the remaining senior-year teachers account for the proportion.

Based on the three specific evaluation indicators corresponding to the OTP model, this section mainly studies the application of artificial intelligence in teacher training in colleges through the two artificial intelligence technologies introduced above. These three specific indicators mainly include three main modules: Organization, Task, and People. Among them, People is the basis of teacher training, and secondly, the Organization structure of the whole personnel can be created by arranging corresponding tasks.

In order to achieve the purpose of comparison of prediction effects, pure support vector machines are also used in this kind of research process.

The OTP mode is mainly implemented through the following steps. First of all, it is an organization-based needs analysis, which refers to the study of the needs of the organization in the development process based on various dimensions such as conditions and structure. Secondly, the training content is formulated by analyzing the knowledge and skills required to be competent for a certain job position. Finally, based on people-based demand analysis, starting

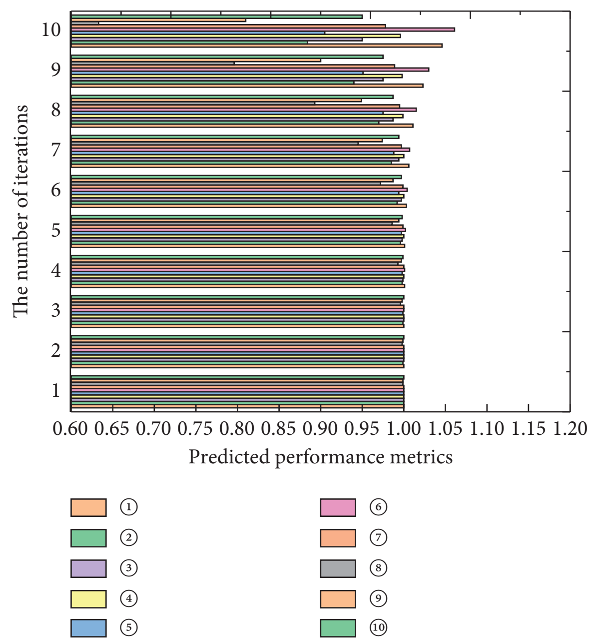


Figure 3: The math connections between the number of iterations and the prediction performance in particle swarm optimization.

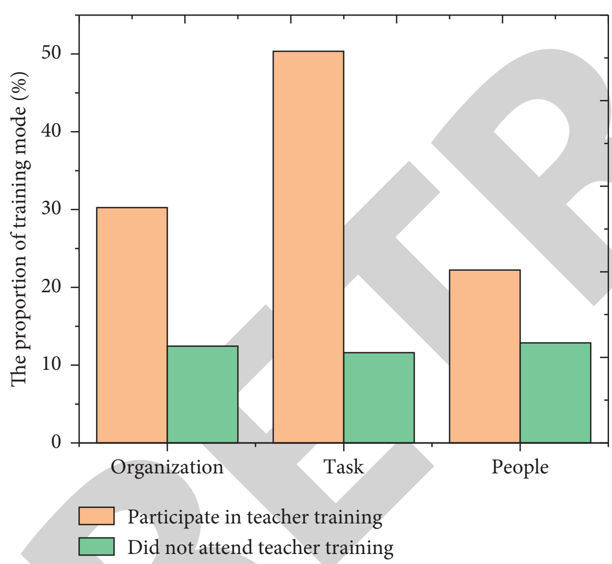


Figure 4: The proportion of the main modules of the three training.

from the actual situation of people, it can design personalized training programs based on their work bases. In addition, the performance analysis model considers performance gaps to be a basic need for training. However, the performance gap is entirely due to the gap in knowledge and skills.

Figure 4 shows the percentage of performance corresponding to the three main modules of Organization, Task, and People. As shown in Figure 4, the proportions corresponding to the three aspects of Organization, Task, and People all show similar changing laws. That is, the proportion of participating in teacher training is larger, which

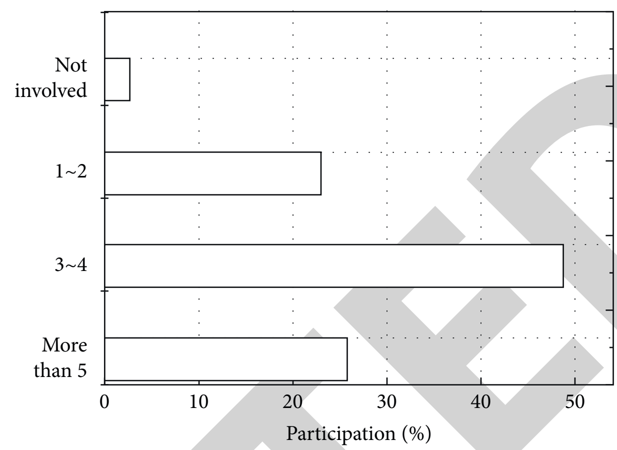


Figure 5: Percentage of teachers participating in educational training each week in the overall teacher data sample.

also shows the importance and necessity of teacher training from the side.

OTP mode [23, 24] and performance analysis mode are the more classic modes in training needs analysis. Both have great influence. The subsequent models are based on these two models. In the process of teacher training, colleges can use the OTP model and performance analysis model as a reference to optimize the training work, training guarantee, and training evaluation based on the actual situation. Only in this way can the effectiveness of teacher training be improved through targeted training. As we all know, the number of times of participating in training can roughly represent the teacher's preference for higher teacher education and training. Figure 5 shows the percentage of teachers participating in educational training each week in the overall teacher data sample. As shown in Figure 5, teachers who participated 3 to 4 times a week had the largest percentage. Its percentage is close to 50%. The corresponding proportion of more than 5 times is close to 25%. On the contrary, the proportion of not participating at one time is the smallest, which shows that college teachers attach great importance to teacher training.

Through the two coupled intelligent algorithms mentioned above, multidimensional support vector prediction based on immune optimization and based on particle swarm-least squares support vector machine model, the three specific indicators involved in higher teacher training are predicted and studied. In order to make the comparison conclusion more credible, this paper also adds the prediction research of pure support vector machine. It is well known that the squared correlation coefficient (r^2) and the root mean squared difference (RMSE) are two typical predictors [25]. Among them, the corresponding RMSE can be calculated by the following formula:

$$RMSE = \sqrt{\frac{1}{n} \times \sum_{i=1}^{n} \left| \left(y_i - x_i \right)^2 \right|}. \quad (14)$$

Table 1: Comparison of prediction performance of three big data technologies.

Artificial intelligence technology	The effect of regression analysis	
	Squared correlation coefficient (r^2)	Root mean squared difference (RMSE)
MSV	0.9238	0.2011
Based on LS-SVM-PSO	0.9821	0.1562
SVM	0.8674	0.268

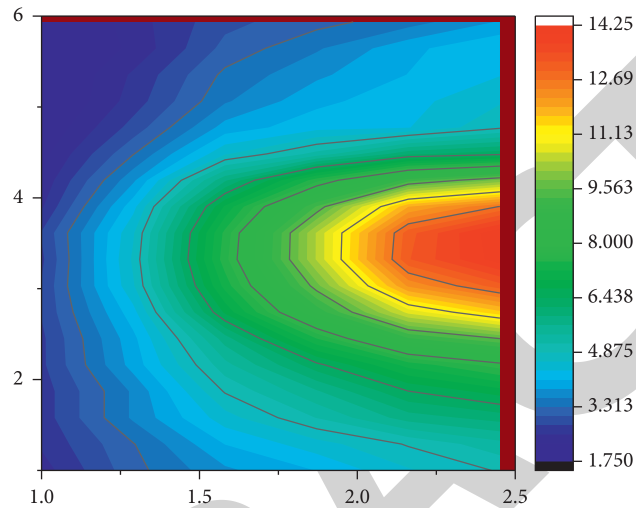
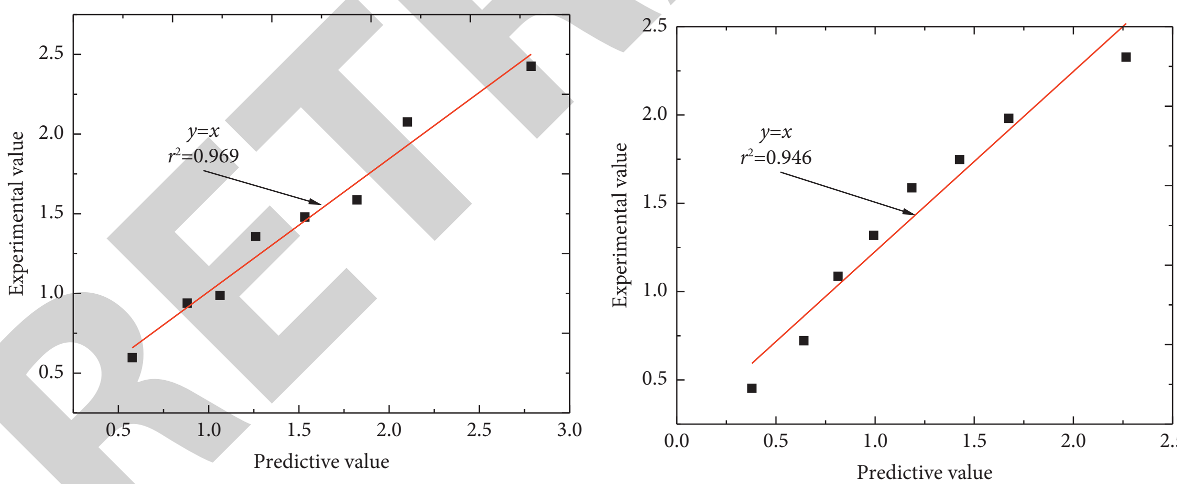


Figure 6: Predictive 3D effect display of typical intelligent algorithms.



(a) (b)

Figure 7: Mathematical correlation between measured and calculated values.

The next step is to compare the prediction effect of the artificial intelligence algorithm by comparing the coefficient of determination and the root mean square difference of the three algorithms. Table 1 shows the prediction performance of the three artificial intelligence algorithms.

It can be seen from Table 1 that the square of the correlation coefficient corresponding to LS-SVM-PSO is the largest, and the maximum value reaches 0.9821. The root mean squared difference is the smallest, and the minimum value is 0.1562. This shows that, compared with the other two algorithms, LS-SVM-PSO has the best prediction effect. The above analysis shows that LS-SVM-PSO can be used as a representative artificial intelligence technology in innovative research on higher teacher education and training.

In addition, in order to more systematically study the prediction effect of artificial intelligence technology, the two-

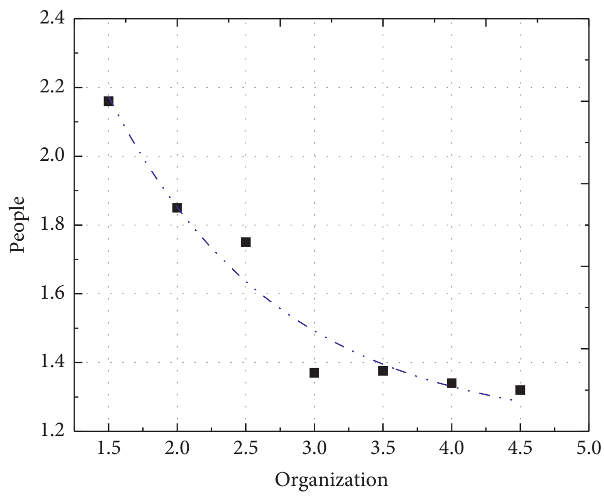


Figure 8: Data fitting relationship between organization and people.

dimensional contour cloud map of the prediction data obtained by the typical intelligent algorithms is drawn in Figure 6. As shown in Figure 6, the prediction results obtained by using artificial intelligence have good continuity. From Figure 6, we can see that the predicted data has the highest probability of appearing in the range of 2.0–2.5. On the contrary, in the range of 1.0–1.5, the probability of occurrence of predicted data is the lowest.

We show the measured data and predicted data of the four main modules involved in the training in Figure 7. It is worth noting that the prediction data is obtained based on LS-SVM-PSO. In particular, it should be pointed out that a represents the organization and b represents the people.

The functional relationship between organization and people is studied by means of data fitting, as shown in Figure 8. As shown in Figure 8, there is a certain exponential function relationship between the two.

5. Conclusion

In the new era of development, colleges are required to focus on the goals of talent training and the new needs of teachers' professional development. The paper introduces three different artificial intelligence technologies: support vector machine based on immune algorithm, support vector machine based on particle swarm optimization, and pure support vector machine. Using the above three artificial intelligence technologies, the performance data corresponding to the three main modules of Organization, Task, and People involved in higher teacher education and training were predicted and analyzed. The prediction effect shows that, for the research case introduced in this paper, LS-SVM-PSO has the best prediction effect. It can be found that the root mean square difference corresponding to LS-SVM-PSO is only 0.1562. In addition, the results of the comparison between the predicted data and the measured data show that the artificial intelligence technology has a better prediction effect on the three module indicators. Moreover, the forecast data of organizations and people exhibit a functional relationship of an exponential function.

Data Availability

The experimental data used to support the findings of this study can be obtained from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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