

Retraction

Retracted: Football Teaching Quality Evaluation and Promotion Strategy Based on Intelligent Algorithms in Higher Vocational Colleges

Wireless Communications and Mobile Computing

Received 25 July 2023; Accepted 25 July 2023; Published 26 July 2023

Copyright © 2023 Wireless Communications and Mobile Computing. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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.

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] X. Jiao and Z. Li, "Football Teaching Quality Evaluation and Promotion Strategy Based on Intelligent Algorithms in Higher Vocational Colleges," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 9469553, 7 pages, 2022.

Research Article

Football Teaching Quality Evaluation and Promotion Strategy Based on Intelligent Algorithms in Higher Vocational Colleges

Xiance Jiao¹ and Zefeng Li² 

¹College of Continuing Education, Henan Vocational College of Quality Engineering, Pingdingshan, 467000 Henan, China

²College of Artificial Intelligence, Chongqing Youth Vocational and Technical College, Chongqing 400712, China

Correspondence should be addressed to Zefeng Li; 41823047@xs.ustb.edu.cn

Received 20 January 2022; Revised 9 February 2022; Accepted 14 February 2022; Published 4 March 2022

Academic Editor: Shalli Rani

Copyright © 2022 Xiance Jiao and Zefeng Li. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

With the continuous deepening of the education reform, the number of students in higher vocational college (HVC) has increased, which puts forward higher requirements for the overall development of talents. Football is a relatively common sport in HVC with a certain degree of regularity and difficulty. Therefore, how to improve the level and the quality of teaching through scientific and reasonable teaching methods has become one of the problems that need to be solved in HVC. This article mainly focuses on the analysis and research of the traditional teaching mode and students' learning situation based on the intelligent algorithm and puts forward effective improvement suggestions and strategies for reference. This article uses questionnaire surveys and data analysis methods to understand the evaluation results of the school's teachers and students on the teaching quality (TQ) of the football course and the necessity of implementing improvement strategies through questionnaire surveys. According to the survey results, most of the interviewees had a high evaluation of the TQ of the school's football course. 46 of the teachers and students who participated in the evaluation rated the school's football course teaching methods as excellent, and only 2 rated it as passing. In addition, 49 of the teachers and students interviewed believe that it is necessary to optimize the strength of teachers, followed by perfecting the equipment configuration of the venue.

1. Introduction

With the continuous advancement of educational reforms, the state's emphasis on HVC has gradually increased, and football as an important physical education course has also been valued. However, there are still many shortcomings at present. With the increasingly fierce social competition, the education of HVC is facing a severe situation. How to improve the quality of teaching has become a topic of research and discussion by many scholars. In the new era, it is very important to train students in football skills. In addition, intelligent algorithms also help people solve many problems. Therefore, it is a necessity to carry out research on the evaluation of football TQ and improvement strategies in HVC in combination with intelligent algorithms.

At present, many scholars have conducted research on TQ evaluation and improvement strategies and have obtained very rich research results. For example, Tang

pointed out that, at present, football courses in vocational colleges obviously cannot adapt to the new requirements and face new challenges. How to effectively improve the quality of football teaching in HVC is an important issue at present [1]. Ma believes that mathematics teaching is an important part of the elementary school education system. In order to better promote the improvement of students' learning quality and related basic literacy, people should pay attention to the evaluation of the quality of elementary school mathematics teaching [2]. Xu pointed out that education quality evaluation is a relatively important link in the education management process of universities and plays a vital role in improving the overall level of education [3]. Therefore, this article starts from a new perspective, combined with intelligent algorithms, to carry out research on the evaluation of football TQ and promotion strategies in HVC, which has important practical significance and research value to a certain extent.

This article mainly discusses these aspects. First, the intelligent algorithm and its related research are explained. Then, the status quo of football teaching in HVC is introduced. In addition, it also discusses the evaluation of football TQ in HVC and the research on promotion strategies. Finally, a questionnaire survey was launched, and the corresponding survey results and conclusions were drawn.

2. Related Theoretical Overview and Research

2.1. Intelligent Algorithm and Related Research. Intelligent computing, also known as “soft computing,” refers to algorithms designed to mimic the laws of nature inspired by the laws of nature when humans study the natural world. Most of the various intelligent algorithms are proposed by humans through the study of natural processes and biological survival competition and gene mutations.

In recent years, humans have successfully used intelligent computing methods to solve many problems. People have carried out related research on intelligent algorithms. The current popular intelligent algorithms mainly include neural network algorithm, genetic algorithm, particle swarm algorithm, simulated annealing algorithm, and gray wolf optimization algorithm.

2.1.1. Neural Network Algorithm (NNA). NNA is one of the most widely used intelligent algorithms. The structure of the neural network is based on the simulation of human brain nerve tissue, which is composed of a large number of neurons through a variety of connections.

An artificial neural network is a system composed of a large number of interconnected neurons. This structural feature means that artificial neural networks have extremely strong information processing capabilities. Although each neuron only performs simple processing and calculation of information, the efficiency of information transmission between neurons is low, but the elements of each neuron are connected to each other and processed in cooperation, which ultimately endows super processing capabilities. Since the artificial neural network contains many neurons and the network’s powerful information storage capabilities, this makes the neural network have a strong ability to process unsafe information. It is precisely because of this structural characteristic and the characteristic of distributed information storage that the artificial neural network has good robustness and will not lose the memory ability of the original model and its very powerful nonlinearity by destroying a “neuron” “capacity.”

2.1.2. Genetic Algorithm. GA is an intelligent optimization method inspired by biological evolution theory. GA does not need to calculate the gradient when searching for the optimal solution, and the group discovery strategy can share information with individuals. When the GA was originally designed, it was not used to solve optimization problems, but to assist the development of artificial intelligence. The characteristic of GA is based on the parallel search of chromosome groups and selection, crossover, and mutation operations according to probability. This special evolution

mode is not available in other search algorithms. In the evolution of each population, the GA can process several individuals in the population at the same time through its unique hybridization and mutation operations, which largely hinders the optimization of the population. The GA is adaptive and self-learning. The algorithm uses fitness functions to evaluate people without further auxiliary information.

The research process of GA involves three operations: selection, crossover, and mutation. The three operations of the GA involve a certain degree of contingency, but it is not just a simple random search; the search of this algorithm is an efficient directed search.

In the GA, many different individuals form a population, and the individuals in the population have multiple genetic codes corresponding to them, because only in this way can crossover and mutation operations be performed. After the initial population is established, the individuals in the population are continuously updated in nature until the optimal solution is found. In each iteration, the GA selects the best individual based on the fitness score of the individual in the population. Then, use crossover and mutation operations to generate a new population and iterate this process until the stopping criterion is met.

If there are only two selection and crossover operations in a GA without mutation operation, the evolution process will fall into a local optimal situation prematurely. Therefore, in order not to affect the quality of the output result, a crossover operation must be performed [4, 5].

2.1.3. Particle Swarm Algorithm (PSA). PSA is one of the most classic algorithms in intelligent algorithms. It is an optimization algorithm proposed on the basis of simulating the predation behavior of birds, and it is also an algorithm based on group iteration. The algorithm requires fewer parameters, and the function of the PSA is simple and easy to program.

In the PSA, each bird in the population is considered a particle, and the initial solution of the problem is the initial position of the particle. The distance between each particle and the food is determined by the fitness function of the problem. Through particle predation, the particles always fly around the current best particle closest to the food. Particles always move in two positions; one is called the individual optimal position, and the other is the overall optimal position. After a period of cyclic movement, the particles will finally find the optimal position, thereby achieving the optimal solution of the global optimization goal. The particle velocity and position update of this algorithm can be expressed by

$$W_u(r+1) = iW_u(r) + a_1e_1(Q_u(r) - Z_u(r)) + a_2e_2(Q_j(r) - Z_u(r)), \quad (1)$$

$$Z_u(r+1) = Z_u(r) + W_u(r+1). \quad (2)$$

Among them, $W_u(r)$ represents the speed information of the u -th particle at time r , $Z_u(r)$ represents the position information of the u -th particle at time r , $Q_u(r)$ represents

the individual optimal position, $Q_j(r)$ represents the global optimal position, i is the inertia factor, c_1 and c_2 are the learning factors, and e_1 and e_2 are random numbers with a value of $[0, 1]$.

The idea of PSA is simple and easy to implement, so it has been developed rapidly and widely used. According to the description of the algorithm, the particles contained in it all move in accordance with the path determined by the speed and position. Since their speed and position are limited, their search space is limited and cannot cover all possible solution spaces. In addition, the algorithm also has some shortcomings, such as slow convergence speed and simple local optimal solution, which requires further research and improvement. Later, some researchers combined the PSA with the quantum evolution algorithm and proposed the quantum PSA, which not only speeds up the convergence speed but also improves the overall optimization ability and efficiency of the algorithm [6, 7]. The optimization process of PSA is shown in Figure 1.

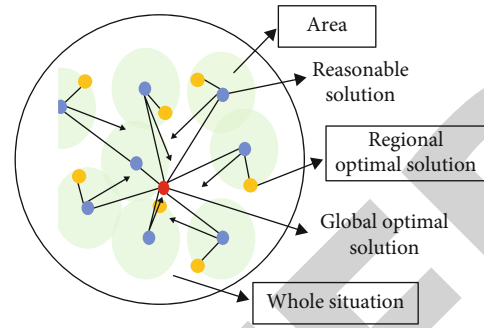


FIGURE 1: The optimization process of particle swarm optimization.

2.1.4. Simulated Annealing Algorithm (SAA). SAA is essentially a global optimization process. Once the algorithm falls into the local optimum, noise can be added in the process of simulated annealing to distract the algorithm from the local optimum, and then gradually reduce the noise, and finally find the overall optimum result. The algorithm can not only accept test points to improve the fitness score but also obtain a solution that has a certain probability of making the fitness score worse. All states in the iteration process are random. Secondly, a check function is introduced into the algorithm to divide the optimization process into different stages. The check function also determines the selection criteria for the random process at each stage. Finally, in the SAA, in order to obtain the next search area and search direction, the objective function must be converted into a fitness value.

2.1.5. Gray Wolf Optimization Algorithm (GWOA). GWOA is a new metaheuristic algorithm based on wolf predation principle. Gray wolves are considered predators, which means they are at the top of the food chain. Most gray wolves like to live with groups of 5 to 12 on average. They have a very strict hierarchy in the gray wolf family. The predation process of wolves can be roughly divided into three processes: hovering, summoning, and siege. Their leader is called the master wolf, and its main task is to control the predation activities of the wolf pack, where to sleep, when to wake up, etc., to master the activities of the entire wolf pack.

Although the gray wolf optimization algorithm appeared late, it has been successfully applied to solve various optimization problems. Compared with other intelligent algorithms, the main feature of the gray wolf optimization algorithm is to update the optimal overall solution according to the first three optimal solutions to determine where the wolf pack needs to be. In addition, whether the gray wolf optimization algorithm is in continuous space or discrete space, the algorithm has good robustness and global search ability [8, 9].

2.2. Evaluation and Promotion Strategy of Football TQ in HVC

2.2.1. The Status Quo of Football Teaching in HVC. From the current point of view, there are still some problems in the course of football in vocational colleges. Some schools lack effective campus football training methods and professional football teachers. There is still a gap between their skills and qualities and the development of campus football. Even some teachers do not have professional football experience, and the method of organizing football training lacks creativity. It is difficult to make students interested in football, and it is easier to affect the teaching effect.

In addition, some schools lack football venues and resources, professional football coaches, etc. This has also become a major obstacle to football teaching in HVC.

2.2.2. Evaluation of Football TQ in HVC and Related Research. The higher vocational TQ evaluation system (ES) is a set of systems composed of a group of closely related indicators of the evaluation target (higher vocational teachers).

The establishment of the TQ ES is conducive to improving the education management level and quality of HVC. It can be the basis for school leaders to improve their educational management capabilities. Problems found in the assessment process can also be reported back to relevant teachers in time, which also improves the quality of teachers. Therefore, certain principles should be followed when establishing an education quality ES.

(1) Objective Principle. The main construction principle of the football class quality evaluation index system is objectivity. The teaching evaluation process should be conducted in an open and transparent environment and based on the mutual understanding between the evaluator and the evaluated object. If the result of educational evaluation is unfair and unobjective, the evaluated object will question the evaluation result, which will greatly affect the enthusiasm of the evaluated object. When evaluating TQ itself, in order to comprehensively and objectively reflect the entire teaching style of the evaluated object, it is necessary to conduct an in-depth investigation of the evaluated object.

(2) The Principle of Feasibility. When establishing an education ES, attention should be paid to ensuring the feasibility

and appropriateness of the evaluation index to ensure that the establishment and implementation of the ES can be truly realized.

(3) *Systematic Principle*. The systematic principle refers to the use of holistic thinking in evaluation to evaluate the entire teaching process of teachers. The evaluation of the overall quality of football teaching is carried out on the basis of a full understanding of the internal and external factors that affect the evaluation results to better ensure the rationality of the evaluation results.

(4) *Guiding Principles*. The evaluation of educational quality refers to the evaluation of TQ, which can help teachers clarify the direction of their work and optimize the whole teaching process, so as to improve the quality of education. Of course, education quality evaluation can also make education managers make more flexible decisions. Therefore, education quality evaluation is an incentive system to improve education quality to a certain extent. This type of guidance usually uses the size of the index weight to influence the specific implementation process. Therefore, when establishing an education quality ES, people should pay attention to determining the weights of various indicators. This article also contains detailed applications.

(5) *Dynamic Principle*. The knowledge of the football class quality evaluation index system is not a summary evaluation, but a formative evaluation. This is a dynamic development process aimed at acquiring knowledge and improving teaching and teacher skills. It can flexibly reflect the changes of the curriculum. Therefore, the football TQ ES must be stable, dynamic, and developing.

(6) *The Principle of Integrity*. The overall principle of the football education quality evaluation index system structure is embodied in the combination of independence and integrity. The design of the indicator system should not only pay attention to the correlation between the various indicators but also avoid the overlap of the various indicators. The choice of indicators and their weights are the key to constructing the evaluation index system of football TQ. The selection of indicators for evaluating TQ should cover the entire teaching process, including the research and adaptation of content, the presentation of educational influence, the change of teaching conditions, and the innovation of teaching methods. Therefore, the establishment of the global education quality evaluation index system must consider the integrity and ensure the independence and the perfect combination of the whole and the part [10, 11].

In addition, the design of the comprehensive ES for the education quality of higher vocational schools should be based on the evaluation of teachers' TQ, and a relatively comprehensive TQ ES for HVC should be established. The ES should be established in strict accordance with the construction principles. When establishing the scientific ES of higher vocational TQ, another important aspect that needs to be considered is the evaluation index. The model of the TQ ES is shown in Figure 2.

The TQ evaluation work of various universities is based on the educational goals, in accordance with scientific standards, through the systematic collection of different information in the teaching process and the continuous improvement of the daily teaching process, effectively using various theories, means, technologies, and methods. And teaching influences the process of measuring and analyzing information and subsequent value judgments.

It is necessary to make a scientific and reasonable evaluation of the quality of education. The evaluation of the quality of football education in HVC has the function of diagnosis, regulation, and encouragement. TQ evaluation is an important part of education evaluation. Its guiding ideology is "promote teaching by evaluation, promote learning by evaluation, and promote reform by evaluation" [12, 13].

Educational quality evaluation has many functions, the focus is to promote the quality of education of football courses, and the evaluation is conducive to the optimization and upgrading of the teaching process. At the same time, the football TQ ES should combine actual education needs, play different functions, and highlight its role. Therefore, the role of football TQ ES should include the following content.

- (1) *Feedback function*: the feedback function of TQ evaluation has two meanings: on the one hand, it is feedback on teachers' teaching work; on the other hand, it is feedback on students' learning effects. Teachers can learn about students' learning conditions based on the results of the assessment, and they can also find themselves in the teaching process. Improve their teaching content and teaching methods
- (2) *Management function*: the results of TQ evaluation can reflect the degree of difference in teaching levels of different teachers and reveal the problems and gaps teachers face in the teaching process. On the one hand, it can assume the function of supervision; on the other hand, it can also be used as a reliable basis for evaluating teacher performance, maximizing strengths and avoiding weaknesses, and even providing theoretical basis for university decision-makers

All in all, the establishment of a scientific, reasonable, and standardized football education quality ES is a prerequisite for the normal performance of various educational evaluation functions and a fundamental guarantee for practical, complete, and efficient evaluation [14, 15].

2.2.3. Strategies for Improving the Quality of Football Teaching in HVC and Related Research. In order to further improve the quality of football education in vocational colleges, schools should adopt certain strategies and measures.

One is to improve the on-site equipment configuration. Some schools have small football fields, imperfect venue facilities, and insufficient training equipment. Strengthening the construction of infrastructure and establishing standardized training facilities and equipment are the basic prerequisites for improving the quality of football teaching in HVC.

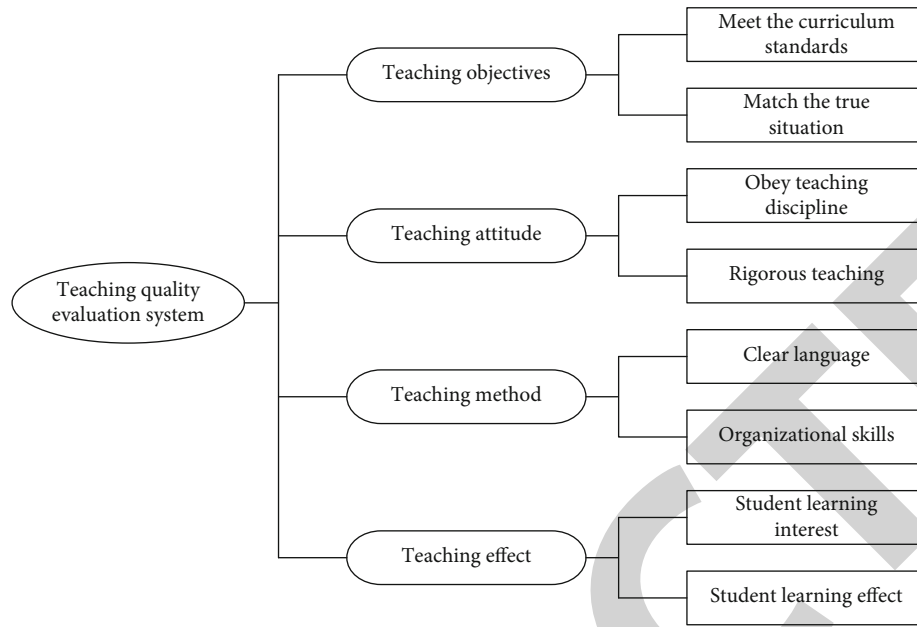


FIGURE 2: TQ ES model.

TABLE 1: Questionnaire distribution method and collection results.

Questionnaire distribution method	Number of questionnaires issued	Number of questionnaires returned	Recovery rate (%)
Internet questionnaire	25	20	80
On-site questionnaire	65	60	92.3
Email	30	20	66.7

TABLE 2: Evaluation and analysis of football TQ.

Evaluation index	Excellent	Good	Medium	Pass
TQ	45	39	12	4
Teaching content	41	40	14	5
Teaching method	46	42	10	2
Teaching effect	43	41	13	3

In addition, the school should hire competent staff to conduct regular inspections of the football field and facilities, conduct standardized planning and management, and avoid safety accidents.

The second is to attach importance to the combination of theory and practice. HVC should look for the connection between theory and practice in the development of college football. In this process, not only should focus on practical training but also on theoretical guidance. Relevant departments and schools actively develop and compile suitable football course materials to ensure the effectiveness and scientificity of football training and to achieve a perfect connection between theory and practice.

The third is to establish a scientific and reasonable curriculum system. In order to further improve the teaching level of football courses, schools should actively construct a scientific and reasonable teaching system and divide the relationship between football theory courses and football training. Before setting up courses, the time required for cultural classes should

be fully considered to ensure that students' participation in football classes will not interfere with cultural classes. During this period, the school should clarify the training objectives and training tasks of students, standardize training methods and assessment methods, and organically integrate ideological work, cultural research, and football.

The fourth is to optimize the teaching staff. At present, the professional level of football coaches in some schools is not high, and improvements can be made in the following aspects. First, the school should choose the professional instructor of football education and go to the school for training on a regular basis. In addition, exchanges and cooperation with football clubs can be strengthened, and teachers are encouraged to learn from the professional talents of football clubs. In this process, relevant government departments should take the initiative to broaden the training channels for football coaches and support them to learn the latest professional knowledge and football training methods. Second, hire a group of highly skilled football talents, retired football talents, experienced expert teachers, etc., to truly improve the overall professional level of high-level football coaches. Third, strengthen the connection with other schools and invite football majors to train in campus football schools. This not only provides practical opportunities for football majors but also adds vitality to the development of campus football. In this context, schools should establish an appropriate reward system for football teachers and coaches to increase the flow of talents and reduce the loss of talents [16, 17].

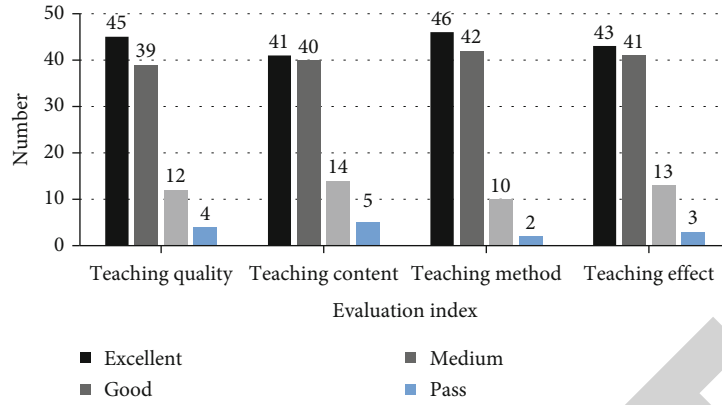


FIGURE 3: Evaluation and analysis of football TQ.

TABLE 3: The necessity of improving the quality of football teaching.

Promotion strategy	Very necessary	Necessary	General	Unnecessary
Improve venue equipment configuration	46	37	14	3
Combination of theory and practice	40	36	19	5
Improve the curriculum system	41	35	18	6
Optimize teachers' resources	49	36	12	3

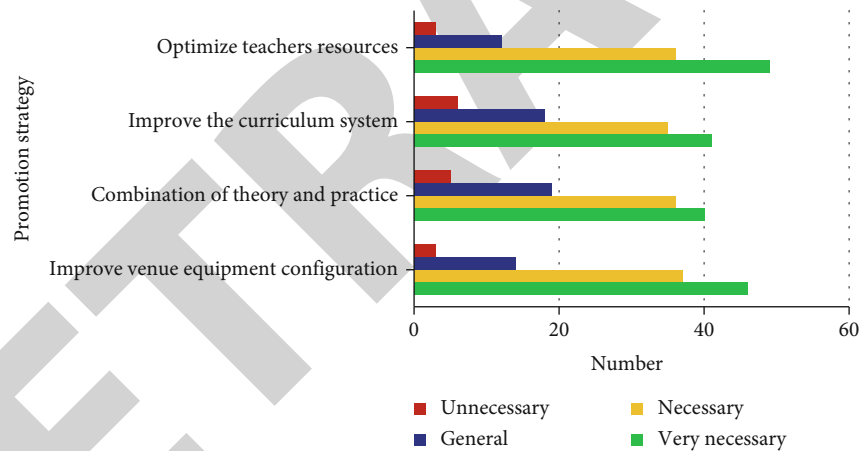


FIGURE 4: The necessity of improving the quality of football teaching.

3. Questionnaire and Research

3.1. *Questionnaire Design Process.* The subjects of the questionnaire survey are college leaders, fellow teachers, and students of a HVC in Q city. A total of 120 questionnaires were distributed and 100 valid questionnaires were returned. The questionnaire recovery rate was 83.3%. The questionnaire distribution method and the results of the collection are shown in Table 1.

The analysis results include the evaluation results of the TQ of the school's teachers and students on the football course and the necessity of implementing the promotion strategy.

3.2. *Questionnaire Survey Content.* The first part is to investigate the TQ evaluation of the school's teachers and students on football. The first-level indicators of TQ

evaluation include TQ, teaching content, teaching methods, and teaching effects. The evaluation grades include excellent, good, medium, and pass.

The second part is to organize the data collected in the questionnaire to understand the interviewee's need to implement improvement strategies.

4. Analysis and Discussion

4.1. *Evaluation and Analysis of Football TQ.* This questionnaire survey evaluates the TQ of the football course of the school. The first-level indicators of TQ evaluation include TQ, teaching content, teaching methods, and teaching effects. The evaluation grades include excellent, good, medium, and passing. The survey results are shown in Table 2.

It can be seen from Figure 3 that 46 of the teachers and students who participated in the evaluation rated the school's football teaching method as excellent, 42 rated it as good, 10 rated it as medium, and only 2 rated it as passing. It can be seen that most of the interviewees have a high evaluation of the TQ of the school's football courses.

4.2. Analysis of Strategies for Improving Football TQ. This questionnaire investigates the necessity of strategies for improving the quality of football teaching, which include improving the equipment configuration of the field, combining theory and practice, establishing a curriculum system, and optimizing the strength of teachers. The survey results are shown in Table 3.

It can be seen from Figure 4 that 49 of the teachers and students who participated in the questionnaire survey believed that it was necessary to optimize the strength of the teaching staff, followed by the improvement of the venue equipment configuration, with 46 people. It can be seen from this that most of the interviewees believe that, in order to better improve the TQ of football courses, it is necessary to implement an improvement strategy, which includes perfecting the equipment configuration, combining theory and practice, establishing a curriculum system, and optimizing teachers' resources.

5. Conclusion

With the deepening of national education reform, higher vocational education has gradually entered a new stage of development, which puts forward higher requirements for the quality of football teaching. In this context, how to improve the level and professional ability of higher vocational physical education teachers has become a topic of social concern. This paper discusses the evaluation of football TQ in HVC and the improvement strategy combined with intelligent algorithm, which plays a certain role in improving the overall efficiency of TQ evaluation. Finally, this paper also draws a conclusion that most respondents have a high TQ evaluation of the school's football curriculum. In addition, most respondents believe that in order to better improve the TQ of football courses, it is very necessary to improve the allocation of venues and equipment, the combination of theory and practice, the establishment of curriculum system, and the optimization of teachers.

Data Availability

The data underlying the results presented in the study are available within the manuscript.

Conflicts of Interest

There is no potential conflict of interest in our paper, and all authors have seen the manuscript and approved to submit to your journal.

References

- [1] T. Hongbo, "On the dilemma and countermeasures of football teaching in higher vocational colleges," *Leisure*, vol. 205, no. 1, p. 183, 2020.
- [2] E. Chalikias, M. Kossieri, and P. Lalou, "Football matches: Decision making in betting," *Teaching Statistics*, vol. 42, no. 1, pp. 4–9, 2020.
- [3] X. Ruibin, "Research on the application of data mining technology in university teaching quality evaluation," *Educational Research*, vol. 4, no. 5, pp. 28–30, 2021.
- [4] W. Jia, "Safety risk assessment of ship power system based on artificial intelligence algorithm," *Ship Science and Technology*, vol. 42, no. 20, pp. 71–73, 2020.
- [5] L. Guangdi, L. Yuchen, Z. Wei, and Z. Le, "A brief review of artificial intelligence applications and algorithms for psychiatric disorders," *Engineering*, vol. 6, no. 4, pp. 462–467, 2020.
- [6] L. Cuicui, "On-chip routing nano-devices and realization of topological photon states based on intelligent algorithms," *Journal of Quantum Electronics*, vol. 37, p. 125, 2020.
- [7] W. Qunmei and C. Zhongbiao, "Application of model reference neural network algorithm in ship heading control," *Ship Science and Technology*, vol. 42, no. 22, pp. 14–16, 2020.
- [8] S. Nikbakht, C. Anitescu, and T. Rabczuk, "Optimizing the neural network hyperparameters utilizing genetic algorithm," *Journal of Zhejiang University-SCIENCE A*, vol. 22, no. 6, pp. 407–426, 2021.
- [9] S. Y. Martowibowo and B. K. Damanik, "Optimization of material removal rate and surface roughness of AISI 316L under dry turning process using genetic algorithm," *Manufacturing Technology*, vol. 21, no. 3, pp. 373–380, 2021.
- [10] T. C. Krehbiel, P. Ghislain, A. R. Hulshult et al., "Agile Teaching," *Journal for Quality and Participation*, vol. 42, no. 2, pp. 30–32, 2019.
- [11] W. Zhu, H. Ma, G. Cai, J. Chen, X. Wang, and A. Li, "Research on PSO-ARMA-SVR short-term electricity consumption forecast based on the particle swarm algorithm," *Wireless Communications and Mobile Computing*, vol. 2021, no. 6, 12 pages, 2021.
- [12] F. Yuan, K. Lv, B. Tang et al., "Optimization design of oil-immersed iron core reactor based on the particle swarm algorithm and thermal network model," *Mathematical Problems in Engineering*, vol. 2021, no. 4, 14 pages, 2021.
- [13] C. Jianjun, "Research on the influence of football clubs in higher vocational colleges on physical education," *Farm Staff*, vol. 655, no. 10, p. 291, 2020.
- [14] T. Sun and J. Liu, "A Study on the Difference of Information Acquisition Ability among Students in Higher Vocational Colleges," *Intelligent Information Management*, vol. 14, no. 1, p. 10, 2022.
- [15] L. Qi and K. Qi, "Analysis of university teaching quality evaluation system based on data mining," *Modern Education Forum*, vol. 4, no. 7, pp. 8–9, 2021.
- [16] A. Abdelhadi and M. Nurunnabi, "Engineering Student Evaluation of Teaching Quality in Saudi Arabia," *The international journal of engineering education*, vol. 35, no. 1A, pp. 262–272, 2019.
- [17] Z. Yong, "Analysis on the strategy of improving the quality of middle school physical education," *China and Foreign Exchange*, vol. 26, no. 19, pp. 182–183, 2019.