



Architecture Design of Intelligent Analysis Software for Physical Education Evaluation Based on Fuzzy Hierarchical Modeling Algorithm

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Abstract—Based on fuzzy analytic hierarchy process and fuzzy algorithm, this paper studies the evaluation method of classroom teaching quality in higher vocational colleges. Firstly, the Analytic Hierarchy Process was introduced to construct the evaluation index system of higher vocational teaching quality, and on this basis, the weight of each index was calculated. The TPSR physical education curriculum model was incorporated into the training content of pre-service physical education teachers and in-service physical education teachers, so that physical education teachers can Fully understand the responsibilities, objectives and implementation structure of the TPSR curriculum model. When TPSR gradually developed and matured, the research goal was transferred to the teacher, and an evaluation method based on the improved fuzzy analytic hierarchy process was proposed to provide a basis for teachers to discover the strengths and weaknesses of students in time and for employers to recruit suitable talents.

Keywords—*Intelligent Analysis Software, Physical Education Evaluation, Fuzzy Hierarchical Modeling Algorithm*

I. INTRODUCTION

There are three levels of data analysis and data mining. At present, most of the BI applications of insurance companies in my country are still in the data reporting stage, which is a low-end application of BI [1], while most foreign companies have entered the mid-end BI (ie data analysis level), and a few It has also entered the high-end BI [2] (ie data mining level), which brings new challenges to my country's insurance industry. In the teaching of physical education for college students, the traditional teaching methods are mainly to explain sports knowledge and [3] train movements, usually running, volleyball and basketball. However, this way of learning makes it difficult to form a lifelong awareness of physical education [4].

As an effective way for teenagers to release pressure and vent their bad emotions, sports are gradually accepted and recognized by the public for its rich moral education factors. The open [5], social and competitive characteristics of physical education classrooms endow physical education courses with a special status in the field of moral education. Through the practice of sports activities [6], students can continuously challenge themselves, improve themselves, and learn to judge things correctly. Experts stem is a branch of artificial intelligence, which was produced in the mid-1960s. All i}Ii and the definition recognized by the public, researchers are more consistent, rough definition is sufficient: the expert system is sufficient. can be in a specific area [7].

However, due to the complexity of the urban community service system and many influencing factors, it is difficult to build a general evaluation model [8]. The AHP can be used for

qualitative and quantitative evaluation, which is simple and easy to implement and widely used. However, its consistency test lacks scientific basis [9], and then put forward the fuzzy analytic hierarchy process. At the same time, how to evaluate public sports services in social sports scientifically, reasonably and comprehensively [10] has aroused the attention and extensive discussion in the sports circles. To this end, it is necessary to establish a scientific evaluation theoretical model for public sports services, and then build an overall logical framework for evaluation [11].

Wu Enying studied the prediction method of classroom teaching quality evaluation results based on the support vector machine multi-class classification algorithm [12], Fan Xiang et al. Application in teaching quality evaluation. A more realistic evaluation system of college students' programming ability. The automatic evaluation [13] mechanism of the programming ability evaluation method is simulated in Matlab, and the experimental results prove the validity and practicability of the model [14].

The evaluation method can not only provide a reference for the recruitment of enterprises, but also can be used as a means to evaluate the programming ability of college students majoring in computer science [15]. The rationality of the product family structure has increasingly become the focus of attention of enterprises planning to implement mass customization [16], and has become an indispensable key link in the process of product family development. Because product family evaluation has the characteristics of multi-objective [17], multi-level, multi-attribute, ambiguity, etc. Data warehouse, the English name is Data Warehouse, which can be abbreviated as DW or DWH [18], is a decision-making process for all levels of the enterprise, providing all types of data a set of supported strategies, which is a single data store, created for analytical reporting and decision support purposes. Relying on the real needs [19] of the university's actual management process combined with current technical capabilities, taking into account the special requirements of the university [20].

Through the in-depth discovery layer by layer, it is urgent to develop a management software for the management system of colleges and universities. Customer forecasting, profit/cost analysis [21], product analysis, business risk analysis, market intelligence analysis, etc., improve enterprise risk control and business decision-making capabilities, improve the scientificity, timeliness and accuracy of management decisions [22], and enhance the company's comprehensive competitiveness. Scientific and technological means can promote the development and cultivate people's ability to master sports means and abilities, cultivate people's logical thinking ability, enhance sports awareness, improve sports ability, and improve smart sports skills [23].

The link between physical education and intelligence is ingenious, and intelligence is high intelligence and intelligence [24].

II. THE PROPOSED METHODOLOGY

A. Fuzzy Hierarchical Modeling Algorithm

In this context, school physical education needs a teaching method that can provide students with positive value teaching in sports situations to promote students' moral behavior and responsibility consciousness. Ethicists Kohlberg and Mayer pointed out that moral development requires the right educational approach. Among them, the personal and social responsibility model developed by Hellison.

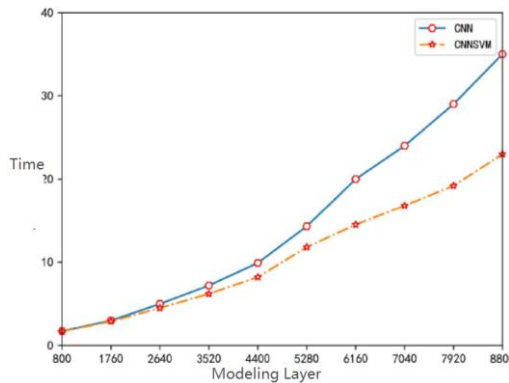


Fig. 1. Virtual Image Generation Algorithm

Public interests can be understood as the actual needs of the overall survival and development of the general public. Only when the fundamental proposition of social development, public interest and publicity, are always contained in the great proposition of public sports and fitness and the vision of the times, can the era responsibility and realistic orientation of public sports services in the new era be effectively demonstrated. The problem is decomposed into different influencing factors, and at the same time, according to the internal relationship between the influencing factors, the influencing factors are layered and organized, and a hierarchical structure model of influencing factors is established, including the highest-level target layer. According to the requirements of major recruitment websites such as Ping.com for the programming ability of developers, and fully considering the experience of experts, the programming ability of developers is evaluated from four aspects: basic knowledge literacy, program understanding and reuse, actual combat ability and enterprise feedback.

The programming ability evaluation index system is shown in Figure 1. Form a fuzzy consistent comparison matrix. The size of the main eigenvector element corresponding to the main eigenvalue λ of the fuzzy consistent comparison matrix represents the priority order of each evaluation object, which is a combination of qualitative and quantitative thinking. Applying AHP to the selection and evaluation of product family models, the following mathematical models are proposed. The data analysis platform based on business intelligence technology should play an auxiliary role in the strategic development and planning of the entire enterprise. By using the data analysis function of the platform, decision makers can understand the current business situation of the enterprise, reasonably plan the future development policy of the enterprise, and make the enterprise is on the road of healthy and reasonable development. The service quality in public sports not only has its own inherent internal attributes, but also has many external attributes granted by the outside world.

B. Physical Education Evaluation Based on Fuzzy Hierarchical Modeling Algorithm

It is not difficult to foresee that, for public sports, the introduction of quality assessment is not aimed at economic benefits and market efficiency, but focuses on the public value and overall development of the entire society. The bottom-level indicator layer has many elements, which are quantitative indicators for the formulation of alternatives and measures when making problem decisions.

Educational evaluation in a narrow sense is based on education r . 1 Standard is the process of making value judgments on the behavior changes of students through education, and providing a basis for improving and optimizing education. Combining the analysis results of relevant literature with the opinions of experts and scholars in the field, on the premise of maintaining systematicness and operability, the whole system is divided, and the system is divided according to the mutual logical relationship between the indicators of each subsystem. Finally, a top-down hierarchical structure evaluation index model is constructed.

$$CI = \frac{\lambda_{\max} - n}{n - 1} \quad (1)$$

$$CR = \frac{CI}{RI} \quad (2)$$

$$\lambda_{\max} = \sum_{i=1}^n nW_i \quad (3)$$

This definition points out that the object of educational evaluation is the educational effect, that is, through education, the changes of students in moral, intellectual, physical, aesthetic and labor aspects; the benchmark of evaluation is the educational goal; the essence of evaluation is to make value judgments; The purpose of evaluation is to provide feedback for improving and optimizing education. The selection and evaluation of the product family structure model integrates the subjective evaluation of decision makers, and cannot be quantitatively analyzed with an accurate mathematical model. Therefore, according to the basic theory of the AHP above, we define the hierarchical hierarchy shown in Table 1. Substructure and comprehensive assessment. In order to maintain self-worth, students do their best or at least protect their ability to learn. The goal of effort in the TPSR model emphasizes that students have team spirit, learn to work together, and do not attribute failure to lack of ability, but to achieve through hard work.

C. Architecture Design of Intelligent Analysis Software for Physical Education Evaluation

The wisdom of physical education evaluation pays more attention to the pursuit of sustainable development. At present, my country is in a critical period of economic transition and social transition, and it is necessary to build a socialist market economy and society by giving full play to the roles of the government and the market. In this paper, six indicators are pre-selected and made into the expert answer sheet. In order to check whether the pre-selected indicators have reasonable problems, each expert is asked to pass the scores from "importance", that is, the average score 4 and "operability", that is Generally, the coefficient of variation 20 can be selected from two aspects. After the hierarchical structure is established, it is necessary to calculate the weights of each

layer of indicators in the evaluation index system of classroom teaching quality.

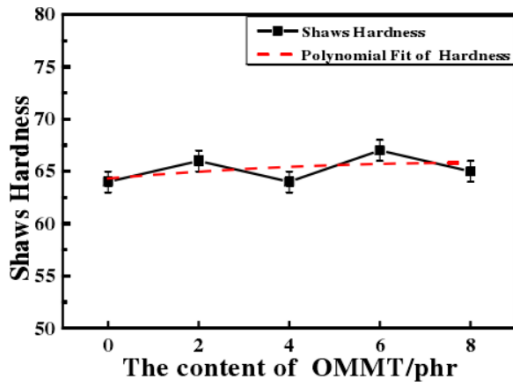


Fig. 2. Architecture Design of Intelligent Analysis Software for Physical Education Evaluation

This paper will take the criterion layer as an example to illustrate the index weight generation process of this layer. After the hierarchical structure of the evaluation index system is established, the affiliation between the elements of two adjacent layers is determined. In order to obtain the composite weight of the lowest factor index of the hierarchical structure relative to the overall goal, it is necessary to first assign the corresponding weight to the lower element dominated by the upper element according to its importance. The design of data processing function includes data warehouse design for storing data and ETL scheme design for data transmission. The data warehouse needs to be scientifically designed according to the business model, and whether the design is reasonable or not directly affects the efficiency of subsequent report queries; data mining, that is, the construction of decision trees, is the basis and premise of statistical analysis and management.

III. EXPERIMENT

The fuzzy hierarchical modeling algorithm is shown in the figure.

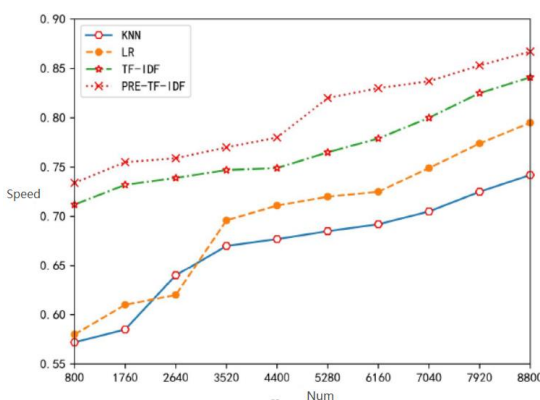


Fig. 3. Fuzzy Hierarchical Modeling Algorithm

The evaluation of physical education teaching is shown in the figure.

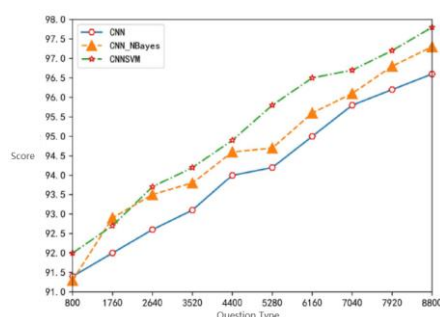


Fig. 4. Physical education evaluation

The intelligent analysis software architecture design of physical education evaluation is shown in the figure

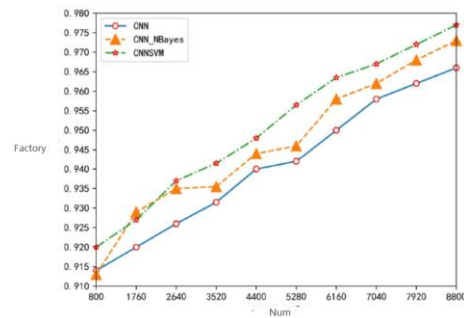


Fig. 5. Intelligent Analysis Software Architecture Design

CONCLUSION

Starting from the effect feedback, thoroughly implement the public sports evaluation system with the participation of the whole people, form a closed loop of adaptive evolution, and continuously improve the public's sense of experience. Through the public sports service evaluation system proposed in this paper, combined with the current progress of public sports services in various places, a higher vocational teaching quality evaluation model based on analytic hierarchy process and fuzzy algorithm is established to make the evaluation results more scientific, effective and convenient. These influencing factors include the submissive psychology of the main reviewer.

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