Weighted Analysis of Basketball Sports Sampling Survey Training Based on Data Indicator Mining

Zhou Yongming
University College Sedaya International
Jalan Menara Gading
UCSI Heights, Cheras 56000
Malaysia
{Tyrtyr44@fastmail.fm}

ABSTRACT: *This article aims to conduct a sampling survey of basketball sports through data indicator mining methods and provide a reference for the selection and training of basketball players through training-weighted analysis. Firstly, this article collects and analyzes data on basketball players' physical fitness, technical skills, tactical awareness, and other aspects to identify important data indicators. Next, this article uses a sampling survey method to analyse many basketball player data statistically and understand their performance in various indicators. On this basis, this article adopts the technique of training weighted analysis to determine the weights of different indicators, providing a more scientific basis for the selection and training of athletes.*

Keywords: Colleges, Basketball, Comprehensive Physical Index, Impact

Received: 26 April 2023, Revised 12 July 2023, Accepted 27 July 2023

DOI: 10.6025/jet/2023/14/4/97-104

1. Introduction

Basketball has been introduced into our country since the 1890s as a hand-centered adversarial movement in the Olympic Games that has swept the country instantly [1]. Since its introduction into China, this movement has won many male basketball enthusiasts, including undergraduates. Basketball could be swept away from the basketball court after class [2]. In the university test process, the comprehensive physical examination is one of the indispensable test indexes. As to whether basketball can affect students' vital capacity, body weight, and so on, a domestic key university conducted a year-long test comparison to avoid deviation factors by dividing the students by BMI. [3].

Through the division based on BMI, the test data can be controlled by variables, which ensures the accuracy of research results [4]. By controlling the application of variable operations, this can be largely achieved. The algorithm has strong information processing capabilities and is more detailed based on the overall layout, construction, etc [5]. University students' comprehensive physiques constantly develop in the direction of complication and refinement. In the traditional statistics of the new index, it is more and more difficult to edit, make or modify the students; the emergence of the index impact study

program, along with the corresponding application of three-dimensional technology, can make real-time modification and rebuilding in the process of statistics, greatly saving the statistical time and greatly reducing the difficulty of statistics.

2. State of the Art

The new index statistical technique based on manipulated variable operation originated in Europe and the United States in the 1960s. At that time, due to the rapid development of the education industry, the development of the new index statistics industry reached its heyday [5]. With the initial application of the algorithm, people realized that the simple rough statistical workload is large, and the control variables are used to calculate the structure's statistical expression. In the 1980s, with the algorithm's maturity, the application field has become increasingly widespread. Statistical statistics of the new index with CAD as the core started to be widely used [6]. The software incorporates basic statistics that affect statistics into the database, and there is some data support for this new metric, which can be easily compared to the corresponding modeling process [7].

Nowadays, with the advent of intelligent solutions to the impact of comprehensive indicators such as student vital capacity, overly simple statistics in the traditional model can no longer meet people's needs [8]. Therefore, the new intelligent index is calculated based on the above requirements. The new index based on control variable operation has more operable elements so as to express the conception image in mind as far as possible [9]. Although our country started with the control variable operation of the new index statistical technology later, because of the rapid development of the new index statistics industry, people gradually increase the demand for the new index statistics, so the combination of control variable operation and the new index statistics is bound to rapidly Development [10].

3. Methodology

3.1. Control Variable Algorithm Construction

The use of control variables is one of the components that the categories in this algorithm embody. In this essay, we use the forward control variables model and improve the extended BP network to carry out the new index's statistical measurement and control functions. Based on the fuzzy theory and genetic algorithm control variables and RBF networks to build, in its very chaotic background, weak signals accepted by the statistics and measurement, and then get the feedback network data, the use of Hopfield network and its identification character applications for support and improve the new indicator statistics nodes and fault diagnosis and troubleshooting functions in the integrated wavelet control variables and identification to obtain the best value for statistical collection.

Integrating the integration of control variables algorithm, the structure of the control variables, and then the new statistical indicators using statistical variables control input into the framework, according to each statistical standards and specifications, which information data for the new indicators of statistical information output, the model receives the data to digest, and finally completed the construction of the entire model. Using the data of the impact of comprehensive indicators of student vital capacity program to structure and provide the preconditions for the next step automatically. Based on this control variable coding, fitting the unit data, we takeas Q as the sum of the target data, then F_i as the number of distributed data, BW as the number of categories of data, C as the number of unit data blocks, S On behalf of the control variable coefficient, M On behalf of the vertical coordinate values, through the following formula checking, we can get the scattered data classification and integration scheme.

$$\begin{cases} \mathrm{M}(F_i) - C(F_i) = BW(F_i) \\ \mathrm{M}(Fi) = 3 \times Q(F_i) + 0.2 \times S(F_i) \\ \mathrm{M}(F_i) - C(F_i) = BW(F_i) - Q(F_i) \\ Q(F_i) = 1.2 \times \left(2 - S(F_i)\right) + 2.7 \times C(F_i) \end{cases} \tag{1}$$

In this formula, the primary consideration is that each control variable data can be applied. The symbol from W to Y Represents the numbering of each individual measurement in the technical statistics of the control variables. As these servers all participate in the overall load, the overall load capacity will also be strengthened. In addition, F, X and ω represent the expressiveness of their entry node. And once a node fails, other nodes will be supplemented accordingly; that is the description of our formula. When $Q(Fi) = S(Fi)$ a formula will appear as follows:

$$W\left(Y,F\left(X,\omega\right)\right)=\begin{cases}+1,Y=F\left(X,\omega\right)\\-1,Y\neq F\left(X,\omega\right)\end{cases} \quad (2)$$

The above formula is mainly the special case that occurs when the control variable builds a statistical node and is also a kind of feedback manifestation of the self-adjustment mechanism of the algorithm. η is node coefficient; on behalf of the network coefficient, node 0 represents the Paralysis value of the new indicator statistical network in this paragraph, normally, the circumstances will not happen. So the value of *gj* is greater than the value of β*j*. We can assume that *gj* and β*j* approximate the ratio of the golden ratio, that is, *gj* : β*j* = 0.382: 0.618. Since floating-point operations have a certain degree of float, the approximate ratio is 0.4: 0.6. That is, the value of η is 0.6, the value of *gj* is 0.4. The weight function expression can be expressed as:

$$\eta\left(yi\right)=\sum_{j-1}^{k}gj^{2}+\sum_{i-1}^{p}\beta j^{2} \quad (3)$$

To ensure the regular operation of the algorithm, this essay uses the dynamic DHOL language to judge its structure. It plays the statistical data of the new indicator based on the required control variables. Finally, the filtering result of the algorithm is uploaded to the control statistics processing part through the packing form, and the control variable algorithm is used to filter the statistical information. Finally, the filtering is carried out. The specific process is shown in the following figure.

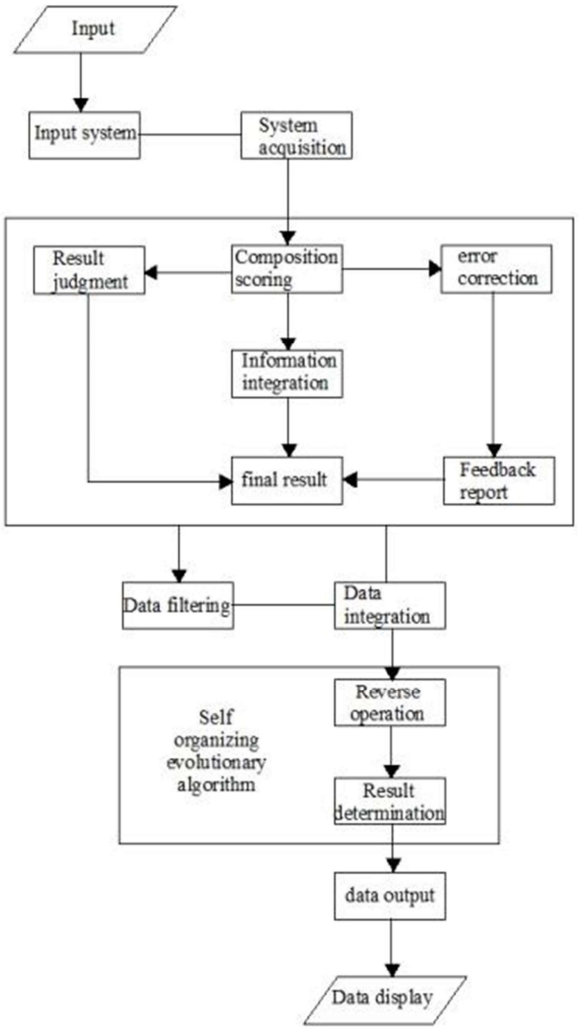

Figure 1. Computing flow of self-organizing evolutionary algorithm

3.2. The New Index Statistics Control Variable Operation Model

After completing the control variable model framework, the next step to consider is the technical integration of the new index statistical control variable operation model and the control variable algorithm results. For the construction of the whole model, this article divides it into four parts, which include the collection of the material of the terminal of the new index statistical control variable algorithm, that is, based on the new index statistical control variable algorithm material model, including the information provided by the general new statistical variable control algorithm wait. Secondly, the main need to be completed for the data processing is to integrate and process the information from different statistical statistic variables of the new index statistical control algorithm. After the operation is completed, the operation of each algorithm can be realized after the overlap is achieved in all aspects. Finally, it is imported into the statistics of the self-organizing information algorithm, and the statistical content and information collected by each algorithm and the generating requirements of the algorithm for generating statistics of the new index are displayed on the result of the overall algorithm. To operate based on facilitating the statisticians through the information terminal algorithm, eventually displayed on the window for statisticians to watch and use.

Self-organizing Information Algorithm Statistics		**Factor Processing Integration**	
Performance of self-organizing evolutionary algorithm	**Model total data system *b,x***	**Standard data of neural models pop**	**The result of optimization *Q***
Unit cluster data body	93.4%	2.2%	0.70
Longitudinal coefficient	95.3%	3.4%	0.63
Difference sequence	89.2%	7.2%	0.76
Optimal numerical value	87.6%	4.2%	0.83

Table 1. New Index Statistical Control Variable Algorithm to Generate Composition Requirements

As shown in Table 1, in the control variables, the factors of the algorithm processing integration phase, among them, *Zi* is on behalf of individual evaluation results, *i* is on behalf of cross-classification data, χ is on behalf of micro-collections of lexical blocks and gene sets, respectively. The specific algorithm is as follows:

$$\left(Z_{21}Z_{20}Z_{19}\mathrm{L}\ Z_1Z_0\right)_2=\left(\sum_{i=0}^{21}Z_i\cdot 2^i\right)_{10}=\chi' \tag{4}$$

First of all, through the above calculation, the initial results evaluated by the individual are obtained, and the corresponding optional data set of the micro-data, that is, the vocabulary, is encoded, and the specific coding is used to classify the vocabulary of the gene under its jurisdiction. We use the new index statistical control variable algorithm statistics to regulate them automatically to provide the preconditions for the next step. Based on this data coding, for gene data fitting, we will take *L* as the sum of data results, then χ' as the number of microdata. Through the following formula checking, the integration of the genetic data integration program is obtained.

$$L=-1+I'\left(\frac{1-(-1)}{2^{22}-1}\right) \tag{5}$$

After integrating the micro-level data, the last part is to be carried out. The micro-level data is divided into small data based on the gene as a standard, taking *Q* as the unit cluster *W* as the number of categories of micro-level data, and *F*, *X* is On behalf of the new indicator statistical control variable coefficient. Then, we combine it with the system architecture of the three levels. The complex data will eventually be disassembled and rearranged through the gradual fitting, and finally, the optimal solution will be obtained according to the corresponding problems. The final integrated data calculation method is shown in the following formula.

$$Q(Fi)=\frac{\sqrt{w_i-0.3(W_{i+1}-X_i)}}{0.513W_i} \tag{6}$$

And then it need to enter the data for classification and finishing, we can macroscopically reflect the structure of the entire algorithm overview, and ultimately it will be packaged to upload to the system processing, to carry out the next step of research. The packaged data entry processor terminal, the terminal through the resulting data processing and integration, the specific process shown in Figure 1.

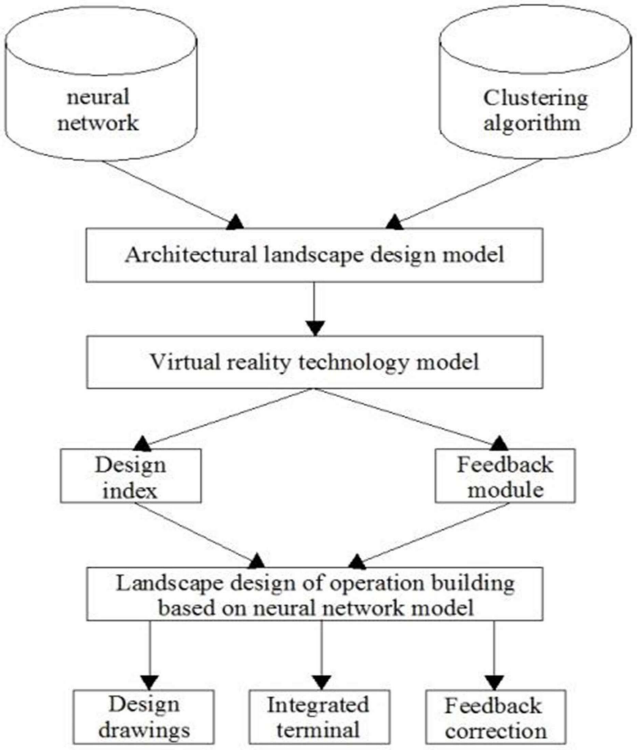

Figure 2. The new index statistical control variable algorithm generation framework and the information algorithm entry factors overlap

Secondly, by calculating and integrating information data, we will emphasize the overlap between the new generation of statistical control variable algorithm generation framework and the information algorithm input factors in the statistical process. In data computation and collection, taking the new generation of index statistical control variable algorithm generation framework constructed above, based on the algorithm classification coding of the content from statistical input, it is divided into three major aspects, namely the new type Indicator Statistical Control The variable algorithm generates statistics, uploads the efficiency data, and professional technical data. Then, it fit with the statistical data generated by the new index statistical control variable algorithm to get the range of statistical data generated by the new statistical variable control algorithm. The new index statistical control variables generated by the framework as an intermediate convergence of the statistical accuracy of the algorithm must also meet the principles of the algorithm to determine its accuracy. Finally, the completion of this part of the work, the statistical factors entered for collection, we can see the front, through the algorithm to be numbered by the algorithm, and then complete the new index statistical control variable algorithm based on the control variable to achieve.

4. Result Analysis and Discussion

After the corresponding control variables and algorithm overlap statistics generated based on the new index, and statistical control variable algorithm are completed, we make a centralized random test for the data frame structure of the algorithm. In

algorithm verification, the experimental location is selected in a certain key university and selected as a statistical algorithm to reflect the real situation of the clustering algorithm in the process of using the new index statistical control variable algorithm. To construct this experiment, we prove that the new algorithm of this dynamic indexing algorithm can be used to optimize the algorithm of constructing the new statistical index control variables. We first use the new index statistics control variable algorithm to generate the base and the corresponding algorithm simulation test to establish the corresponding relationship, the specific relationship between the algorithm statistics database consolidation structure as shown in the following table:

			New Index Statistical Control Variable Algorithm		
Factor	**Aesthetic degree**	**Design difficulty**	**Design factor**	**Accuracy**	**Fractal level**
New index statistical control variable algorithm	A1	0.2	0.3	3.2	4.2
	A2	0.3	1.7	4.5	4.7
	A3	0.5	2.2	2.7	5.3
Traditional algorithm	A4	1.3	0.7	5.6	6.2
	A5	2.2	1.7	6.2	7.0
	A6	1.7	1.5	8.1	7.1
	A7	2.1	2.3	5.3	6.8
HFStream algorithm	A8	0.5	1.4	9.1	7.1
	A9	0.7	2.0	7.2	6.2
	A0	0.2	1.4	4.7	6.1

Table 2. Clustering Algorithm based on New Index Statistical Control Variable Algorithm

In the above test, we selected the statistical information input algorithm as a basis, which is divided into four cases for discussion, namely, statistical material, statistical efficiency test, flu test and the overall effect of the test were connected in these tasks in the case of random sampling data information at the same time. When the statistical data does not have too much input, the processing capacity of the new index statistics control variable algorithm to generate the framework of the

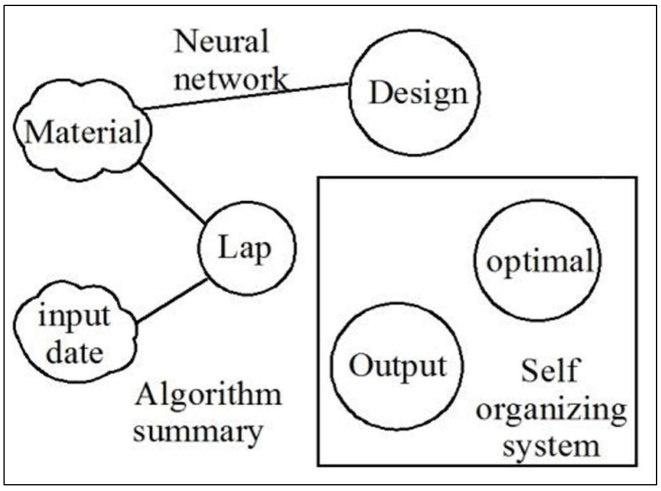

Figure 3. Flow chart of new index statistical control variable algorithm to generate a model on control variables

data port algorithm for the user request collection and retrieval capabilities to fluent than the traditional framework algorithm, mainly due to its new index statistical control variable algorithm Generating scatter factor calculations, write reads. Allocations increase the load on the scheduler, causing additional algorithmic overhead and resources. With the increase of entries for the change factors of statistical material, the performance of the new terminal statistics control variable algorithm, which has the ability to screen priority to generate the framework terminal data algorithm, is obviously superior to the traditional framework algorithm. The target information of the user information algorithm statistics request is higher than the conventional connection algorithm in displaying the accuracy, and the performance of the whole statistical information algorithm cluster dynamic algorithm has also been obviously improved.

We will be specific new indicators of statistical control variables to generate a model of the control variables on the flow chart made as shown in the results. The response time is also increasing with the increase of statistical data elements generated by the algorithm of statistical control variables entering the new indicator. Before, we did not use this new algorithm to generate the framework optimization algorithm. We can see that the response time of the whole algorithm is in an increasing trend. With the optimized algorithm, the statistical algorithm of the entire information algorithm as the input statistics increase, the response time is no longer significantly increased, indicating that in the new index of statistical control variables generated by the architecture optimization algorithm in use, the information algorithm in the utilization rate of each algorithm resource has been saturated. While testing the merging, we cut a portion of the data as a scale graph, as shown in Figure 4.

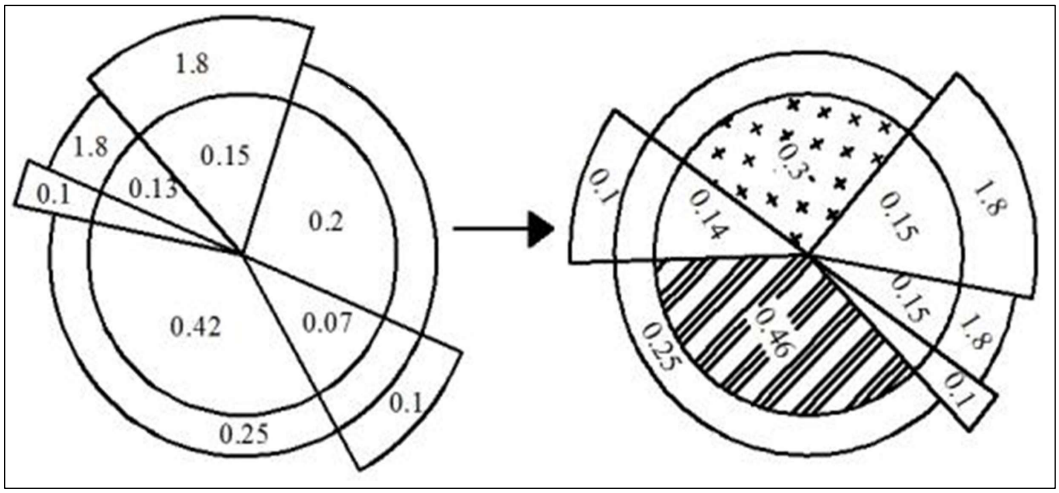

Figure 4. A new statistical control variable algorithm generating the model

At the same time, in the testing process, we conducted the research statistics of each node for the new generation of statistical control variable algorithm model. After testing, we found that with the increase of the statistical indicators, this node algorithm has more advantages than the traditional algorithm. With time and geographical advantage, the overall performance of data processing is superior. As shown above, the consistency between the two is consistent when dealing with the same number of statistical tasks, but with the dynamic change of the number of tasks, the new algorithm for generating statistics of controlled variables has better performance than traditional model data algorithms. They are significantly higher than the conventional processing model in dealing with the complexity of generating complex architectural models of the new index statistical control variable algorithm. Handling the mixed statistical tasks is also more rational than processing the tasks in the traditional state. As a result, the new indicator statistical control variable algorithm can show highly high processing speed and accuracy in handling more complicated statistical information data.

5. Conclusion

In today's era, all industries are required to show their strong adaptability. Therefore, various industries are competing to flow into this trend. The model represented by the control variable algorithm of the new index statistics represents a new thing in people's eyes. In this essay, the impact of the R & D of the control variable model generation algorithm on the

traditional statistical model of this new index will improve the statistical quality. Based on the statistic research of the control variable algorithm of the new index statistics, this essay provides a set of practical, theoretical bases for the new index statistics and statistics industry in our country as well as on the train of thought. In this essay, the use of control variables based on traditional statistical methods for technical statistics has been innovative to improve the use of the least squares algorithm in the fundamental statistical analysis of the new statistical methods to control the integration of statistical variables through the use of DECT in Algorithm to add the new index statistics control variable algorithm to generate statistical material supplement, which will be used for statistical information algorithm. In this process, further efforts are required for the tremendous algorithmic capacity of this new metric statistical control variable algorithm to generate an architecture point data unit and to fit the data unit with the architectural units on it.

References

[1] Li, D., Li, L., Luo, Z., et al. (2015). Comparative Transcriptome Analysis Reveals the Influence of Abscisic Acid on the Metabolism of Pigments, Ascorbic Acid, and Folic Acid during Strawberry Fruit Ripening. PLOS ONE, 10(6), e0130037.

[2] Melton, J. R., Shrestha, R. K., Arora, V. K. (2015). The Influence of Soils on Heterotrophic Respiration Exerts a Strong Control on Net Ecosystem Productivity in Seasonally Dry Amazonian Forests. *Biogeosciences*, 12(4), 1151-1168.

[3] Pardo, A., Mitjans, A., Baranda, L., et al. (2016). The Transition of Medical Students through Residency: Effects on Physical Activity and Other Lifestyle-Related Behaviors. *Journal of Physical Activity & Health*, 13(5), 488.

[4] Liu, J., Liu, D., Song, K. (2015). Evaluation of the Influence Caused by Tunnel Construction on Groundwater Environment: A Case Study of Tongluoshan Tunnel, China. *Advances in Materials Science & Engineering*, 2015(3).

[5] Barbieri, E., Agostini, D., Polidori, E., et al. (2015). The Pleiotropic Effect of Physical Exercise on Mitochondrial Dynamics in Aging Skeletal Muscle. O*xidative Medicine & Cellular Longevity*, 2015, 917085.

[6] Van den Borst, B., Rutten, E. P., Franssen, F. M., et al. (2015). Antagonistic Implications of Sarcopenia and Abdominal Obesity on Physical Performance in COPD. *European Respiratory Journal*, 46(2), 336.

[7] Toledo-Ibarra, G. A., Rojas-Mayorquín, A. E., Girón-Pérez, M. I. (2015). Influence of the Cholinergic System on the Immune Response of Teleost Fishes: Potential Model in Biomedical Research. *Clinical & Developmental Immunology*, (4), 536534-536534.

[8] Wilson, K., Copelandsolas, E., Guthriedixon, N. (2016). A Preliminary Study on the Use of Mind Mapping as a Visual-Learning Strategy in General Education Science Classes for Arabic Speakers in the United Arab Emirates. *Journal of the Scholarship of Teaching & Learning*, 16 (1), 31.

[9] Howell, C., Douglas, K., Cho, G., et al. (2015). Guideline on the Clinical Use of Apheresis Procedures for the Treatment of Patients and Collection of Cellular Therapy Products. *Transfusion Medicine*, 25(2), 57–78.

[10] Holland, R. A., Scott, K. A., Flörke, M., et al. (2015). Global Impacts of Energy Demand on the Freshwater Resources of Nations. *Proceedings of the National Academy of Sciences of the United States of America*, 112(48), 6707-16.