How to Use Computer New Media Technology to Reform and Innovate the Integration Mode of Sports and Education in Colleges and Universities

Huimin Wang*
Lanzhou Resources & Environment Voc-Tech College, Lanzhou 730021, Gansu, China

*Corresponding author e-mail: wanghuimin@lzre.edu.cn

Abstract. With the development of the times, information technology has been a great improvement. Nowadays, computer technology is developing at a particularly fast pace, at the same time, the supporting software hardware is also gradually improving. With the development of science and technology, China's economic level has been greatly developed, but because of the imbalance of physical education in domestic education, the reform of physical education in our country's colleges and universities is inevitable. Therefore, the purpose of this paper is to use computer new media technology to reform and innovate the integration mode of physical education in colleges and universities. We first look up the new media technology of computer, and then use the algorithm construction system to simulate the fusion mode of physical education in colleges and universities, and calculate the results. Then carry on the offline experiment. By looking for the experimental group to carry out real experiments, we get the experimental data we need to infer the experimental results. The experimental results show that by using the new media technology of computer, some reform and innovation can be carried out on the integration mode of physical education in colleges and universities, and the resistance is small and easy to accept.

Keywords: New Media Technology, College Physical Education, Reform and Innovation, Computer Technology

1. Introduction
Nowadays, in China, physical education has always been in a weak position in national education [1]. Although moral, intellectual, physical and aesthetic education has been put forward for many years, it has not been implemented [2]. This is because, from small to large, students will be eliminated in the college entrance examination because of their achievements, so all schools and parents pay attention to the results of cultural courses. At the same time, the proportion of sports performance in the examination is ignored [3]. And because of the cruelty of the college entrance examination, especially in China, many people think that the college entrance examination is a life-long test, but there is no proportion of sports scores in the college entrance examination, so school teachers and parents are crazy to urge children to learn culture lessons, and even some people and some schools refuse to carry
out sports training for students. It's not right, but it's normal, and it's hard for us to change that. Therefore, our main purpose is to reform the physical education in Colleges and universities [4].

At present, physical education in Colleges and universities is also a relatively weak position. In many colleges and universities, sports performance is not included in the comprehensive test evaluation results, it is only as a prerequisite, that is, must pass. In the current visit, it is found that most college physical education teachers will make concessions to students and let them pass easily, so this is not possible [5]. So, we have to change them. In the past high school physical education, physical education is basically free activities and exercise, and in Colleges and universities, general sports activities refer to choosing teachers to carry out favorite sports with their own interests, such as table tennis, badminton, basketball, football and so on [6]. However, although the original intention of the school to put forward these sports is good, but with our in-depth investigation found that most of the courses are carried out with a perfunctory attitude, which has not played a substantial change in the physical education of students [7]. Therefore, the reform of integration of sports and education is inevitable.

But how to carry out the reform of physical education is also a difficult point in the process of implementation at this stage. This is because the status of physical education in the hearts of Chinese people is not very high, and it cannot be compared with professional cultural education. This leads to the intermingling of good and bad PE teachers in Colleges and universities in our country, and most of them are in a state of leisure. Once the reform is carried out, PE will become an important course comparable with professional courses, so for PE teachers, the increase of workload is just unnecessary in most people's eyes [8]. And for students, physical exercise is very tired, for schools, sports school reform is to spend energy and money to re-plan, and buy facilities and so on. These are all big tests. Therefore, the reform of physical education is still a long way to go. In order to better carry out the reform of physical education, we need to make some changes [9]. According to the notice on printing and distributing opinions on deepening the integration of sports and education and promoting the healthy development of teenagers issued by the Ministry of education, we can know that the state has targeted and purposeful reform on the integration of sports and education, which shows that the state has paid more and more attention to sports and education. So, what we should think about is how to carry out the education reform efficiently and effectively. So, we choose the new media technology based on modern computer technology to publicize this, and then promote the reform of sports education integration in schools [10].

2. Adaptive Control Algorithm

When the control filter order is L, the identification estimate filter order is M, and the input of filter is

\[ f_i(n) = [f_i(n), f_i(n-1), \ldots, f_i(n-L+1)]^T \]  

The control filter \( W_{i0} \) for the i-th band can be expressed as

\[ W_i(n) = w_{i1}, w_{i2}, \ldots, w_{iL}^T \]  

Then there is

\[ y_i(n) = f_i^T(n)W_i(n) \quad i = 1, 2, \ldots, Q + 1 \]

\[ e_i(n) = d_i(n) + S^T(n)y_i(n) = d_i(n) + S^T(n)f_i^T(n)W_i(n) \]

According to the principle of gradient drop, the controller weight coefficient is updated as follows

\[ W_i(n + 1) = W_i(n) - u_i(n)e_i(n)f_i(n) \quad i = 1, 2, \ldots, Q + 1 \]

Where the \( u_i(n) \) is the iterative step of the i-th band and the decomposition signal is filtered by the secondary channel estimation model \( f_i^T(n) \)
\[ \hat{f}(n) = \sum_{j=0}^{M-1} \delta^n f_i(n - j) \]  

(6)

3. Experiment

3.1 Experimental Process

This experiment mainly uses new media technology to think about and change the reform and innovation of the integration mode of physical education in colleges and universities. So, our focus is on reform and innovation. So, the first step of our experiment should be to collect the red-headed documents and examples of reform related to the reform of physical education in recent years, and the second step is to explore the experimental conditions and funds available to colleges and universities, as well as the site, personnel and other resources. The third step is to use existing technology to integrate the resources we have, and then make up our minds to carry out all-round reform of physical education in colleges and universities. But the reform first needs to meet to formulate the general outline, then carry out the propaganda, give our plan down, and then carry out the distribution reform. Therefore, we chose two schools to reform this and to observe and compare the situation before and after the reform.

3.2 Source of Experimental Data

This experimental data mainly comes from the local two universities, we carry out their physical education integration reform. We mainly use the new media technology of colleges and universities to make plans for them to develop and publicity process, and then through the cooperation of various departments of the school to complete this reform of physical education integration. Therefore, this experiment takes a long time. In order to better complete this reform experiment, we first used new media technology to simulate, and then the general results will be extrapolation, and then to carry out real conditions conducive to school conditions, because the conditions of the two schools are not the same. So, we developed two different plans to reform them separately, and then came up with experimental data for analysis and comparison.

4. Evaluation Results

4.1 Experimental Results

| Results               | Excellent | Good | Pass | Failed | Total number of people |
|-----------------------|-----------|------|------|--------|------------------------|
| Control group         | 49        | 63   | 30   | 18     | 160                    |
| The experimental group| 78        | 57   | 20   | 5      | 160                    |
| Total number of people| 127       | 120  | 50   | 23     | 320                    |

Based on the analysis of Table 1 and Figure 1, we can see that the excellent and good percentage of the results produced by the experimental group after the end of the period was more than 80%, and the number of failures was only 5. The number of people who failed in the control group was 18,
accounting for more than 10%, and the number of excellent and good people was less than that of the experimental group. So, we can draw from the experimental data that the reformed college physical education is better than the previous results. But reflecting from results doesn't reflect everything, so we took the second step of experimenting and using questionnaires to get their assessment of the current usage pattern.

![Figure 1. Analysis of the experimental situation](image)

Table 2. The questionnaire's assessment of the current correctional model

| Evaluation             | Excellent | Good | So so | Not good | The total number of copies |
|------------------------|-----------|------|-------|----------|----------------------------|
| Control group          | 34        | 66   | 36    | 24       | 160                        |
| The experimental group | 82        | 44   | 23    | 11       | 160                        |
| The total number of copies | 116    | 110  | 59    | 35       | 320                        |
Figure 2. The questionnaire's evaluation of the current correctional model

An analysis of the situation shown in Figure 2 shows that half of the evaluations of the experimental group were excellent, while the proportion of excellent and good was more than 80%. The excellent proportion of the control group was only less than 20%, and the excellent and good evaluation together accounted for 62.5 percent. So, we know that the reformed physical education model should be more popular.

4.2 New Media Technology

The new media technology is GEOGRAPHIC. It is a kind of space information system, which is mainly developed under the development of computer technology. It mainly collects location and geographic information, such as latitude and longitude coordinates, the altitude of mountains, and so on, and analyzes and processes spatial information, and then makes it into an image, and analyzes it. Subjectively, the new media technology is to integrate the map on the surface for a more intuitive experience.

New media technology from a macro point of view, it should be from ancient times. Because the new media technology is the study of geographical information. Long ago, people drew maps, carved stone statues, and so on to record the topography, which can be considered part of GIS. But now, thanks to the development of computers, new media technology is completely different from before, because there are many new technologies. GIS is now generally divided into five parts, namely, people, data, hardware, software, processes.

Personnel, mainly developers, maintenance personnel, operators. Because only developers develop good software, and maintenance personnel to maintain it in real time and timely processing, coupled with the operator's precise operation, can make the new media technology better operation.

Data is one of the cores. Because only good data can be drawn into good charts and can be used for analysis. And if the data doesn't work, then the tables that are made don't work.

Hardware, mainly refers to the composition of computer systems and the hardware composition of each operating system. Only good hardware can be satisfied with fine processing, otherwise the image can not be fine. For example, a graphics workstation and a regular computer treat the same picture the same way. Graphics workstation through good hardware can produce high frame rate pictures, resolution can be on 4k, and ordinary can not, can only make a general picture resolution of only 1080p.
Software, new media technology is naturally the core. But GIS is useless, but also have the corresponding supporting database, drawing, statistics, watch making, imaging and other processing software to make a good image.

Process, the variety of processes is more. We need to find a relatively simple and convenient process from a variety of processes with low consumption of resources, high accuracy to map to ensure the rational use of resources and the results of relative excellence.

So, we ended up building new media technologies with the help of various parts, and then analyzed the data we needed and charted it. And that's what we need.

4.3 The Purpose of the System Update
Now because the country strongly advocates the reform of physical education, so many people will blindly follow the trend to do. It would be wrong to make a so-called reform plan without knowing what you're up to or about. We need to be clear about what should be done in order to make a reasonable plan. For example, most colleges and universities or organizational education reform purposes, the most important is to help students complete physical exercise. It is necessary to supervise the reform of physical education, to question and determine the reliability of this. Instead of simply making a so-called physical education reform plan that can fool through, it is responsible for the students' bodies.

4.4 The Meaning of Adaptive Control Algorithms
Adaptive control algorithm is a set of hecing methods and calculations to create adaptive control model based on data. To create a model, the algorithm first analyzes the data you provide and looks for specific types of patterns and trends. The algorithm uses the results of this analysis to define the best parameters for creating a mining model. These parameters are then applied to the entire dataset to extract feasible patterns and detailed statistics. Mining models created by algorithms based on your data can take many forms, including a set of categories that illustrate how cases in a dataset are related. Predict the results and describe how different conditions affect the decision tree for that result. A mathematical model for predicting sales. Describes a set of rules that group products together in a transaction and the probability of purchasing them together.

5. Conclusion
To sum up, after analyzing the data experimentally, we found that after the reform of physical education integration, the students' physical education class enthusiasm beed higher, their physical fitness strengthened, and even the A school also screened out a sports team composed of professional national athletes. This shows that the reform of physical education integration is imperative. The purpose of our reform of physical education integration is to meet the needs of society on the one hand, and to be responsible to students and teachers on the other. Nowadays, with the investigation finding that the physical quality of young people is gradually declining, this university as one of the leading educations needs to make some responses and changes to this, which is the reason for the reform of the integration of high-efficiency physical education. And at present, because of the characteristics of our country in the field of sports, so we must continue to maintain our advantages, complement our shortcomings, only in this way, we can become a full range of sports power without weaknesses.

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