Retraction

Retraction: Countermeasures for Promoting the Development of Sports Economy by Physical Education in Colleges and Universities Based on Big Data Analysis (J. Phys.: Conf. Ser. 1852 042100)

Published 9 September 2022

This article has been retracted by IOP Publishing following an allegation that raises concerns this article may have been created, manipulated, and/or sold by a commercial entity. In addition, IOP Publishing has seen no evidence that reliable peer review was conducted on this article, despite the clear standards expected of and communicated to conference organisers.

The authors of the article have been given opportunity to present evidence that they were the original and genuine creators of the work, however at the time of publication of this notice, IOP Publishing has not received any response. IOP Publishing has analysed the article and agrees there are enough indicators to cause serious doubts over the legitimacy of the work and agree this article should be retracted. The authors are encouraged to contact IOP Publishing Limited if they have any comments on this retraction.

Retraction published: 9 September 2022
Countermeasures for Promoting the Development of Sports Economy by Physical Education in Colleges and Universities Based on Big Data Analysis

Nan Li*
Jilin Engineering Normal University, 3050 Kaixuan Road, Changchun City, Jilin Province, China

*Corresponding author e-mail: linan@jltiet.edu.cn

Abstract. It can be seen from the successful hosting of the 2008 Olympic Games and the upcoming Winter Olympics in China that my country’s sports economy is on the cusp of rapid development. However, my country's backward physical education in colleges and universities seriously hinders the development of the sports economy. In order to adapt to the sports economy in my country's new situation, the reform of college sports education is imminent. To this end, this article mainly injects capital into the reform of physical education in colleges and universities, strengthens teachers through economic strength and complements various competitions, so that my country's sports economy is steadily on the road of rapid development. In this experiment, the sports economic profit of the experimental group that injected college physical education through the economy was as high as 1.7 million yuan, 8.5 times higher than the control group of traditional physical education. This also confirms that the development of the sports economy first needs to inject capital into sports education, so as to increase people's consumption of sports activities through education, in order to promote the steady development of my country's sports economy.

Keywords: College Physical Education, Physical Education, Sports Economy, Development Strategies

1. Introduction
In recent years, due to the popularization and promotion of sports, the contradiction between my country's college sports and the development of sports economy has become increasingly serious. Although college sports in my country is still in the initial stage of sports development, with the successful holding of various major sports events in my country, traditional physical education has been unable to keep up with the rapid development of sports economy. As an important link connecting the national sports economy, how college physical education promotes the development of China's sports economy has become an inevitable problem.

Under the current social background, the world's economy is developing rapidly. Under the influence of the global economic environment, my country's current economic system has undergone
transformation, which has also led to the transformation of the sports economic system. In the development of physical education in colleges and universities, educational reform has promoted the development of physical education, which is a key step in the development of physical education in colleges and universities. Liu and Villalba believe that college physical education can cultivate the ability of college students to consume sports. This ability does not refer to economic ability, but a sense of cognition and identity [1-2]. Kirk and Mckenzie college physical education can cultivate college students' awareness of sports consumption, thereby promoting the growth of sports consumption demand [3-4].

Sports consumption consciousness will be affected by the surrounding environment. In the process of university physical education, any factor may promote the formation of college students' sports consumption consciousness. The strong atmosphere of university sports research and the sports research results produced by scientific and technological equipment can provide guidance for scientific research and sports training in our country, and the promotion of sports science and technology information market can serve sports training, making it an important force for improving technical levels [5]. From the perspective of the development of China's sports economy, to promote the development of university sports, theory and economy must be combined. In other words, it is necessary to combine education and scientific research industries to adapt to the development of university sports education and sports economy [6]. It can be seen that in order to promote the development of my country's sports economy, education and the current economic development are closely linked, the complementarity of economy and education and the promotion of the common development between the two are an inevitable trend under the contemporary background.

2. Method

2.1. High School Physical Education

As we all know, physical education in physical education is the basic organizational form of physical education in colleges and universities, and it is a required course clearly stipulated in the college teaching plan. However, in the process of completing its tasks, due to the changes of the times, the educational thoughts and concepts that are constantly updated to adapt to social changes have always affected its development direction, which also indirectly affects the development of my country's sports economy. In order to promote the development of my country's sports economy under the contemporary world economic environment, college sports have to seek corresponding education models, cultivate students' sports hobbies through physical education, guide students to actively participate in sports activities, stimulate sports consumption in my country, and achieve promotion the purpose of the rapid development of my country's sports economy.

2.2. Physical Education

In the development process of my country's physical education, two basic factors play an important role in it. One is to cultivate students' awareness of sports consumption. Colleges and universities can correctly guide students to cultivate the basic awareness of sports consumption through teaching. Once the consumption consciousness is formed, it can drive the demand for sports consumption and promote the growth of the sports economy [7]. Sports consumption consciousness is a potential psychological phenomenon. In the process of physical education in colleges and universities, there are a lot of external environments that affect the formation of college students' sports consumption consciousness. In teaching, it is necessary to provide college students with various knowledge about sports skills and health. The dissemination of sports knowledge is conducive to the formation of new concepts and ideas in sports consumption, and is conducive to the cultivation of sports interest and consumer interest [8]. This shows that college physical education has increased the interest and consumption of college students in sports activities. Therefore, guiding college students to form the correct awareness of sports consumption through physical education can increase the demand for social sports consumption and promote the development of my country's sports industry and economy;
the second is to stimulate college students to consume sports. The concept of improving sports consumption ability through physical education is analyzed from the perspective of economics. Physical education in colleges and universities can promote the reasonable development of sports consumption awareness in the process of sports development, so that students can reasonably view the desire to stimulate sports consumption, thereby improving students’ sports spending power. This ability is not usually referred to as economic ability, but an ability to recognize new things or recognize new things. From the perspective of educational development, physical education is a basic daily activity education. Teachers and students have different concerns. Therefore, physical education teachers should learn to improve students’ awareness of consumption during the teaching process. Therefore, improving the quality of physical education and overall physical quality is very beneficial to the development of the sports economy.

2.3. Sports Economy
Through the analysis of the status quo of the development of sports economy in my country, it is pointed out that the most important and fundamental thing in the development of sports economy is the possession of sports resources [9]. Sports and population mainly include sports parks. The sports population refers to social groups and social security groups who exercise regularly and want to engage in related sports activities. Sports facilities are places where sports activities are held. From the analysis of the employment situation of the number of people participating in physical exercise, 70% of the participants are students, and the frequency of participating in physical exercise is relatively high. Such a high frequency of sports participation is one of the main and lasting factors in China's sports development, and has a positive impact on the development of China's sports economy. In addition, college students account for almost one-third of the national sports population. Then in terms of sports, according to relevant data, from the analysis of the overall concept of China's sports participation, sports colleges represent a large part of China's sports economic development. The main reason is that when universities develop physical education, they must build stadiums and gymnasiums to meet the needs of daily physical education, such as indoor basketball courts, football fields, badminton courts and swimming pools. Almost all universities have these sports facilities. Therefore, sports colleges are a powerful driving force for the development of sports economy. In most areas of my country, in order to improve the physical condition of students and enable them to relax in a tense atmosphere, some schools have also proposed interdisciplinary conditions. In many cases, major sports competitions are organized by local universities and high schools. Through the above research and analysis, it can be seen that most of the population groups that promote sports development and sports economic development are from Chinese college students.

2.4. Development Strategy
Under the various driving forces to promote the development of sports economy, the most important thing is to ignore the physical education of our country's colleges and universities. The specific strategies of physical education are as follows: First, strengthen the construction of physical education teaching staff. In college physical education, strengthen the talent construction of physical education teachers. This is not only to increase the number of physical education teachers, but also to improve the overall quality of teachers' education. At present, under the model of physical education in my country, there is a serious shortage of physical education teachers. The quality of physical education in colleges and universities is directly linked to the development of my country’s sports economy, and it also affects students' professional sports ability [10]. Therefore, if we want to use the development of college sports to improve our country's sports consumption ability, we must attach great importance to the talent construction of physical education teachers. According to the current situation of various universities, reforming the education model, building a team of physical education teachers, strengthening and changing the traditional old education concepts, is conducive to comprehensively promoting the construction of the teaching team. The second is to carry out competition activities. In college physical education, we should pay attention to how education can effectively combine theory
with practice. Theory is greater than practice is a common phenomenon in sports activities in my country. Through the holding of prize-winning competitions, students will be able to apply the theoretical knowledge they have learned to reality and give corresponding rewards. At the same time, they can also cultivate their solidarity and cooperation in sports.

3. Experiment
According to the foregoing, in this chapter, we will bring the reform of physical education to colleges and universities. Through comparative experiments between colleges and universities that carry out physical education reforms and traditional physical education colleges, we summarize and analyze the universities and traditions that integrate economic and physical education reforms. Of the effects of physical education colleges on the development of sports economy.

3.1. Subject Selection
Take a certain two universities in our province as an example, select two different universities as the survey objects, and divide them into the experimental group and the control group using the economic reform of physical education methods and the traditional physical education methods. During the experimental test period, all physical education classes are unified.

3.2. Experimental Test Indicators
After conducting the course for one academic year, we conducted a questionnaire survey of 300 students in each of the two universities, and compared the growth of the sports economy of the two universities to judge whether the combination of economy and physical education would promote the development of the sports economy effect.

3.3. Analysis and Processing of Experimental Data
This experimental investigation uses data statistical analysis software SPSS22.0 to process and analyze the collected data information, which involves the summation of data, the formula is as follows:

\[
\text{SUMIF} (AS2 : GS2, H$2, A3 : G3)
\]

4. Result

4.1. Degree of Interest in Sports of the Two College Students
In the questionnaire survey, we learned about the degree of interest of the students in the two universities in sports. According to the survey data, 17.0% of the students in the experimental group indicated that they were not interested in sports at all, 39.0% of the students indicated that they were more interested in sports, 41.0% of the students indicated that they were very interested, and 3.0% of the students indicated that they were unclear; In the control group, 68.0% of the students said they were not interested in sports activities at all, only 15.0% and 7.0% of the students said they were more interested and very interested in it, and 10.0% of the students said they were unclear. This shows that compared with the traditional teaching methods and education models, the physical education model combined with economic reform is obviously more effective for college students' physical education. Under the mode of combining economy and education, in addition to teachers' dictation and guidance, with the help of various sports events held by the school, students can experience and feel the charm of sports more personally, which is more conducive to arouse and inspire students Sports hobbies, so that college students can spend more naturally in sports. The comparison of the two groups of college students' interest in sports is shown in Figure 1.
4.2. Cognition and Understanding of Physical Education and Economy between the Students of Two Universities

In the survey on "the cognition and understanding between physical education and the economy" and "how to make college physical education promote the development of sports economy", we found that the students in the experimental group answered these two questions more scientifically and rationally. Most of the 300 students in the experimental group of the two colleges and universities stated that the physical education in colleges and universities is not only for students to exercise, but also for students to participate in sports, make contributions to the national sports industry, enhance my country's sports strength and enrich sports Economy; On the contrary, among the 300 students in the control group, many students' understanding of physical education stays at the narrow level of "coping with superiors, punishing students physically, and earning money". Regarding the question of how physical education should promote the development of sports economy, more than 90% of the students in the two groups expressed the hope that colleges and universities can attach importance to the strengthening of sports teachers and hold more sports events, and about 10% of the students think Commercial sports intervention is possible. This shows that most students hope to have better physical education and believe that the integration of physical education and economy is an important measure. The specific situation of how to promote the development of sports economy by the students of the two universities is shown in Figure 2.

Figure 1. Comparison of the degree of interest in sports between two groups of college students

Figure 2. Investigation on the development of sports economy in two universities
4.3. Development of Sports Economy in Two Universities This Academic Year

Table 1 shows the income and expenditure of the sports economy of the two universities in this academic year.

|                       | Income | Expenditure | Profit |
|-----------------------|--------|-------------|--------|
| Experiment group      | 430    | 260         | 170    |
| Control group         | 180    | 110         | 20     |

As shown in Table 1, the sports economic development of colleges and universities is constituted by the income and expenditure of sports events this year. In this experiment, we compare the income and expenditure of the two universities for analysis. In the experimental group, the college’s income reached 4.3 million yuan, expenditure was also 2.6 million, and the profit reached 1.7 million; while the control group’s college sports income was only 1.3 million, but the expenditure was as high as 1.1 million, and the profit was only 200,000. It can be seen that the reform of the physical education curriculum of the experimental group is very successful, and the effect of sports economy promotion is remarkable. On the other hand, the sports economy of the comparison group is obviously inferior to the experimental group. This is closely related to physical education in colleges and universities. During the event, it promotes the development of related sports industries and injects strong blood into the college sports economy. However, traditional physical education methods can hardly stimulate students' learning enthusiasm and interest in participating in sports activities, and it is difficult to improve students' sports consumption level.

5. Conclusion

Before going to university, people were busy studying and had no time to participate in sports activities. After graduating from university, people went to work and ignored sports activities. Therefore, college students have become the backbone of my country's sports economy. Colleges and universities have become an important part of guiding college students to participate in sports consumption. Encouraging students to actively participate in sports activities and stimulating sports consumption are issues that universities should actively respond to. Strengthening the construction of teaching teams in colleges and universities is the key to physical education. Actively holding various prize-winning sports competitions is a necessary measure. At the same time, commercial sports can also be actively developed to cultivate students' love for sports and increase sports consumption. Obviously, traditional physical education methods do not meet the needs of modern sports development. For this reason, this article integrates economy into university sports, strengthens the construction of teaching teams and sports events through economic power, and stimulates students' enthusiasm for participating in sports activities. Practice has proved that the mode of combining sports and economy plays an important role in promoting the development of China's sports economy.

References

[1] Liu J, Shangguan R, Keating X D, et al. A conceptual physical education course and college freshmen's health-related fitness. Health Education, 2017, 117(1): 53-68.
[2] A. Villalba, M. D. González-Rivera, B. Diaz-Pulido. Obstacles perceived by physical education teachers to integrating ICT. Turkish Online Journal of Educational Technology Tojet, 2017, 16(1): 83-92.
[3] Kirk D. Physical Education and Regimes of the Body. Journal of Sociology, 2016, 30(2): 165-177.
[4] Mckenzie T L, Nader P R, Strikmiller P K, et al. School physical education: effect of the Child and Adolescent Trial for Cardiovascular Health. Preventive Medicine, 2016, 25(4): 423.
[5] Santos J, Petrica J, Serrano J, et al. Psychometric validation of Atest-EF and attention profile of
students during physical education classes. Quality & Quantity, 2019, 53(6):3119-3130.

[6] Wu Y, Bai Y, Song Y, et al. Development strategy and conceptual design of China Lead-based Research Reactor. Annals of Nuclear Energy, 2016, 87(JAN.PT.2): 511-516.

[7] Ding J, Sugiyama Y. Exploring Influences of Sport Experiences on Social Skills in Physical Education Classes in College Students. Advances in Physical Education, 2017, 07(3): 248-259.

[8] Dockter K A, Ribeiro A B F. Years Spent In Secondary Physical Education And Levels Of Physical Activity In College Students And Adults:1525 Board#119 May 28 10:30 AM-12:00 PM. Medicine & ence in Sports & Exercise, 2020, 52(7S): 402-403.

[9] Seferiadis A A, Cummings S, Zweekhorst M B M, et al. Producing social capital as a development strategy: Implications at the micro-level. Progress in Development Studies, 2018, 2(2): 170-185.

[10] Zuckerman S L, Kuhn A W, Yengo-Kahn A M, et al. Outcomes after sport-related concussion: does socioeconomic status matter. British Journal of Sports Medicine, 2017, 51(11): 31-32.