

Retraction

Retracted: Basketball Technology Simulation Application Based on Virtual Reality

Mathematical Problems in Engineering

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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

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.

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- [1] Y. Song, "Basketball Technology Simulation Application Based on Virtual Reality," *Mathematical Problems in Engineering*, vol. 2021, Article ID 6657670, 9 pages, 2021.

Research Article

Basketball Technology Simulation Application Based on Virtual Reality

Yushuai Song 

Physical Training College, Beijing Sport University, Beijing 100084, China

Correspondence should be addressed to Yushuai Song; huanxiang82@bsu.edu.cn

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The combination of virtual reality (VR) technology and basketball technology simulation can make the players have a real experience and experience, so as to effectively improve the quality of basketball training. It can also, according to the individual needs of different players, promote their physical and mental health development and improve the enthusiasm of basketball training, so as to improve the level of basketball technology. Immersive feeling and interest of human-computer interaction are the essential characteristics of virtual reality. The real conception of space-time environment, that is, the process of enlightening thinking and obtaining basketball technology simulation information, is the ultimate goal of virtual reality. In this experiment, five high-level basketball players in our city were selected and numbered from no. 1 to no. 5. Before the experiment, it is necessary to make the players warm up fully before the experiment and then test the forward turning technical movements of basketball. The test variables are based on different angles and distances. After that, standardized selection of basketball technical statistical indicators includes shooting hit rate, two-point hit rate, three-point hit rate, and free throw hit rate. According to the results of the experiment, it took the most time for the curve technique to lower the buffer stage, and it took up 29% of the total time of the entire precursor shot and turned back and the aerial shot stage is 23% and 22%, respectively. There is 20% time in the takeoff phase and 6% time in the brake phase. It has a great influence on the results of the game.

1. Introduction

1.1. Background and Significance. As science and technology continues to develop, more and more advanced facilities have been introduced into athletic activities. To improve the training quality and training effectiveness of athletes, different training techniques are used to change training methods [1]. Sue needs new skills and equipment to make training more difficult. Due to the increase in training time and practice, the athlete's mind and body fatigue rapidly increases and the athletes' skill learning and performance are affected, lowering performance and even impeding exercise. Virtual reality technology is developed in recent years. It is a technology that uses computer simulation to create a three-dimensional virtual world. It provides users with visual, auditory, tactile, and other sensory simulation, so that users can feel themselves in the scene [2]. In a three-dimensional space, the participants can experience and interact with the virtual world through appropriate devices.

1.2. Related Work. The objective is to explore the effect of virtual reality technology (VRT) combined with rehabilitation robot training on motor function and event-related potential (ERR) in patients with hemiplegia after cerebral infarction. From December 2012 to December 2013, Maples-Keller used the random number table method. All patients had unilateral lower limb hemiplegia. The patients were divided into the control group ($n = 40$) and the intervention group ($n = 40$). Both groups were given routine rehabilitation training. The control group was trained by robots, and the intervention group was trained by virtual reality technology combined with rehabilitation robot training. The FMA and Berg Balance Scale were used to evaluate the efficacy of the two groups before and 8 weeks after treatment [3]. Donghui focuses on selecting the exact placement model suitable for psychological evaluation, psychological resilience training, and psychological intervention needs by combining historical development trends and features of virtual reality. We need to study more deeply to improve

research methods, control development costs, and strengthen process experiences and interactions [4].

In order to observe the effect of whey protein powder on the hematological indexes of professional athletes in basketball training, Koeva randomly divided the athletes into the control group and nutrition group. Athletes completed 30-minute quantitative exercise with bicycle before and one month after the experiment. Blood was drawn immediately after exercise, heparin was extracted, and hematological indexes such as hemoglobin, erythrocyte count, hematocrit, and mean corpuscular volume were measured [5]. Chen compared the changes of spinal curvature between young male basketball players and the nontraining control group in 2 years. The study included 10 basketball players and 11 untrained men. At the beginning of the study, all participants were 13 years old; at baseline and in the first and second years of the study, they measured the anterior and posterior curvature of the spine at baseline and at the first and second year of the study [6].

1.3. Innovation. Virtual reality technology can simulate basketball technology, observe a true three-dimensional basketball court from different induction angles, and create different scenes through change to make the final basketball technology effective. It can provide an effective basis for building mockups; the environment for adapting to computers has changed; initially, people always communicated with computers when dealing with everyday environmental problems. It is now more intuitive and transparent to find the best basketball technology simulation information through similar sensing devices [7].

2. Simulation Application of Basketball Technology Based on Virtual Reality

2.1. 3D Modeling. The traditional method for 3D modeling of a real shape is based on a figure or a geometric plane view and is a simulation of the light interaction process of an object in a real situation [8]. When reconstructing, the modeling system is used to determine the geometric model of the scene, and then the material and pattern of the object are specified to check the position and intensity of the light source in the scene. It calculates the brightness of all visible points, identifies the properties of shape elements such as points, lines, faces, and bodies with a computer, and then realizes them through computer design and display [9, 10]. In fact, these two stages are inseparable in the implementation process. In order to facilitate the description, the process is shown as two stages of modeling and drawing. The expression from natural shape to the computer 3D geometric model is called modeling. The establishment of the virtual scene model is the basis of the whole real-time roaming system, and the quality of the model directly affects the performance and accuracy of the scene [11]. For complex large-scale scenes, the establishment and optimization of the model is very important [12].

The integrity of the virtual reality science education model is reflected in the process of learning activities,

learning experience, and learning objectives. When establishing the model, we must conduct a comprehensive evaluation, understand the different stages of the learning process, clarify the learning activities and learning objectives, and analyze the implementation process of virtual reality science education, which fully reflects the integrity of the model [13]. In the construction of the geometric object model, it is necessary to study the virtual coordinate system and the original and organization structure. The mass center of the observed object can choose the coordinate system composed of the main inertial axis and the orthogonal direction. The origin of coordinates can also be selected as the observation point, but because there are many observation points, the model stores a lot of information. The front end contains the preview of face primitive and volume primitive. The connection between front ends can be displayed by using the matrix sum tree or network. The structural expression of objects includes surface/boundary representation, generalized cone method, and volume representation method. An object with an edge interface or edge line is called a surface/boundary representation [14]. According to the space curve, the scanning object composed of two-dimensional parts is called the cone method [15]. The object of the primitive representation of the actual connected volume is the object generated by the Boolean operation of the volume representation and the set of primitives (block, cylinder, cone, and sphere). The complex shape model is used in hierarchical structure, and the object is divided into several subordinate objects. The geometric model is represented by the lower object model and its connection: the human model is composed of head and body; the left and right arm models are composed of two layers of arm and arm. In the hierarchical structure, the change of the direction and position of the lower target can generate different posture actions [16].

Virtual reality (VR) technology in the simulation technology, sensor technology, display technology, and immersion interaction [17], while all teaching changes can rely on technology, can fully meet the requirements of athletes' understanding, experience, and mutual learning. This sense of engagement cannot be achieved with existing teaching techniques. With the blessing of virtual reality technology, athletes can eliminate cognitive barriers caused by time and space and let them immerse themselves in the imaginary simulation scene [18]. Compared with the performance characteristics of knowledge in traditional training, the performance of VR teaching is three-dimensional, which helps athletes deepen their impression of knowledge. The combination of VR and basketball technology simulation can play a strong value in the field of training [19].

2.2. Construction of Basketball Player's Character Model. First of all, the success or failure of the 3D character model construction depends on the accuracy and appropriateness of the character model. Therefore, modeling is the core of making the model. As Maya has powerful modeling and animation performance functions, the software environment is used to create the skeleton and skin of basketball

players [20]. In the construction of the skeleton, the connection between the human body model and the bone will be affected by the relevant bones and the weight of the model, which is directly related to the deformation of the model surface in the bone movement [21]. Here, we need to adjust the weight of the human body to improve the above problems. At the same time, using UV texture mapping, merging organization models, simplifying the number of models, and realizing optimization model can ensure the effect of reducing file size and the fluency of virtual interactive environment [22].

The motion path collected by the motion capture system is the data points of human joints, which should be able to drive the character model according to the trajectory movement [23]. When binding bones, in order to ensure the physical coordination of model motion, we should pay attention to the influence of data point weight of each node in the model [23]. The specific procedure is as follows. First, the initial data collected from the movement capture system are input to the computer software and the basic structure of the movement image model is set to 0 so that the shape of the human body adapts to the initial movement, which is the basic skeletal posture. The characteristics of the 23 data volume nodes are the areas that form the basic structure, and then the raw data were collected using motion and magnification tools in a situation where the skeleton model is not in motion; then, the proportion and angle of the initial motion are kept unchanged, and the raw data are compared with the key nodes of the human skeletal model. The data are captured, driven, and archived [24]. Finally, the binding and debugging of moving bones are completed. The new character data model can be inserted into the computer software. The movement of the data model can be driven by character control tools, and the 3D animation of basketball players can be realized by using motion capture technology.

2.3. Special Physical Training. Special physical training is connected with the latest scientific and technological achievements in many fields, such as scientific education, sports physiology, scientific life, industry, and computer science, and has become an important way to improve the technical level of modern basketball [25]. Sports is a basic science with strong direction and structure. In some countries, it is specially studied as a learning direction of university. Every NBA team has more than one sports coach, and everyone has conducted in-depth research on some aspect of basketball technology. However, so far, in the specific basketball specific physical training, there is no complete set of the special physical training system. Training theory, concept confusion, and physical exercise specific characteristics are not obvious, and training methods continue to use track and field events, not targeted and practical [26]. On the one hand, due to the lack of experts in this field, most of the physical fitness coaches of some sports teams come from the field of track and field, and not every team has a coach. On the other hand, in the minds of many coaches, special physical training is still a narrow or vague concept. Due to the lack of detailed and systematic research on the

characteristics of their own sports and the required physical education teaching, training has been caused to practice blindly mechanically and copy other training methods [27].

Modern sports has a wide range of concepts and rich colors, including body shape, body function, and sports quality. Each part has many goals, such as the quality of sports, speed, endurance, sensitivity, flexibility, coordination, and flexibility. The speed of basketball players is divided into starting speed, turning speed, and braking speed. At the same time, there are differences between general physical fitness and special physical fitness, and each of which must be guided in detail by the coach [28]. The most important thing is how to scientifically combine physical training with special skills and routine training and really apply it to actual combat. It will become a special strength and a special ability and eventually evolve into a wonderful moment for basketball players to snatch, block, lay up, take off, and dunk. This is the need to take many complex and delicate methods and steps, and long-term research and continuous exploration of sports coaches are needed.

2.4. Application of Virtual Reality Technology in Basketball Technology

2.4.1. Breaking through the Limitation of Time and Space and Enhancing the Immersion of Basketball Teaching. Virtual reality technology can meet people's needs by using a computer to simulate various real scene environments. When VR sports technology is used to display 3D images on virtual reality devices through computers, athletes can learn through simulated sports scenes and make up for the defects in teaching conditions [29]. In the virtual reality scene, we can complete the skill movement which has a certain degree of danger in the basketball teaching method and let the players complete the basketball skills which are difficult to complete in reality and can avoid the occurrence of dangerous injuries and so on. With the help of VR technology, we can also simulate the scene of the basketball game, so that all players can experience the fierce atmosphere of the basketball game. At the same time, we can boldly use the skills we have learned to make the players more immersed in the simulated basketball practice scene and enhance their learning fun.

2.4.2. Breaking the Traditional Physical Education Teaching Mode and Enhancing the Diversity of Basketball Teaching. Traditional basketball teaching mainly focuses on learning the basic skills of basketball, for example, learning basketball dribble, catch, shoot, and three-point shot, teaching content is cliché, the teaching method is single, and subjective learning intention of athletes is not strong. In addition, in the teaching process, most coaches cannot focus on the needs of athletes in the new era. However, with the blessing of virtual technology, not only can the virtual scene be simulated, but also their favorite basketball stars can show basketball skills and provide supplementary courses to meet the curiosity of athletes and the pursuit of advanced technology [30]. This will greatly enhance the enthusiasm of

athletes in learning and improve the quality of teaching. Due to the limitation of physical quality and basic knowledge of basketball in traditional basketball teaching, many players do not experience the pressure, stimulation, excitement, enjoyment, and satisfaction brought by basketball competition. Therefore, after introducing virtual reality technology, they can simulate the game scene and let the players voluntarily use various basketball skills and tactics to participate in the intense and fierce basketball competition, so that the players have always maintained in a high atmosphere [31].

2.4.3. Breaking the Limitation of Teaching Supervision and Enhancing the Timeliness of Learning. Basketball education should not only rely on course learning and practice but also need continuous training and practice after class, which can improve the athletes' sports quality and the sensitivity of ball games such as basketball skills. Although in basketball class, coaches can provide guidance and help to athletes directly, it is not easy to supervise after class. The introduction of virtual reality technology can play a role of supervision, provide accurate guidance to athletes, and clearly record the completion status of athletes' technical movements, so as to check the accuracy and standardization of their actions, and it can evaluate the behavior of athletes, point out the shortcomings, and put forward suggestions for improvement, which can improve the learning effect. In the process of practice, the coach can analyze the specific learning situation of all the athletes by a computer [32] and provide performance feedback to the athletes and coaches, so that the coach can easily master and supervise the overall learning situation of the athletes and make appropriate learning plans for all athletes.

3. Basketball Technology Simulation Application Experiment Research Based on Virtual Reality

3.1. Research Object. Five high-level basketball players in our city are selected as the experimental objects. They are all professional basketball players who have practiced for more than ten years, they have relatively stable technical movements, and they are also used more frequently in basketball technology. They are familiar with the rules of the basketball game and train hard every day. Therefore, the percentage of shooting percentage is relatively high. In these five high-level athletes, each person uses the right hand to realize the shooting movement.

3.2. Experimental Steps. The virtual reality technology equipment uses HTC Vive equipment, the software selects VR Sports software [33], VR Sports is a VR sports software including basketball, table tennis, badminton, and other seven sports items. Basketball can be used to exercise fixed-point shooting in this software, and the position of players will automatically change, with different degrees of difficulty to choose.

Before the motion data acquisition, in order to prevent computer hardware errors, it is necessary to select a working environment that is not disturbed by the earth's magnetic field. Athletes need to wear special clothes to complete the cable connection between inertial sensors. At the same time, it is necessary to check the correct position of all inertial sensors and reasonably correct the position of sensors and the corresponding human body. In addition, it is necessary to ensure that there are no metal objects on the surface and near the space of the model body [34]; otherwise, the electromagnetic field will be distorted and the accuracy will be affected. Then, the athletes are guided to perform some routine actions, such as stop, walk, run, and jump, and calibrate the actions before the action capture function to make the motion data more accurate.

The number of athletes participating in the experiment is 1–5 before the experiment, and the athlete must complete the exercises such as warming up, limb stretching, and shooting to activate the athlete sufficiently. Predicting and practicing forward and backward movements is necessary to secure the range of roles. After loosening, direction is changed before starting the test. The test subject takes six turns and shoots before receiving the ball. Completing the point, the angle is 0° , the distance is 2 m, the angle is 45° , the distance is 4 m, the angle is 90° , and the distance is 2 m, 4 meters away from a 90-degree angle. The accuracy of the movement must be ensured by performing three movements each time. Statistical standards for basketball include shooting accuracy, two-point hit ratio, three-point hit ratio, and free throw hit ratio.

3.3. Correlation Analysis Theory. Related analysis is a statistical method that is often used to study the accessibility of variables. Correlation is a universal correlation that refers to the relationship between two objects. That is, when one variable X obtains a specific value, the other Y variable cannot take one value according to a specific function. Related relationships can be divided into linear and nonlinear relationships. Linear correlation analysis studies the degree and direction of the linear relationship between two variables. Correlation coefficient is a statistical value describing the strength and direction of this linear relationship, usually expressed by r . The correlation factor r has no unit, and its value varies between -1 and 1 . The sample observation values $(X, Y)_i$ of n groups of random variables X and Y and the correlation coefficient between $i = 1, 2, \dots, n$, variables X and Y were calculated by Pearson product moment correlation formula:

$$r = \frac{\sum_{i=1}^n (X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^n (X_i - \bar{X})^2} \sqrt{\sum_{i=1}^n (Y_i - \bar{Y})^2}} \quad (1)$$

In the above formula, \bar{X} and \bar{Y} are the mean values of variables X and Y , respectively. X_i and Y_i are the i^{th} sample values of variables X and Y , respectively.

4. Basketball Technology Simulation Application Experiment Analysis Based on Virtual Reality

4.1. *Forward Turn Shooting Technique.* In order to study the movement technique carefully, we must study from the time characteristic, the space characteristic, the speed characteristic, the angle characteristic, the angular velocity characteristic, the acceleration characteristic, and many aspects, and this experiment to the front turn shot technical movement research analysis mainly from the three aspects such as time characteristic, the angle characteristic, and the acceleration characteristic. Through the research of athletes, it is found that most of them take their right hand as the shooting hand, and they are used to take the right foot as the central foot and the left foot as the rotating foot. According to the video shooting and related research, in order to refine the technical action, the technical action of front turning is roughly divided into the following five stages: turning stage, braking stage, kicking off stage, taking off stage, and landing buffer stage. The sequence is “body center of gravity drops slightly and the left foot drives the left knee and left hip to rotate clockwise,” “the left foot lands and feet touch the ground to cushion,” “feet push the body off the ground,” “body soars to complete the hand,” and “body gravity drops and feet touch the ground and double knees cushion” [35].

In order to make a more detailed analysis of the technical movements of the five athletes, the experiment divided them into five stages: the turning stage, the braking stage, the kicking off stage, the air release stage, and the falling buffer stage. The time spent in each stage was statistically analyzed, as shown in Table 1.

The data in the table allow each athlete to accurately record the specific time consumption in step 5. The time difference between athletes in the same exercise step is very small, but the time difference in different movement steps is even more. As can be seen in Figure 1, the descent buffer stage occupies the longest time and 29% of the total shooting time. The turn and air fire stages then account for 23% and 22%, respectively, followed by 20% of the landing and takeoff phases and finally 6% of the braking phase.

In the turning stage, the heel of the rotating foot starts to leave the ground, and then the forefoot gradually leaves the ground and starts to rotate towards the toe. The body changes from the original two-foot support to the single support stage with the central foot as the support point. With the rotation of the rotating leg, the hip joint expands outward, and the body rotates with the direction of the toe rotation until the rotating foot begins to contact the ground, which is the beginning and end of this stage. In this stage, the turning action needs to obtain a certain horizontal force, which is the result of the force from the support foot, the swing leg, and the waist and abdomen. The turning effect is the reasonable combination of the horizontal force and the rotation speed.

TABLE 1: Time consuming in different stages.

Number	Twist	Breaking	Take off	Free hand	Buffer
1	0.28	0.12	0.3	0.28	0.38
2	0.29	0.1	0.28	0.24	0.34
3	0.27	0.1	0.26	0.26	0.36
4	0.29	0.09	0.25	0.24	0.38
5	0.28	0.11	0.27	0.25	0.36
Average value	0.282	0.104	0.272	0.254	0.364

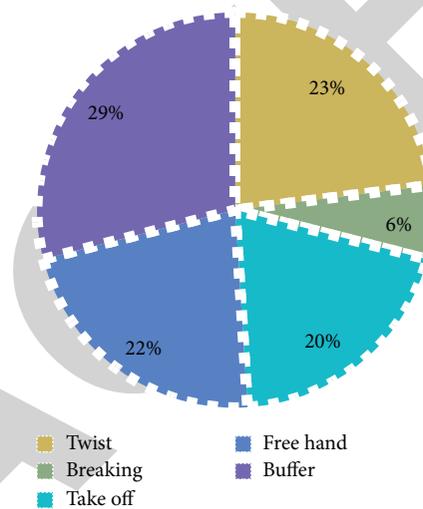


FIGURE 1: Time structure chart of each stage of forward turn shooting.

4.2. *Analysis of Angle Characteristics at the Beginning Stage of Rotation.* In the process of rotation, the movement form of the transfer leg mainly depends on the swing of the rotating foot, and the swing of the knee joint drives the force of the hip joint. With the different body shapes in the turning process, in order to maintain the body posture, the hip angle, knee angle, and ankle angle in the rotation leg present different angles, and with the turning stage going on, the hip angle, knee angle, and ankle angle show different angles. The angles of the three joints of the rotating leg also change continuously, as shown in Figure 2.

As can be seen in Figure 2, the average hip angle of the athlete’s leg rotation is 172.8° and the range of hip angle is 158.2° to 186.3° according to the statistical data. The average knee angle of the rotating leg is 139.6°, and the range of the knee angle in the rotating leg is 128.6° to 157.3°. The average ankle angle of rotation leg is 122.7°, and the range of ankle angle is 105.7° to 150.8°. Through the comparison of hip angle, knee angle, and ankle angle, we found that hip angle > knee angle > ankle angle.

The average hip angle of the supporting leg was 148.7° in the rotation stage, and the hip angle ranged from 139.2° to 155.8°. The average knee angle of the supporting leg is 153.2°, and the range of knee angle is 142.6° to 159.2°. The average

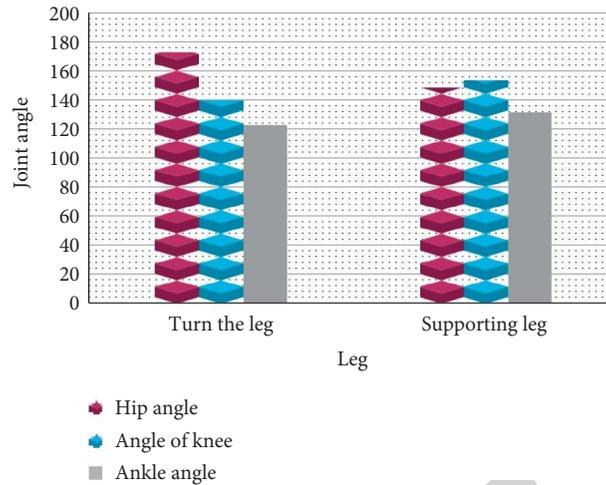


FIGURE 2: Joint angles of the rotation leg and supporting leg.

ankle angle of the supporting leg is 131.5° , and the range of ankle angle is 112.8° to 158.7° in the supporting leg.

4.3. Correlation Analysis between Score Ratio and Other Technical Statistical Ratios. In accordance with the rules of the basketball game, the basketball game is scored. In the game, the goal of the team's tactical combination and player skill management is scoring. It is necessary to analyze the correlation between the score rate and the descriptive statistics index on the basis of comparing the ratio of descriptive statistics in order to study the factors of the game match in basketball. Factors and tactical features can be analyzed.

In order to analyze the technical statistic index factors of winning basketball match, the linear correlation between score ratio and technical statistics data ratio is measured by correlation analysis theory. The greater the Pearson correlation coefficient between the ratio of technical index data and the ratio of competition score indicates that there is a big difference between opponents in the technical statistics and the greater the influence on the victory and defeat of the competition, the smaller the Pearson correlation coefficient, the smaller the difference of the technical statistical data, and the smaller the impact on the victory or defeat of the competition. After the correlation analysis of score ratio, the analysis results are shown in Figure 3.

From the above data, we can know that the correlation coefficient between the score and the shooting percentage is 0.52, the correlation coefficient with the three-point shot shooting times is 0.347, the correlation coefficient between the free throw shooting rate and the free throw shooting rate is 0.582, and the correlation coefficient with the three-point

shot number is 0.135. Through the correlation analysis theory, the probability p value of their correlation coefficient test is close to 0. Therefore, it is considered that there is a strong linear relationship between them and scores, which has a greater impact on the outcome of the game, while other technical indicators have no significant impact on the outcome of the game.

4.4. Difference Test of Each Index. Comparing the data of the experimental group before and after the experiment, except for the shooting percentage under fatigue state [36], the p values of the test indexes reflecting ankle joint strength and stability and basketball technical level are all less than 0.05, as shown in Figure 4. It shows that there are significant differences between the experimental data after the experiment and those before the experiment.

Before and after the experiment, there were significant differences and significant progress in the test results of ankle strength and stability and basketball technical level in the experimental group. The first reason is that the normal footwork training and basic basketball skill training have improved the human body's sports ability, and the basketball technical level has been significantly improved. The targeted training improves the stability ability and habitual posture in the movement process, thus promoting the strength transmission and cohesion of each link in human movement, and greatly improves the work efficiency of each link. The second reason is that the training of ankle strength and stability can strengthen the strength and stability of ankle muscle group, provide the last fulcrum to stabilize the human body when the lower limbs do movements, and improve and stabilize the efficiency of energy transfer of lower limb work.



FIGURE 3: Results of correlation analysis between score ratio and other technical statistical ratios.

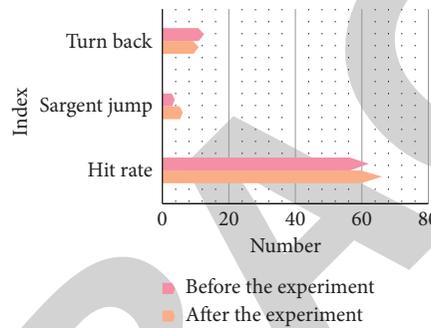


FIGURE 4: The difference test of each index before and after the experiment.

5. Conclusions

Virtual reality technology has the characteristics of immersion, interactivity, multiple perception, and imagination. It can create and experience the virtual world generated by the computer. The “world” here refers to a sense of reality. From a three-dimensional perspective, it can be a real representation of a specific real world, or a planned world. Experts can carry out specific stage activities or virtual reality technology simulation communication through sensory perception. This technology will become a necessary means of college physical education in the future. The combination of virtual reality technology and school physical education can subvert the traditional teaching methods, provide athletes with real scenes for different teaching needs, strengthen and deepen the experience of athletes, and help athletes master, integrate, and understand sports skills.

Incorporating virtual reality technology into college basketball education can break old educational models. The coach provides nondiscriminatory training for the entire class, allowing all players to experience the true scene in a virtual education environment and feel the pleasure of successfully practicing basketball skills and even tactics. The

application of virtual reality technology can provide athletes with a higher level of basketball skill demonstrations and can demonstrate and assist with their favorite basketball stars with action demonstrations. Because the professional difference between the two and the basketball skill level does not match, the basketball skill movement is not normative, beautiful, and even wrong presentation. By using virtual reality technology to reduce the stress of the coach, the coach can catch the wrong movements.

Basketball skill movements are natural, lively, and represent an infinite 3D animation format, and athletes are complete and intuitive by observing the details and key points of the skill movements in each direction and at any distance. It helps to create human movements. Interaction between humans and computers stimulates the excitement of athletes to imitate training, improves self-learning skills, and can enhance the effectiveness of educational training. The working principle of the Moventraptic collection system is that when collecting 3D basketball technical data, the coach will often integrate and use teaching resources and establish and update the project database in real time to meet the needs of teaching. By conducting scientific teaching studies using exercise parameter data collected in physical

education, the exercise rules of exercise technology are analyzed to make the course more intuitive and smart. Of course, data can be monitored and used effectively. In the course of doing this, they made higher demands on computer training for physical education instructors.

Data Availability

No data were used to support this study.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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