

Research on Monitoring of Basketball Training Load Based on Multimedia Technology

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Abstract: With the continuous progress of science and technology, the monitoring methods and means of sports training are constantly updated, and the concept of digital training monitoring is put forward in the field of elite training. Digital training monitoring is to collect the real data of athletes' physical indicators through various scientific equipment in sports training and competition, and to transform the strength, speed, endurance, sensitivity, explosive force and other abilities of athletes' physical training into digital data. The multimedia teaching method based on modern computer technology is an important tool in school education, and it is also applicable to basketball teaching and training. The penetration of computer technology in all educational stages has shown good results, so college basketball educators have begun to try to integrate multimedia technology into practical courses. Taking multimedia teaching and basketball teaching and training as the research objects, this paper analyzes the concrete application of multimedia teaching in basketball training load monitoring on the basis of summarizing multimedia teaching, in order to provide reference for concrete practice.

1. Introduction

Basketball is an important part of sports. Basketball originated late, but it is widely loved by people because of its teamwork and competitiveness. The rapid development of modern information technology and big data has driven the scientific and digital sports training, and digital training has become one of the necessary foundations to improve the core competitiveness of athletes [1]. The modernization of teaching means is one of the important topics in today's physical education reform, and the application of computer-assisted instruction technology in physical education training is an important way for physical education to move from the traditional mode of experience teaching training to scientific, information and modernization [2]. In the traditional training mode, students can't intuitively feel the similarities and differences of different tactical forms, their minds don't have a clear idea and layout, and the training effect is not satisfactory [3]. The application of multimedia system in basketball tactical training conforms to the educational law of realizing science and technology in education, and is also an effective way to improve training efficiency and teaching effect. Multimedia technology not only has the function of recording and demonstrating, but also the function of editing materials. In the process of integrating text information, picture information, audio information and video information, it can create a more ideal educational and teaching situation, and then enter a more efficient learning pattern [4].

Digital training is to quantify athletes' physical training data, transform all kinds of information of athletes into comparable data, and train for athletes' weak events, so as to provide guarantee for improving athletes' overall physical fitness level [5]. The development of science provides many possibilities for the basketball teaching process, not only in the renewal of teaching mode, but also in the high-tech content of teaching tools [6]. The sports load level and training intensity of basketball players during physical training determine their sports level and performance. Athletes' tolerance to load and training intensity varies from person to person, and the research shows that load can be divided into [7]. Taking multimedia teaching and basketball teaching and training as the research objects, this paper analyzes the concrete application of multimedia teaching in basketball training load monitoring on the basis of summarizing multimedia teaching, in order to provide reference for concrete practice. According to the feedback data, coaches can also adjust the training

plans of athletes who have not reached the stimulation level or athletes whose weak events have not got the training effect, so as to help athletes achieve the maximum performance in physical training.

2. Connotation and characteristics of multimedia teaching

2.1. The meaning of multimedia teaching

Multimedia teaching is a modern teaching method formed and developed rapidly in recent years, which mainly refers to a new teaching method based on multimedia. In the process of basketball tactical training for students, teachers still have to take the students' original professional accomplishment and knowledge reserve as the basis when using multimedia system to imitate and explain their tactics, so that they can understand and master the tactical content explained by multimedia system. In many college basketball education and teaching, physical education teachers pay more attention to the application of multimedia, but in many cases, the actual effect is not very ideal. As a new concept formed in recent years, multimedia is based on computer technology and information communication technology [8]. When using multimedia for specific teaching, teachers should closely combine the specific and narrative needs of this course, and select appropriate forms such as words, pictures, videos and audio, so as to transform boring and complicated classroom contents into vivid images and enhance students' knowledge and understanding of the classroom. Some college P.E. teachers' information literacy is not high, their mastery of multimedia technology is not in place, and they often can't effectively apply it to the actual basketball training courses. In this respect, they lack long-term and sustained investment, and they can't quickly show the actual effect. Therefore, it's easy to give up in practice, and then it's difficult to give full play to the value of multimedia technology in auxiliary physical education teaching.

2.2. Characteristics of multimedia teaching

The resources of basketball training based on multimedia technology are very rich, which will become important materials in the process of college basketball training guidance. Without the support of multimedia technology, these resources can hardly be effectively presented to college students, that is to say, with the help of multimedia resources, the demonstration pattern of college basketball training can be brought into a more ideal state. Compared with other teaching methods, multimedia teaching mainly has two characteristics, namely, technical characteristics and teaching characteristics. In the process of confrontation tactics training, teachers first guide students to watch the latest basketball game videos, select relevant fragments of confrontation tactics, and guide students to understand the value of confrontation tactics in actual basketball competitions in a slow way, and summarize and summarize the skills of their implementation. During watching this multimedia video, students have a certain understanding of actual confrontation techniques in their minds [9]. Because of its solid foundation, multimedia teaching mode shows strong expressive force, reproducibility, spread range and participation. Among them, expressiveness mainly means that teachers can transform boring and complicated knowledge by multimedia, and then directly show theoretical knowledge and operational skills through vivid models.

Different multimedia resources have different effects in improving the teaching quality of basketball training. For example, introducing popular basketball animation resources into the early stage of the actual classroom can stimulate students' enthusiasm for learning basketball courses. Similarly, watching the documentary about the growth of basketball stars that students like can realize the transmission of basketball spirit, make students feel more strongly about the basketball spirit, and then enter a more ideal basketball learning pattern. Whether students recognize the application of this multimedia system in teaching will affect the speed and degree of students' mastery of teaching content. And different teaching contents will produce different teaching effects when applying multimedia systems. During the application of multimedia system, students will change their learning attitude according to whether it is more suitable for teaching content. In the actual basketball education and teaching, teachers should know how to combine the actual teaching demands, choose more targeted multimedia basketball resources, realize the full interaction between

classroom resources and extracurricular resources, and then step into a more ideal learning pattern.

3. Application of multimedia teaching in basketball training

3.1. The teaching of basic basketball skills

The advantages and functions of multimedia systems are obvious, and they are also widely used in various courses. To give full play to the advantages of multimedia systems and show their expected functions, it is necessary to fully consider the application of multimedia systems when designing courses. Basketball idea is the main foundation to enhance students' understanding of basketball, which can first depict a certain knowledge structure or background structure in students' minds. Only in this way can the multimedia system be applied at the right time and achieve the best results. Multimedia teaching is different from the traditional teaching mode, and it has its own specific rules for the expression of content and the distribution of attention. The tactical content and cognitive degree expressed by students in multimedia courseware will also be different, and the overall rule is from simple to complex, from single to comprehensive, and the forgetting rule is characterized by fast first and then slow. The tracking model of sports technical action target is shown in Figure 1.

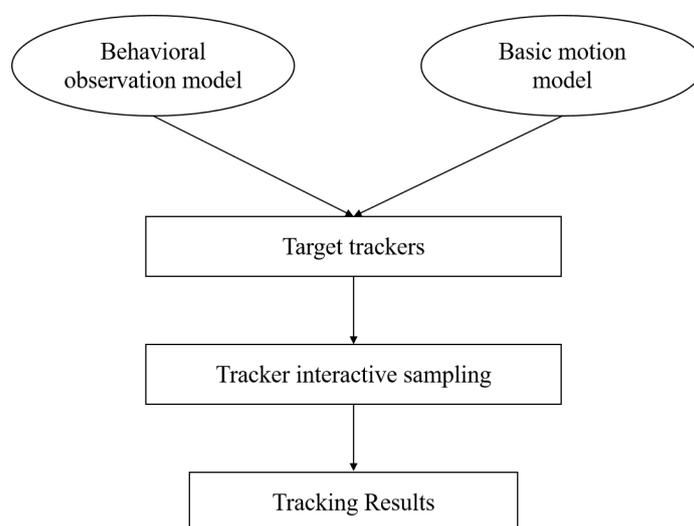


Figure 1 Sports training technology action target tracking model

For general physical education, to learn or participate in any activity, you must first know the name, content, rules and calendar years of the activity. Only by establishing a good basketball concept can students' attention and achievements in the teaching process be enhanced. Teachers should respect the cognitive law of multimedia system when using multimedia system to train students in basketball tactics, and combine the use of teaching methods, teaching content and cognitive law. Multimedia teaching method can greatly reduce the workload of teachers in the process of lesson preparation and teaching, and at the same time it has strong flexibility and convenience. Using multimedia teaching method, students will be very interested in teaching in multimedia classroom, because there are abundant teaching resources and network information in multimedia classroom, which can satisfy their curiosity, adopt or insert what students like, and combine it with the teaching center.

3.2. Application of multimedia teaching in basketball training monitoring

Traditional teaching methods have been used in basketball tactical training for many years, accumulated rich teaching experience, and produced a large number of excellent teaching methods, which have important practical significance for the realization of teaching objectives. The multimedia system is only suitable for the early theoretical knowledge teaching and the construction of tactical thinking mode, but in the tactical practice stage, teachers need to focus on what problems still exist in students' basketball tactics, and can properly combine multimedia to explain students'

existing problems. The application of multimedia in basketball training mainly includes physical fitness training, skills and tactics training and psychological training [10]. The intelligent physical training monitoring system based on multimedia technology is shown in Figure 2.

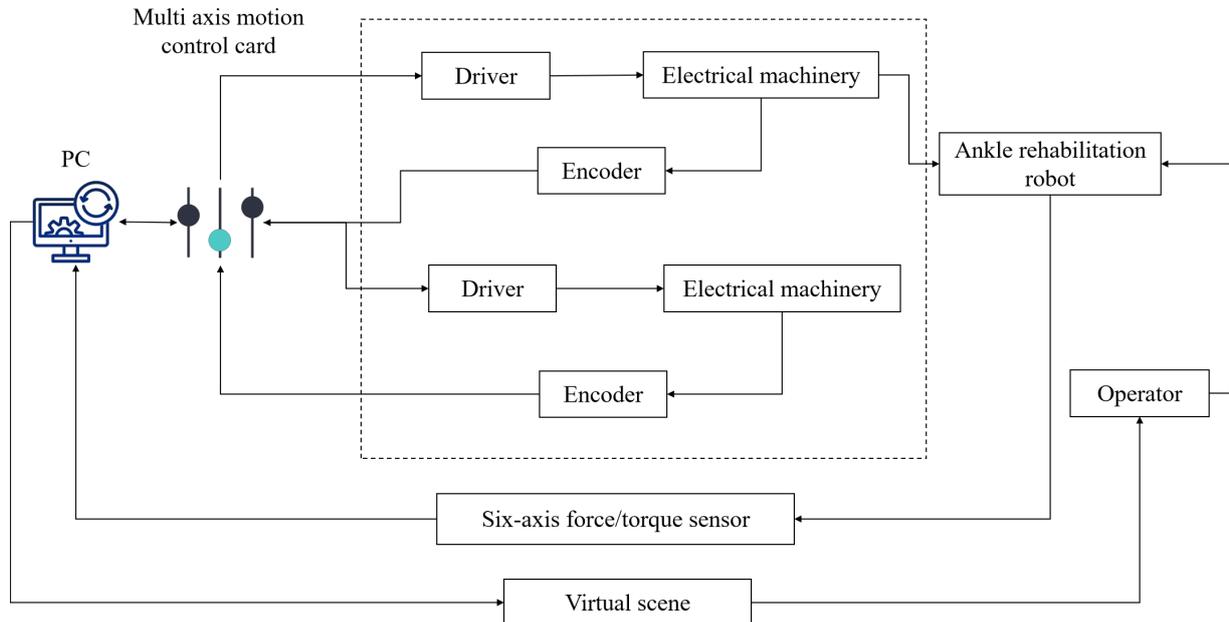


Figure 2 Intelligent physical training monitoring system based on multimedia technology

After the training, coaches can adopt the combination of independent relaxation and music relaxation to achieve the good effect of physical and mental relaxation at the same time. Secondly, in the training of skills and tactics, it is very important to master the training methods. When the coach explains the skills and tactics, he can play the content to be trained on the screen of the projector. At the stage of actual combat training, it is more important for teachers to guide the application of tactics in the actual combat of students, so that the level of basketball tactics of students can be comprehensively improved in actual combat. Although multimedia technology is an advanced educational technology, it should be used reasonably according to the actual teaching situation.

4. Conclusions

College basketball training is an important node in college basketball education and teaching. As a college basketball teacher, we need to look at its value correctly, and constantly improve our information literacy, master more advanced multimedia technology, and effectively infiltrate it into the actual classroom design. The application of multimedia system in basketball tactical training has created a new idea of physical training teaching. By virtue of its technical advantages, the multimedia system can improve the teaching quality and teaching effect through rational application in basketball tactical training. The development and progress of multimedia technology provides a more powerful tool for education. Educators should make good use of it to contribute to the improvement of teaching level. In terms of training monitoring and feedback, coaches should not only focus on all kinds of training monitoring data, but also flexibly select training methods and means according to the collected data, and fully consider the differences of each athlete's physical quality. Digital training is an auxiliary means to improve athletes' competition performance. How to maximize the application effect of various means is the standard and requirement to test a good coach. When setting the physical training load, the subjective initiative of athletes should be fully considered, and it should be clear that the purpose of digital monitoring is not to improve the training data, but to improve the competition level and physical quality of athletes.

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