

Research on Basketball Teaching Process Theory and Structure Optimization Based on Knowledge Map

Shihong Liu^{1,*}, Hai Chen²

¹Physical Education Department, Chengdu University of Information Technology, Chengdu, Sichuan, 610225, China

²Sports School, Sichuan University, Chengdu, Sichuan, 610065, China

*Corresponding Author

Keywords: Knowledge Map, Basketball, Teaching Process

Abstract: in the Field of Basketball, with the Reform and Development of School Education, Modern Education and Teaching Ideas from Various Countries Have Been Introduced, So That Many Advanced Teaching Theories Are Applied to Basketball Teaching Practice, Improving the Quality and Efficiency of Basketball Teaching. under the Data Age, the Research and Update of Training Concept and Method, Effectively Promote the Improvement of Competitive Ability of Basketball Players, Make the Competition of Basketball Games More Intense. It is Not Only of Reference Value for Future Research, But Also of Benefit to the Development of Basketball and Society. to Analyze and Control Each Technical Link from a Dynamic Perspective and to Make Its Basketball Skills and Technical System under Purposeful, Conscious and Planned Control is the Premise for Implementing Optimal Control. the Theory of Knowledge Map is Introduced to Construct an Information Knowledge System, Which Integrates Information Theory Knowledge Points with Interdisciplinary Information. Dig out the Laws in the Research and Development Process in This Field, Breaking through the Limitations of Traditional Research Methods.

1. Introduction

Basketball is a Sport with a Good Mass Base, and Has a High Popularity Rate in China. under the Guidance of Teachers, Basketball Teaching Process is a Kind of Cognitive Process of Students for Basketball. It is a Specific Implementation Process in Which the Methods, Steps and Links of Teaching and Learning Are Interconnected and Orderly Developed [1]. in the Era of Increasingly Prominent Role of Scientific Research in Competitive Sports, More and More Scientific Research Results Are Widely Used in Competitive Sports [2]. the Construction Process of Knowledge Map is to Extract Entities, Entity Attributes and Relationships among Entities from Various Structured, Semi-Structured or Unstructured Data Using Natural Language Understanding and Other Corresponding Technologies. the Changing Trend of Research Frontier with Time and the Relationship between Research Frontier and Knowledge Base, and Intuitively Show the Evolution Path of Research Frontier and Classic Basic Literature in Research Field [3]. Attention Should Be Paid to the Cultivation of Students' Physical Quality and the All-Round Development of Students. Basketball is an Indispensable Sport to Improve Students' Physique in Current Physical Education. Therefore, Basketball Has a Very Good Development Prospect in Our Country [4].

The Research of Basketball Teaching Process Theory is to Explore the Law of Basketball Teaching Process, Reasonably Deal with the Relationship between the Basic Elements, Establish an Optimized Structure of Teaching Process, and Improve the Education Quality and Level of Basketball Teaching Process [5]. the Distribution of Basketball Paper Authors is One of the Representatives of Scientific Research Activities in This Discipline. the Visual Research on Basketball Paper Authors Can Directly Reflect the Influence of Different Stages and Authors on Basketball Research Activities [6].It Greatly Expanded and Deepened the Breadth and Depth of Information Retrieval, Accelerated the Process of Scientific Discovery and Innovation, and Provided Reliable, Scientific and Effective Documentation for This Research. Absorb and Apply

Knowledge to the Greatest Extent, Realize the Integration of Knowledge, and Put Theory into Practice. through the Minimum Cost to Get the Best Results, Finally Achieve the Optimization of the Whole Teaching Structure, Play a Certain Role [7]. Understanding China's Deficiencies in the Field of Basketball Research Can Help Us Learn Advanced Experience from Foreign Basketball Research and Promote the Qualitative and Quantitative Improvement in the Field of Chinese Basketball Research [8]. with the Help of Scientific Knowledge Map, People Can See through the Structure of Various Fields in the Huge Knowledge System and Straighten out the Complex Knowledge Network Formed by the Contemporary Knowledge Explosion. to Reduce the Unnecessary Search for Relevant Questions by Questioners [9]. the Construction of Knowledge Map is Mainly to Obtain a Large Amount of Data That Can Be Processed by Computers, Including the Basic Contents of Important Knowledge Points and Their Cross-Related Knowledge. Therefore, This Paper Studies the Theory and Structure Optimization of Basketball Teaching Process Based on Knowledge Map [10].

2. Knowledge Map Method

2.1 The Concept of Knowledge Map

Knowledge map, from the perspective of basic knowledge unit carried by scientific journals, presents the development track of knowledge in various disciplines and the visual map of knowledge network structure. In the teaching process, on the basis of reference to the teaching materials and syllabus, we should select the important basketball technical and tactical content for key explanation and practice, and make a brief introduction to the non key content, which should not only follow the technical learning from easy to difficult. Knowledge map combines the theories and methods of Applied Mathematics, graphics, information visualization technology, information science and other courses with the methods of bibliometrics citation analysis, co-occurrence analysis, natural language understanding, etc., and uses the visualized map to intuitively display the hierarchical structure and development process of the discipline. At present, the research field of basketball teaching has formed stable high-yield authors and institutions. The information changes of relevance and cross-expansion are shown in Figure 1, which can be shown by highly refined keywords such as document title, abstract and content. The higher the co-occurrence frequency of keywords, the stronger the central intermediation, indicating the higher the research heat it contains. Establishing knowledge map, dividing emphasis, constructing the framework between important entities, reducing the explanation time for sub-important and non-important knowledge points, and compressing the knowledge points among them.

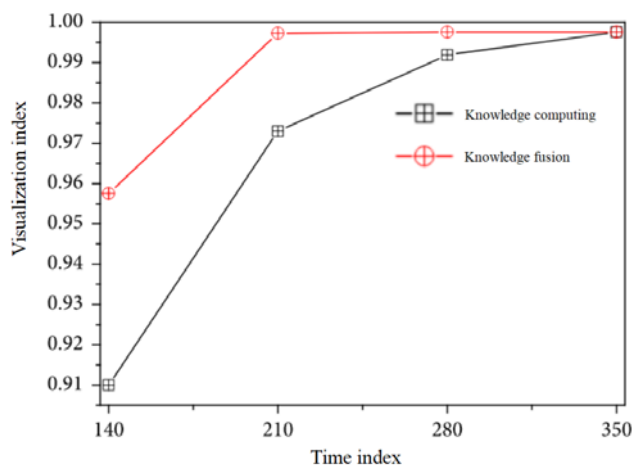


Fig.1 Information on Relevance and Cross Development

2.2 How to Use the Concept of Knowledge Map

Sports cognitive structure is a psychological structure formed on the basis of people's understanding of sports objects and experiences. On the basis of the processing and understanding

of the knowledge structure of sports teaching materials, the students' Sports cognitive structure is an internalized knowledge structure formed in their minds. According to the principle of cybernetics, information feedback is an important means of information control. Without information feedback, there will be no information control process. Classroom basketball teaching feedback is an important means of controlling classroom teaching. The traditional powerful basketball country is undoubtedly in the high-level position in the field of basketball training and scientific research, which fully shows the close relationship between scientific research results and competitive level. Master the skills of basketball. Psychologically, it is a special cognitive process from perceptual knowledge to rational knowledge and from rational knowledge to sports practice. Pay attention to the cultivation of ability, explain basketball tactics more, extend on the basis of teaching materials, simplify complex problems, and teach in an easy-to-understand way. First impart basic knowledge, and then carry out in-depth research based on the foundation.

When teaching basketball skills, we should pay attention to the orderly control, and strive to achieve the following: proper speed, degree of weight, density, appropriate speed, natural and orderly intonation, so that students can sound calm, think, remember and practice. We should cooperate with each other, through the way of interaction, to complete the teaching and reception of knowledge, so as to achieve the teaching purpose. Teachers should not be too rigid and strict in their education of students. They should cultivate students' interest in learning by means of encouragement. Practice methods are more common in the practice of single action program. This kind of fixed practice of the same action can make students learn an independent technical action in an undisturbed environment when they practice a single motor skill, which is relatively conducive to the improvement of the practice effect. The examples of learning tactics should be gradual, and should be decomposed and trained in accordance with the actual situation. For the selected examples of tactics, the purpose must be clear, and the reasonable methods and basic requirements of law coordination must be mastered. In the calculation of mathematical characteristics of information source entropy, the structural classification of continuity and discreteness requires the integration operation in advanced mathematics to solve the probability density of continuous information source. The control of teaching and training is an empirical control, and the choice of teaching means and methods lacks strict logic. Second, the control of teaching and training is a kind of fuzzy control. The implementation of teaching objectives lacks precise foresight. Thirdly, the control of teaching and training in normal times lacks channels and measures of feedback control.

3. The Optimization of Basketball Teaching Structure

3.1 Optimization of Cognitive Structure

The relationship between the number of papers published in basketball research and the change of time can reveal the research history and development speed in this field, and predict its development trend. The analysis of basketball research institutions can clearly promote the development of the core institutions of basketball, and help researchers to find the benchmark and find the gap from the institutional level. Expand the interdisciplinary branches related to it and establish the atlas system. Many professional courses involve the application of Huffman coding, including in the course of data structure, how to solve the optimization problem of binary tree generation and traversal from the perspective of algorithm. The teaching process of basketball technology is actually the process of teachers and students' output and acceptance of information. However, the amount of information output and the degree of acceptance all affect the teaching effect and efficiency. Creative ability and all-round development of ideological and moral education “ . Scientific and reasonable handling of basketball teaching process teachers, students, teaching materials, teaching methods, the four basic elements of the interaction of the interaction of mutual influence. Determining the most suitable control target is the basic condition for implementing optimal control. If the target is set too high, the possibility of achieving the target will be reduced. If the target is set too low, it is difficult to guarantee the best level.

3.2 Optimization of Information Structure

Physical education teaching is a process of information transmission first, which is a process of transforming human cognition into individual cognition through practical activities under the guidance of teachers and in a specific environment. The standard of optimization can be summed up as follows: the teaching effect from the part to the whole must be optimized; the expected benefit must be achieved in the shortest time; the effect achieved must be the most appropriate standard. Through the selection and use of reasonable and effective teaching methods, stimulate, form, consolidate and improve the skills; through repeated practice and multiple strengthening, constantly improve the technical action. Can We can organize learning in a cooperative way, cultivate initiative, and actively explore knowledge. The focus of the teaching process should be shifted from simple knowledge teaching to the cultivation of ability. In the practice of understanding, analyzing and solving problems, innovative thinking and creative ability should be cultivated.

The combination of jump shot and emergency stop is widely used. Whether it is a dribble emergency stop jump shot or a catch emergency stop jump shot, it is necessary to master the connection between the emergency stop action and stop, jump and keep the body in the air stable. In teaching, we can explain and demonstrate at the same time, avoid learning knowledge only from books in class, learn theory in practice, master skills and improve skills through practical operation. Through the connection of multi knowledge point entities, the end-to-end connection is constructed, and abstract concepts and broad theories are put forward. According to the different teaching purposes, we should determine the speed and rhythm of the teaching process, elaborate and practice more, reasonably arrange the teaching competition time, and ensure that every student has the time for independent learning, so as to improve the efficiency of classroom learning. The teaching plan, teaching methods, teaching means and feedback methods are carefully arranged so that students can get the most possible development in mastering the skills and intelligence of tactics, and have a certain time standard. Through the “learning guide” link, students can further consolidate and improve their acquired technical knowledge and skills. “Learning guidance”, “practice guidance”, “learning guidance” and “practice” influence and promote each other. “Cultivate independent thinking, develop creative ability and achieve synchronous and coordinated development of body and mind. To sum up, the teaching process is also a process of all-round education and all-round development in knowledge, ability, body and mind.

4. Conclusion

This paper studies the basketball teaching process theory and structure optimization based on knowledge map. The author of the document is the creator of the content of the document, the main exporter of the innovative ideas of the document, and the main executor of knowledge discovery in scientific research. Grasp the two aspects of the contradiction between teaching and learning, and grasp its unique law of movement. Then there is a lot of work to be done. As a system, it is discussed by using cybernetics theory. The key point is how to eliminate the average uncertainty of its system, which may be the necessary and sufficient condition to achieve quantitative control. The control of the basketball teaching and training process refers to the organic combination of the basic principles and methods of system theory and the basic principles and methods of physical education theory, with feedback regulation as the core. The optimization of the teaching process is not an absolute optimization. Only the optimization of each component can optimize the entire teaching process. It is necessary to change the traditional educational concepts and establish modern educational ideas. The content of scientific research forms a multi-disciplinary and interdisciplinary composite subject group dominated by the results of physical education. These results provide a strong scientific support and academic guarantee for the development of basketball.

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