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Learning and Content Management System in the Process of Sports and Training

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ABSTRACT
The purpose of the research is to raise the level of use of information and communication technology in education and research to a new level. The method is: first, focus on the selective investigation of existing technology and management systems, and then focus on how to construct our professional learning and content management system in the process of physical education and training. Finally, actively introducing the existing research results of smart system studied, mainly selecting suitable theoretical models and technical measures, so that teachers and students of this major can actively participate. The result is: because we have fully introduced a series of simple and effective cognitive systems and new information processing strategies and new tools from experts in intelligent systems, we can combine the theoretical knowledge in physical education textbooks with the practical experience of physical education teachers and coaches. The combination, thus, allows the process of physical education and training to fully enjoy the information and communication technology in education and research, and then constructs the professional learning and content management system. Its significance lies in the promotion and popularization of this research result, not only can benefit the training of teachers of physical education in normal colleges, but also can further benefit the teachers and students of universities, middle schools and primary schools, so that they can appreciate the new research of smart systems as soon as possible. Strategies and new tools promote the role of information and communication technology in education and research across the industry.

Keywords: *ICT in education and research, Learning and content management systems, Smart system studied, Cognition and cognitive development, Web-based education and training, Examination system without paper.*

1. INTRODUCTION

The increasing popularity technologies of information and communication in education and research, especially learning and content management systems, has attracted our attention. For this reason, we have conducted corresponding investigations and researches on research papers from representatives in this field in the past five years, especially in combination with how we can better construct our own learning and content management systems in the process of sports namely physical education and training, and propose this The purpose of the research is to raise the level of use of information and communication technology in education and research to a new level, and focus on the use of sports knowledge ontology to achieve personalized services.

2. RESEARCH

2.1. Selecting in Education and Research

In recent years, online courses and learning management systems have been widely opened, and online learning resources have also grown tremendously. Therefore, personalized resource recommendation has become a greater challenge. Our research in this direction emphasizes the use of ontology, big data, and artificial intelligence in the system. To provide personalized services, ontology is a method of modeling learners and learning resources, which helps to retrieve details. Ontology has the advantages of re-usability, reasoning ability, and supports reasoning mechanism, which helps to provide enhanced services [1]. Based on the technology

acceptance model and the expectation confirmation model, some studies have proposed a two-stage model to explain and predict the continued use of the learning management system by young students, thereby providing a future direction for young students' acceptance of online learning technology. It also provides empirical evidence for practitioners to better promote the learning management system in school curricula [2]. Most e-learning systems nowadays support knowledge sharing and information exchange between learners, and the amount of shared information available in online forums has increased exponentially, making it difficult for learners to find information of interest. Some researchers have proposed a novel recommendation architecture that can recommend posts of interest to learners in online learning forums based on the filtering of semantic content and the negative evaluation of learners, and evaluate the proposed e-learning recommendation system and existing use E-learning recommendation systems based on similar filtering technologies differ in accuracy and learner performance. The experimental results show that the accuracy of the system is better than using non-semantic content filtering technologies [3]. We know that the cognitive processing ability of human memory is limited. Students participating in online learning will experience changes in cognitive load over time. Teaching activities, topics discussed on forums and interaction during synchronized video conferences will also increase. The cognitive load of online students, in view of the dynamic changes of cognitive load with the learning process, some people have proposed an analysis-based method to measure and manage cognitive load [4].

2.2. Maintaining the Specifications

With the development of information technology, the learning management system has played an important role in providing educational resources [5]. Although textbooks are essential for learning in a traditional classroom environment, their role in the e-learning environment may be different. A study investigated 100 commonly used textbooks and classified the accompanying learning resource samples. The results showed According to the revised Bloom's classification, most textbook learning resources are only suitable for low-level to intermediate-level learning, and lack the complexity and complexity to support high-level learning, because high-level learning involves learners and facilitators in A large amount of interaction and collaboration on the e-learning platform, in other words, existing textbook learning resources may help self-regulated low- and intermediate-level e-learning, including basic to intermediate cognitive processes such as memory, comprehension, application and Analysis, usually improperly designed, cannot promote high-level e-learning involving high-level cognitive processes, such as evaluation and creation, and requires extensive interaction and collaboration between learners and facilitators in the e-learning environment [6]. The online learning platform is a comprehensive system that provides information, tools and resources for students and teachers to promote and strengthen the delivery and management of learning. In recent years, platform designers have introduced multi-modal interaction to make online courses more attractive and immersive [7]. These have reference value for the normal physical education we are doing.

3. METHOD

The method is: first, focus on the selective investigation of existing technology and management systems, and then focus on how to construct our professional learning and content management system in the process of physical education and training. Finally, actively introducing the existing research results of intelligent system research, mainly selecting suitable theoretical models and technical measures, so that teachers and students of this major can actively participate.

3.1. Conduct Selective Research on Existing Technologies and Management Systems

Give full play to the role of teachers and experts, make full use of the online courses and the large number of open online learning resources of the learning management system, combine the characteristics of school-based physical education, make full use of personalized resource recommendation, and make full use of the physical knowledge ontology, teaching big data and artificial intelligence Such technologies can provide personalized services, highlight the advantages of the re-usability and reasoning ability of sports knowledge ontology, and support the reasoning mechanism, which helps to provide enhanced personalized services to achieve the purpose of teaching students in accordance with their aptitude. In view of the fact that most of the teachers trained in normal colleges and universities provide teaching services for young students, combining the characteristics of the times, highlighting the future direction of online learning technology research, and better promoting the learning management system in the school curriculum for normal students Provide corresponding actual combat training. Nowadays, as most e-learning systems support knowledge sharing and information exchange between learners, the shared information available in online forums brings difficulties to learners, and we need to provide filtering based on semantic content to students in online learning forums. Recommend a variety of novel and interesting posts, and give full play to the positive role of semantic content filtering technology in terms of system accuracy. Given that

human memory and cognitive processing capabilities are limited, students participating in online learning will experience changes in cognitive load over time, teaching activities, topics discussed on forums, and interaction during synchronized video conferences will increase. For online students' cognitive load, it is necessary to measure and manage cognitive load based on analytical methods. With the development of information technology, learning management systems have played an important role in providing educational resources. Although textbooks are essential for learning in traditional classroom environments, their role in e-learning environments is only suitable for low-level to intermediate-level learning. Learning lacks the complexity and complexity to support advanced learning. Therefore, advanced learning involves a large amount of interaction and collaboration between learners and facilitators on the e-learning platform, which requires sufficient guidance from model teachers. Online learning platform is a comprehensive system that provides information, tools and resources for students and teachers. The introduction of multimodal interaction can enhance the attractiveness and immersion of online courses. These are what we should focus on in normal physical education. Disciplinary leaders should play their role in decision-making consultation in these areas.

Table 1. Teachers are experts

Activity	**Teachers are experts**	
	Teaching and training management	***Subject***
Teach	Teach is for that will not teach again	Teacher
Manage	Manage is for that will not manage again	Leader
Sharing	Knowledge sharing & information exchange	learners

The learning management system has played an important role in providing educational resources: it supports knowledge sharing and information exchange between learners. Teachers are experts: subject or discipline leaders should play their role in decision-making consultation. In order not to teach (demonstration + recommendation), teachers recommend a variety of novel and interesting posts. The tube is to measure/manage cognitive load regardless of (training + autonomy) based on analytical methods. The learning management system plays an important role in providing educational resources: it supports knowledge sharing and information exchange among learners.

3.2. How to Construct a Learning and Content Management System for Sports Majors

The content of normal physical education teaching and training emphasizes the unity of knowledge and practice and complement each other. Among them, in the cultivation of cognitive ability, computer-assisted means can be used to make full use of sports knowledge ontology, teaching big data and artificial intelligence technology to provide personalized teaching services, highlighting the re-usability, reasoning ability and enhanced ability of sports knowledge ontology. Personalized service achieves the purpose of teaching students in accordance with their aptitude; in the training of behavioral ability, that is, physical fitness, teaching in accordance with the situation, entertaining and teaching, all closely revolve around teaching in accordance with their aptitude, which is characterized by the use of computer-assisted means to construct sports professional learning and content management system.

The specific method is: First, from the perspective of cognition, clarify the basic knowledge and professional skills of physical education teaching and various kinds of sports expert knowledge. Emphasize expert knowledge acquisition and expression and its targeted repeated use. Second, from the perspective of behavior, highlight the basic skills and various skills of sports training, especially its basic essentials and key links. Third, from the perspectives of unity of knowledge and action and complement each other, it not only emphasizes the coordinated training of the central nervous system and the autonomic nervous system, but also pays attention to the physical and mental health of individual and the social harmony of groups. The uniqueness of the physical education scene and the physical activity training scene where students are located, strengthen the knowledge accumulation and skill in comprehensive training, safety awareness and emergency response.

Strengthen the knowledge accumulation and skill in comprehensive training. Virtual realization of intelligent software and hardware. Comprehensive training of interdisciplinary knowledge and skills. Encourage teachers and students of physical education to take the initiative to use information and communication technology. Basic concepts, basic principles, basic methods and typical examples (three bases and one example). Complete tasks of knowledge teaching and skill training with high quality. Physical education courses mainly focus on sports physiology and sports training, as well as school physical education.

Table 2. The Specific Method

Basic Steps	**unity and complement of knowledge and action**	
	sports learning	***content***
First	the perspective of cognition	expert knowledge
Second	the perspective of behavior	sports training
Third	the prspectives of both	physical and mental

3.3. Choose Suitable Theoretical Models and Technical Measures for Intelligent Systems

In view of the ubiquity smart systems and their various elements in today's era, it is recommended to start with virtual realization of intelligent software and hardware and try comprehensive training of interdisciplinary knowledge and skills, so as to drive teachers and students of physical education to use information and communication technology.

For example, the major courses of physical education include: Introduction to Sports, School Physical Education, Sports Anatomy, Exercise Physiology, Sports Psychology, Sports Health, Sports Research Methods, Sports Statistics, Track and Field, Sports training such as gymnastics, basketball, volleyball, football, martial arts and table tennis. Among them, each subject has basic concepts, basic principles, basic methods, and typical examples (abbreviated as: three bases and one example). They are the methods of computer-assisted teaching and the enthusiasm and initiative of teachers and students to realize interpersonal, human-computer, and computer-assisted teaching.

Reasonable division of labor between humans and robots, complementary advantages and even a high degree of collaboration and optimization interaction, so as to achieve the integration wisdom, form the best synergy of teamwork, and complete the tasks of knowledge teaching and skill training with high quality. According to the requirements of the current postgraduate examination of physical education, sports courses mainly focus on exercise physiology, sports training and school physical education. We have designed a way for teachers college's teachers to achieve through computer-assisted technology, and rationally divide the labor between teachers and students in each class. Teachers and students of all grades in the school work together to complete the large-scale production task of knowledge modules for the entire curriculum of physical education in the school in two semesters, combined with current computer-assisted teaching environmental platform to make a sports learning and content management system that combines standardization, personalization and optimization professionally.

If the total data covers part of the knowledge and part of the information, then, based on the theory of smart system studied research, namely the theory of wisdom, the following three equations can be obtained[8], as in:

$$I_k + I_u = I_d \quad (1)$$

$$I_d - I_u = I_k \quad (2)$$

$$I_d - I_k = I_u \quad (3)$$

The symbols using in equations means:

First, from the perspective of cognition, clarify the basic knowledge and professional knowledge as I_{know}.

Second, from the perspective of behavior, highlight the basic skills and various skills of sports training for students as $I_{unknown}$.

Third, from the perspectives of both knowledge and action, cover all data as I_{data}.

An excellent style manual for data scientist is.

The three equations can be obtained

Table 3. Virtual Realization Styles

Basic Steps	**Virtual realization of software and hardware**	
	sports learning	***content***
First	the cognition as I_k	expert knowledge.
Second	the behavior as I_u	sports training
Third	the both as I_d	physical and mental

4. RESULTS

The result is: because we have fully introduced a series of simple and effective cognitive systems and new information processing strategies and tools from experts in intelligent systems, we can combine the theoretical knowledge in sports textbooks with the practical experience of physical education teachers and coaches. The combination, thus, allows the process of physical education and training to fully enjoy the information and communication technology in education and research, and then constructs the professional learning and content management system. This laid the foundation of information technology for the development of disciplines. Achieve an electronic manual and supporting sports learning and content management system for all teachers and students in the school (access to the query mini program).

Table 4. Virtual Realization Styles

Basic Steps	**Virtual Realization by using software and hardware**	
	sports learning	***content***
First	Access query: small program	expert knowledge.
Second	Physical education and training	sports training
Third	teachers and coaches (Knowledge Center)	physical and mental

The simple and effective cognitive systems and new information processing strategies and tools. Access query: small program (entry). Sports professional learning and content management system (database + knowledge base).A series of simple and effective cognitive systems and new information processing strategies and tools (software and hardware). The theoretical knowledge in physical education textbooks

and the practical experience of physical education teachers and coaches (Knowledge Center). The process of physical education and training fully enjoys the information and communication technology (data center) in education and research.

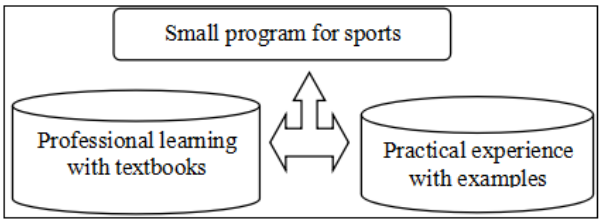

Figure 1. The sports training guide applet is based on teaching materials and cases as two major knowledge information databases. The sports training guide applet is based on teaching materials and cases. The two major knowledge information databases of professional learning and training are easy to popularize.

5. CONCLUSION

The process of popularizing the results of this research. Benefit the training of teachers of physical education in normal colleges. Further benefit the teachers and students of universities, middle schools and primary schools. Let them all understand as soon as possible: new strategies and new tools for smart system studied or research. The promotion of information and communication technology in education and research for the whole industry.

The simple and effective cognitive systems and new information processing strategies and tools.

Its significance lies in the promotion and popularization of this research result, not only can benefit the training of teachers of physical education in normal colleges, but also can further benefit the teachers and students of universities, middle schools and primary schools professionally, so that they can appreciate the new research of intelligent systems as soon as possible. Strategies and new tools promote the role of information and communication technology in education and research across the industry. Just imagine: what is the situation that every ordinary teacher and student can have an electronic manual by supporting sports professional learning and content management system (access to the query applet)?

Table 5. Smart system studied for the whole

Basic Steps	**Smart system studied with software and hardware**	
	sports learning	***content***
First	Small program for normal colleges	expert knowledge.
Second	Benefit universities, middle schools and primary schools	sports training
Third	Knowledge Center promotion of information and communication technology in education and research for the whole	physical and mental

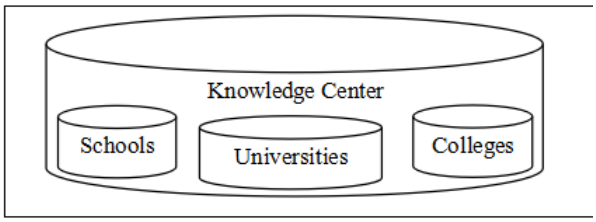

Figure 2. Physical education teachers and coaches (Knowledge Center).

AUTHORS' CONTRIBUTIONS

The author's contribution can be summarized by Table 1-5, Figure 1-2 and Equation 1-3.

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