

# Application of New Media Technology on Mobile in Physical Education Teaching

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**Abstract**—In this paper, we use the principle and method of artificial intelligence to study the application prospect and development trend of artificial intelligence in modern physical education technology, and puts forward the corresponding development of artificial intelligence in modern physical education technology. The results of research show that the Intelligent Physical Education Teaching System has high It has high practicability and maneuverability.

**Keywords**—Modern physical education technology, New media, Artificial intelligence

## I. INTRODUCTION

With the development of human society, more and more scientific and technological achievements have rapidly entered the field of physical education and teaching[1-3]. This not only affects the changes in physical education teaching content and teaching methods, but also affects the renewal of physical education concepts and teaching models, which in turn leads to changes in the physical education system and sports organization[4]. How to deal with problems related to educational technology in the practice of modern educational technology, including how to use the existing educational technology achievements, give full play to the overall effect of physical education and teaching resources, improve the effect of physical education, and serve the overall reform of physical education. It has become an urgent problem to be solved. Therefore, research on physical education technology is both necessary and urgent [5,6]. Many of its research topics and research techniques represent technological developments in the field of computers[7]. Applying these advanced technologies and research fields to physical education technology can solve many of the practical problems in the field of physical education. Computer network and Internet technology, physical education technology is also entering the era of information society and network economy[8]. It has put forward more specific research goals and research topics for artificial intelligence.

## II. THE COMPONENTS OF CLIENT SOCKETS AND SERVER SOCKETS

There are two components of client sockets and server sockets. They allow you to connect to other machines and allow you to read and write information over this connection. Associated with each sockets control are windows socket objects, which are a practical terminal socket connection. The control uses the windows socket object to encapsulate the windows socket API calls, so you don't need your application to care about how to establish a connection, nor do you need to manage socket information.

To establish a TCP connection, we first need to send a SYN J to the corresponding server through our own client. After receiving the corresponding SYN J request, the server needs to confirm the SYN J, that is, the server. SYN J is sent as a response to the user's SYN J, and ACK J+1 is confirmed during the response; after receiving the response from the server, the client also needs to send a server confirming ACK K+1 to the response, only Through these three processes, we are only possible to establish a TCP connection. In this process, the functions involved in the socket are as shown in Figure 1.

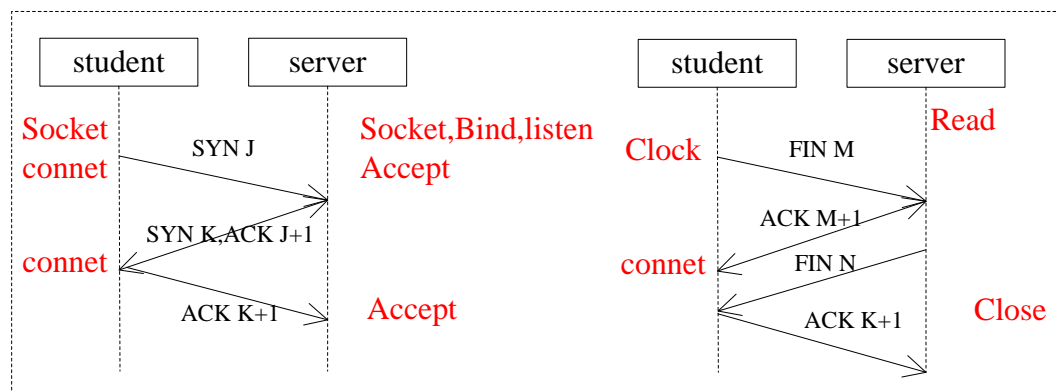


Figure. 1 Three processes sent by TCP in Socket and TCP four-way handshake

From the above figure, we can clearly see that in the process of establishing a connection, the client first sends a connection request SYN J packet to the server according to its own needs. In this process, the client invokes the connect command. After sending, the connect in the client will enter the corresponding busy state; after the client sends the corresponding connection

request, the server will receive the SYN J packet accordingly, that is, the request to receive the connection from the client, then the server will Call the accept function to accept the client's request, and send the corresponding response SYN K and the confirmed ACK J+1 to the client; after receiving the corresponding SYN K and the confirmed ACK J+1, the client will return, and the connect will return. Send the confirmation packet SYN K to the server. When the server receives the acknowledged ACK K+1, accept returns, so that through the three processes we finally realize the purpose of establishing connection.

### III. INTELLIGENT PHYSICAL EDUCATION SYSTEM

#### A. Business Analysis of Intelligent Physical Education System

The curriculum as a teaching arrangement for the implementation of professional teaching and training programs is a concrete implementation plan for students' classroom learning and teacher teaching process. The intelligent physical education teaching process is the process of integrating the curriculum, time, teachers, students and teaching venues. It is a very heavy and complicated job for the academic staff.

Intelligent physical education should try to satisfy an optimal arrangement for each major. In the actual intelligent physical education teaching operation, this optimal intelligent physical education teaching program is not unique, and there are even many feasible solutions. Students need reasonable and in line with the teaching requirements during the week of study. They should make reasonable analysis arrangements for the nature of the different courses and the characteristics of the teaching links, and also handle the relationship between professional compulsory courses and public elective courses for students. Provide the space to maximize knowledge and skills.

#### B. Basic needs and business processes of intelligent physical education

After summarizing the above basic conditions of intelligent physical education teaching, aiming at the overall basic needs of the automatic intelligent physical education teaching system, that is, what requirements are required for the system, what needs to be done by the system, further generalization and summary, as explained below, according to The teaching class divided by the courses in the semester teaching task book implements the automatic intelligent physical education teaching process according to the professional administrative class for conflict detection. It satisfies the basic constraints of intelligent physical education and can automatically check the conflicts between professional compulsory courses and public elective courses. Control the total class size of compulsory and elective courses in the same time period to ensure that students have sufficient elective space. Provide a good systematic feedback on the results of the curriculum, so that the academic staff can adjust the curriculum.

In the flow chart of the intelligent physical education information input module, the teaching enters the user name and the login password to log in on the login interface, as shown in Figure 2. After logging in the system, it is necessary to enter the intelligent physical education information materials of each professional course, including the calculation of the course week, the use of teaching. After the academic continuously enters a number of courses related to the intelligent physical education materials, the system updates the database and submits the information to be saved.

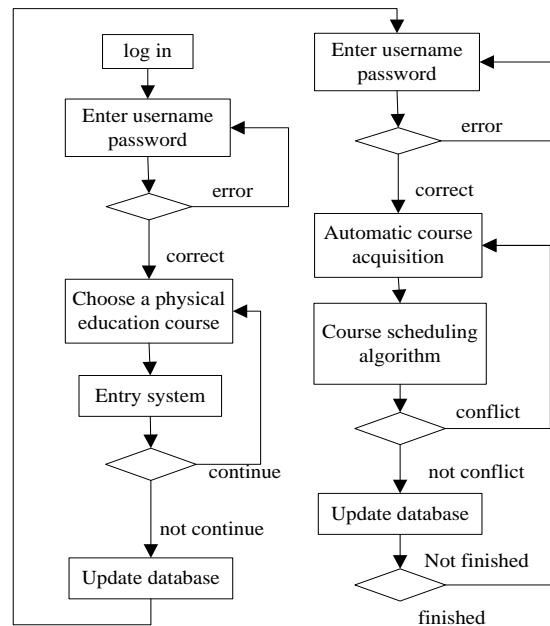


Figure. 2 Intelligent physical education curriculum scheduling module process

In the above figure, the intelligent physical education teaching activity map, the teaching enters the user name and password on the login interface, and after the system is verified correctly, enters the system to perform the automatic intelligent physical education teaching business. According to the classes divided by the courses in the semester teaching task book, the system

implements the intelligent physical education teaching process based on the professional administrative class for conflict detection, and applies the automatic intelligent physical education teaching algorithm to the automatic intelligent physical education teaching, as shown in Figure 3. When the intelligent physical education teaching of each administrative class in the selected course does not conflict, the intelligent physical education teaching of the course is successful. If the course conflicts in the selected course are unable to arrange or not complete all course classes, continue to select other unscheduled courses for intelligent physical education.

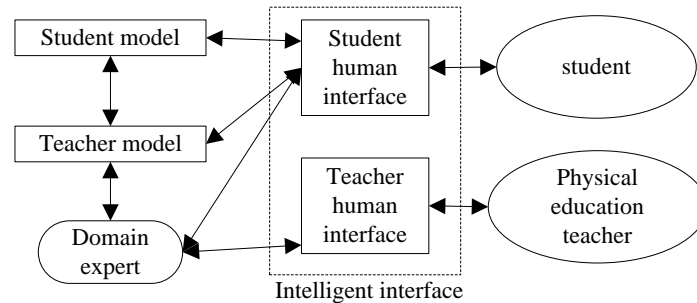


Figure. 3 System structure of teaching, strategic and tactical layers

### C. Conclusion

For the college intelligent physical education teaching system, the most important is the intelligent management of all physical education teaching information, and the use of effective physical education teaching algorithms for intelligent physical education teaching of physical education teaching information is the top priority of the whole physical education teaching work. The key technologies used in the system are further introduced, and the key technologies used in the research and development of the intelligent physical education system in colleges and universities are described. Among these technologies, the current more popular B/S with better stability is used, while the development technology uses PHP technology, one of the most popular Web development technologies.

Through the combination of the above technologies, the stability of the whole system is greatly enhanced, coupled with a simple and easy-to-operate web interface and a reasonable physical education teaching algorithm, which makes the intelligent system of this university more reasonable from design to implementation, thus solving the previous The time-consuming and laborious situation in the physical education teaching system makes the teaching staff more easy to master the physical education teaching operation, and the efficiency is very high.

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### REFERENCES

- [1] Esteves A, Hoven E V D, Oakley I. Physical games or digital games?:comparing support for mental projection in tangible and virtual representations of a problem-solving task[C]// International Conference on Tangible, Embedded and Embodied Interaction. 2013:167-174.
- [2] Levin, M. A., & Wen, X. G. (2004). String-net condensation: a physical mechanism for topological phases. *Physical Review B*, 71(4), 045110(1-21).
- [3] Yannakakis, G. N., & Hallam, J. (2008). Entertainment modeling through physiology in physical play. *International Journal of Human - Computer Studies*, 66(10), 741-755.
- [4] Manchado, C., Cortelltoro, J. M., & Tortosamartínez, J. (2018). Effects of two different training periodization models on physical and physiological aspects of elite female team handball players. *Journal of Strength & Conditioning Research*, 32(1), 280-287.
- [5] García-Pallarés, J., García-Fernández, M., Sánchez-Medina, L., & Izquierdo, M. (2010). Performance changes in world-class kayakers following two different training periodization models. *European Journal of Applied Physiology*, 110(1), 99-107.
- [6] Yannakakis, G. N., & Hallam, J. (2008). Entertainment modeling through physiology in physical play. *International Journal of Human - Computer Studies*, 66(10), 741-755.
- [7] Schaaff, K., & Adam, M. T. P. (2013). Measuring Emotional Arousal for Online Applications: Evaluation of Ultra-short Term Heart Rate Variability Measures. *Humaine Association Conference on Affective Computing and Intelligent Interaction (Vol.7, pp.362-368)*. IEEE Computer Society.
- [8] Tonti, M., & Salvatore, S. (2015). Homogenization of classification functions measurement (hocfun): a method for measuring the salience of emotional arousal in thinking. *American Journal of Psychology*, 128(4), 469-483.