Development of Intelligent School P.E.in the Era of AI

First author: Yang Mei\textsuperscript{1,a}, Second Author: Ouyang Liuqing\textsuperscript{2,b,*}

\textsuperscript{1}Address: School of International Education, Wuhan Sports Univ., Wuhan430079, China
\textsuperscript{2}Address: School of P.E., Wuhan Sports Univ., Wuhan430079, China
\textsuperscript{a}yangmei@whsu.edu.cn, \textsuperscript{b}e-mail: 835772459@qq.com
\textsuperscript{*Corresponding author: b 395389863@qq.com

Abstract: In this paper, through the analysis of the future development of school physical education (P.E.) in the era of AI, new theories and research ideas are provided. The idea of intelligent education advocates the idea of lifelong education and happy learning, and the corresponding idea of P.E. should also be the idea of lifelong sports, happy sports and intelligent sports. In the era of AI, the application of modern P.E. is different from the traditional P.E. The teachers' explanation and demonstration can effectively improve the students' interest in learning and improve the teaching effect. The teachers become more effective in guiding the students' learning, improving the ability of the P.E. teachers to update their knowledge and use P.E. technology, improve the quality of P.E. and P.E. evaluation system.

1. Introduction
The coming of the age of AI is an important turning point of the future school P.E. reform. In the teaching process, we often see that P.E. teachers play standard technical action video combined with language explanation and demonstration to give students more intuitive teaching effect. With the application of AI, the future P.E. should be different from the traditional P.E. in teaching subject, mode, form, venue, equipment and other aspects. It is no longer influenced and limited by the subjective and objective factors such as teaching environment and venue and equipment.

The future P.E. must be based on the concept of lifelong sports and individual sports. Sports is not only a means to strengthen the body, but also an important way for people to improve the quality of life and experience the fun of participating in sports. The development of AI provides the possibility to achieve this goal. Based on the above needs, whether the future development of school P.E. can seize the opportunity, and adapt to the new changes brought by AI have put forward new requirements for sports researchers, school educators, and P.E. teachers at the arrival of the era of AI. How to adapt and develop school P.E. in the future is an important topic of this study with theoretical and practical value.

2. Materials and Methods
The rapid development of AI will profoundly change the world development mode and the human lifestyle. In order to seize the important strategic opportunity of AI development, all countries are endeavoring to take the initiative. At present, there are two technological development paths of AI. One is data intelligence driven by model learning, the other is brain like intelligence driven by
cognitive bionics. According to the theory of AI, the development paths of school P.E. intellectualization include intellectualization of school sports venues, intellectualization of student health data, intellectualization of school P.E. equipment, visualization of health knowledge and skills, intellectualization platform of school P.E, intelligent gym, intelligent assistant and intelligent training.

AI is an interdisciplinary discipline, a new technology science that researches and develops theories, methods, technologies and application systems used to simulate, extend and expand human intelligence. It is a kind of intelligent behavior which is usually related to human intelligence, such as judgment, reasoning, proof, recognition, perception, understanding, communication, design, thinking, learning and problem solving. Its research fields include robot, speech recognition image recognition, natural language processing and expert system. It not only involves computer knowledge, but also knowledge of philosophy and psychology.

AI is an important direction in the field of computer science and technology. It involves a wide range of research fields, including expert system, machine learning, pattern recognition, natural language understanding, automatic theorem proving, automatic programming, robotics, game, intelligence decision support system and artificial neural network. The application of AI in the field of education has also proved its wide applicability.

In May 2019, UNESCO held the first International Conference on AI and Education in Beijing, China. The theme of the conference is “Planning education in the AI Era: Lead the Leap”. The conference focuses on: (1) policy making, (2) education management, (3) teaching and teachers, (4) learning and evaluation, (5) values and ability cultivation, (6) lifelong learning opportunities, (7) the use of equality and inclusion, (8) gender equality, (9) ethical issues, (10) research and monitoring. The purpose is to effectively use modern technology to improve the quality of teaching in the era of AI from the aspects of improving learning evaluation, helping personalized training, enabling teaching, assisting teachers’ work, improving teaching management and optimizing education supply.

3. Results & Discussion

The rapid development of AI will profoundly change the world development mode and the human life style. In order to seize the important strategic opportunity of AI development, all countries are endeavoring to take the initiative. At present, there are two technological development paths of AI. One is data intelligence driven by model learning, the other is brain like intelligence driven by cognitive bionics. According to the theory of AI, the development paths of school P.E. intellectualization include intellectualization of school sports venues, intellectualization of student health data, intellectualization of school P.E. equipment, visualization of health knowledge and skills, intellectualization platform of school P.E, intelligent gym, intelligent assistant and intelligent training.

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With the rapid development of internet, big data and other technologies, accelerated application of intelligent equipment and IOT is the embodiment of the extensive application of AI. Different kinds of sports APPs such as Keep and Joyrun, provide certain technical guidance for people's sports. Boohee, records human health data and provides corresponding sports prescription. The continuous development and innovation of these APPs not only arouse people's attention to keep fit, but also indicate the arrival of the era of AI. On April 6, 2017, the China Sports Data and AI Summit held in Beijing introduced the application of innovative ideas and technologies in the field of sports media, and analyzed the close relationship between sports and AI from the background data, event data, technical statistics, Hawkeye technology and other intelligent applications. The research focused on: (1) the development and research of various sports practical expert systems; (2) the cultivation of the researchers of sports practical intelligent technology; (3) the basic theoretical research of sports practical AI.

In the “Internet +” era, China greatly encourages the development of electronic information technology, which brings new opportunities and challenges to the teaching and management of school P.E. Many colleges and universities have launched the application of university P.E. information, focusing on the introduction of P.E. teaching information into the APPs. Students can not only find the P.E. results and teachers’ information on the APPs, but also understand the teaching content and the use of sports venues. Meanwhile, the schools can supervise the students’ extracurricular exercise by timing and bring it into the physical performance, which can effectively supervise and supervise the students' physical exercise. In primary and secondary school P.E., multimedia computer-aided teaching, the research and development of P.E. practical expert system, the development and application of virtual reality technology and other related technologies can be applied. “AI and modern P.E. technology” puts forward several strategies for the application of AI technology in modern P.E. technology: (1) correctly understand the ideological change of AI to modern P.E. technology; (2) actively promote the informatization of P.E. teachers' education, change their ideas and raise their awareness; (3) comprehensively improve the quality of P.E. teachers’ education technology; (4) carry out various forms various kinds of P.E. technology training work; (5) concentrate the research force of educational technology and form a unified research team, which provides some reference for school P.E. to adapt to the development of AI era.

Intelligent school P.E. includes: intelligent sports venues; intelligent health data of students; intelligent equipment and equipment of school sports, visualization of sports and health knowledge and skills, intelligent platform of school sports; intelligent gym, intelligent small assistant, intelligent training. Researches on the application of AI in the development of School P.E. include: the future development path of school P.E. in the age of AI with intellectualization of school sports venues, intelligence of student health data, school sports intelligent equipment and equipment, visualization of sports and health knowledge and skills, intelligent platform of school P.E., intelligent gym, intelligent assistant and intelligent training.

4. Conclusions
The development of the field of AI has broadened the way of the development of school P.E., explored the value of artificial intelligence technology in the process of school P.E construction and the development difficulties it has faced, combined with the development reality and characteristics of school P.E, put forward the new concept and development path of school P.E reform in the era of AI, adapt to the era of AI. The main way of the development of school P.E is integrated into the intelligent thinking link so as to realize the real-time collection of all kinds of data of school P.E, the intelligent analysis of fitness data, the creation of health files of fitness people, and finally the realization of the process and goal of school P.E, the dynamic monitoring and optimization of sports guidance.
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