Retraction

Retraction: A New Method of Free Combat Teaching Based on Artificial Intelligence (*J. Phys.: Conf. Ser.* 1992 042010)

Published 9 September 2022

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The authors of the article have been given opportunity to present evidence that they were the original and genuine creators of the work, however at the time of publication of this notice, IOP Publishing has not received any response. IOP Publishing has analysed the article and agrees there are enough indicators to cause serious doubts over the legitimacy of the work and agree this article should be retracted. The authors are encouraged to contact IOP Publishing Limited if they have any comments on this retraction.

Retraction published: 9 September 2022
A New Method of Free Combat Teaching Based on Artificial Intelligence

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Abstract. Artificial intelligence is an effective way to promote the intelligent development of education and teaching, and also an important concept of the development of quality education. This paper mainly studies the new teaching method of free combat based on artificial intelligence technology. This paper analyzes the innovation brought to education by intelligent image recognition, speech recognition, big data analysis, deep learning, intelligent teaching robot and other related technologies in the era of artificial intelligence. Meanwhile, it analyzes and discusses the influence of teaching reform in the era of artificial intelligence development. From the experimental results of this paper, it can be seen that from the perspective of students' free combat sports skills, using artificial intelligence technology can more effectively improve students' free combat skills than using conventional teaching methods to conduct elective free combat teaching. In the elective teaching of free combat in colleges and universities, the application of artificial intelligence skills can effectively improve the excellent rate and good rate, control the pass rate and reduce the failure rate of students' examination results of free combat course.

Keywords: Artificial Intelligence, Free Combat Teaching, Teaching Methods, Intelligent Education

1. Introduction
Nowadays, people's life and work style has been influenced by artificial intelligence brought about by the huge, at the same time, the subtle influence of artificial intelligence in the development in the field of education, human will be based on artificial intelligence (AI) drive a new era of education reform and development, so the future of education is bound to appear the characteristics of intelligent education, new teaching ideas, teaching methods, teaching tools will be emerged, promote the whole teaching mode was transformed, obviously improve teaching effect is achieved. At present, personalized learning has been effectively realized with the development of artificial intelligence. It is obvious that artificial intelligence has played an important role in learning tutoring, learning evaluation, teaching optimization and other fields, which promotes all-round improvement of teaching efficiency and better learning experience effect of students. Artificial intelligence has gradually become an important factor in the development of education informatization, helping the innovative
development of education and teaching [1]. The development of information technology not only brings great influence to the field of science and technology, but also plays an important role in the development of the Times. At present, the field of education is actively introducing artificial intelligence technology, and the elements of teaching activities are constantly changing, promoting the personalized and life-long learning activities of students, and promoting the development of the whole education level from low-level extensive education to high-level precision education.

Teaching reform has always been the focus of attention of all countries in the world. Changes in social development and economic conditions may lead to a tide of teaching reform. Therefore, people hope that the development of science and technology can promote the development of teaching and promote a greater change in teaching mode. Timms points out that the focus of education reform is to reform students' learning styles, so that students can change from passive learning to active learning [2]. Gadanišis et al. ‘s research points out that information technology has a great impact on education reform, and after in-depth analysis of the integration of the two, a theoretical framework is proposed to help others better understand the integration of the two [3].

The smooth implementation of intelligent teaching requires the application of artificial intelligence in teaching as a condition, to explore the change factors of artificial intelligence in the era of teaching activities and the new idea, can make the artificial intelligence in the era of personalized teaching and adaptive learning possible, this kind of teaching method can optimize the traditional teaching methods, improve teaching efficiency, improve the teaching results, enhance the participation of teaching, teaching activities to promote intelligent, precise, personalized direction.

2. Free Combat Teaching Method of Artificial Intelligence Technology

2.1. New Educational Technology in the Era of Artificial Intelligence

Artificial intelligence is used for simulating the intelligence of people, and by machine research and development for simulation, extend and expand the intelligent person of emerging science and technology, for example, composed of auditory perception such as awareness, and covers the learning, reasoning, thinking ability of intelligent behavior, in terms of actions and thinking machines have the ability and humans are very similar, in the past only people can work independently now machine can replace man to finish [4]. In recent years, the rapid development of artificial intelligence has gradually brought people some fear and panic, and the focus of people's attention has gradually shifted to whether artificial intelligence will replace the existence of human beings. A robot or computer can optimize itself, design itself, and even upgrade the AI with the help of AI. As for the impact of artificial intelligence on education, we should take a rational view and neither overestimate nor underestimate it.

Intelligent control, pattern recognition, machine learning and other technologies are the main research fields of artificial intelligence. The development of computer technology in the present stage accelerated, along with the development of relevant technology such as large data, makes a huge artificial intelligence development, and widely used in different fields, industries in the development of the difficulties encountered in the process of both can get help by artificial intelligence, the same is true for education field. Some scholars say that as enabling technologies, auxiliary and subjectivity are the two application forms of artificial intelligence in the field of education.

Single technology is unable to effectively support its influence on the education teaching, need comprehensive utilization technologies, such as artificial intelligence, big data, therefore, in the teaching into technologies such as artificial intelligence, big data, study analysis will brings the certain effect to the field of education, will also bring new opportunities and new challenges to the development of teaching [5].

2.2. Intelligent Image Recognition

In teaching, it is difficult to understand the relatively abstract knowledge content, for example, to understand the magnetic field distribution in physics teaching. It is not only difficult for students to
understand such abstract knowledge points, but also difficult for teachers to solve this teaching phenomenon. To achieve the purpose of the abstract knowledge realization and part of the education institutions effectively integrates technologies such as artificial intelligence, then launch the artificial intelligence applied to the field of education technology products "AR on analysis of knowledge", generally, is to use relevant technology such as 3 d model concrete to the abstract knowledge, in front of the students present a three-dimensional knowledge content [6]. In the past, students who are not good at developing spatial imagination also face great difficulties in learning abstract knowledge. However, through the explanation of this new AR technology, learners can solve the problems they do not understand and complete the learning tasks easily and efficiently.

In the process of learning, learners only need to scan a two-dimensional image in the book, and the mobile phone can quickly identify the knowledge content and obtain the corresponding analysis, and then clearly show the knowledge context to learners, so that they can sort out the relevant knowledge; If students are unable to independently solve in the problem solving, only need to use a mobile phone in the AR camera function, use camera to scan knowledge after pictures can easily extract the feature points, and automatically with the storage of the corresponding feature points matching, then the corresponding knowledge point in 3 d model information is loaded into the mobile phone [7].

2.3. Big Data Analysis
Huge amounts of high-quality application scene data have been built in artificial intelligence. Compared with traditional data, big data shows strong advantages in data volume, flow speed and many other aspects [8]. This technology is based on the collection, analysis and storage of data, the relationship exists in the known variables are found to make scientific decisions. At present, big data has been widely applied to many fields, such as e-commerce, finance, etc. In the field of education, a large amount of data will appear in the teaching process at any time, and the teaching will solve relevant teaching problems through the analysis of big data. Big data will have a profound impact on education and teaching.

The fundamental role of big data is to complete intelligent decision-making based on scientific analysis of data. In other words, only big data technology has the capability and tools to build relevant models, so as to maximize the advantages of big data.

Teaching can create new opportunities for its own development through the organic integration of artificial intelligence and big data. Huge data inside artificial intelligence is its cornerstone. Machine learning has made great progress with the development of big data, which enables the unlimited potential to be stimulated and released. For example, when we see several dogs, we can tell a child that this is a dog, so that the child will know that this is a dog the next time he sees other dogs in another place. In order for the machine to recognize a dog, we need to provide a large number of pictures of dogs to the machine. Therefore, the development of artificial intelligence needs the support of big data. The advantages of big data will be given full play when combined with artificial intelligence. For example, the artificial intelligence model can help teachers find the deficiencies in teaching and make improvements through analyzing a large number of teaching designs and teaching data in the process of education and teaching [9, 10].

3. Experiment of Artificial Intelligence Teaching Method

3.1. Experimental Method
A total of 60 free combat elective students from Grade 2018 were selected as the experimental subjects. First of all, according to the purpose of teaching experiment and the characteristics of free combat sports, on the basis of combining expert opinions, we select and determine the indicators and evaluation criteria of the experiment test. Secondly, according to the physical quality of the students before the teaching experiment, free combat motor skills and affective attitude and other indicators of the experimental subjects were tested, according to the results of the indicators of the experimental subjects before the test, they were evenly divided into experimental class and control class. Thirdly,
teaching experiments are carried out. The experimental class uses artificial intelligence technology to teach in the process of free combat teaching, while the control class uses conventional teaching methods and means in the process of free combat teaching.

3.2. Teaching Methods of Experimental Class

In order to ensure the accuracy of the research results and the uniformity of the subjects' grades and colleges, this study adopts random sampling method to select the subjects from embedded majors of different grades and departments, who are freshmen, sophomores, juniors and seniors respectively.

Artificial intelligence technology is used to teach the students in the experimental class, and the teaching content and task are publicized through pictures and videos, so that students can more intuitively understand the teaching content and requirements of this class. In the basic section of the course, teachers will often granted by this class of technique content such as pictures, video, and text form, advance sent to network platform, students know already, and the corresponding preparation before class, therefore, in the basic part of the curriculum, teachers mainly play the role of inspiration and guidance, the existence of wrong action to the student, teachers help error correction, and the students in the process of practice more action through the photos and video of false action is taken, with pictures and video editing software, will the correct action and error action, decomposition action and complete action. Moreover, the teacher will film the practice process of the students' technical movements and transmit it to the network platform, so that the students can watch and learn from each other, point out the problems between each other, and help the students to improve the ability of finding and solving problems.

3.3. Mathematical Statistics

In the process of teaching experiment development, Excel computer office software was used to conduct statistics and processing on the test results of various indicators and questionnaire survey data of students in two classes before and after the experiment. SPSS17.0 statistical software was used to conduct paired sample test on the test results of each index in the pre-test and post-test of the experimental class and the control class, so as to judge the difference between each index of the students in the two classes.

The t-test formula used in this paper is as follows:

\[ t = \frac{\bar{X} - \mu}{\sigma_X} \sqrt{n-1} \]  
(1)

\[ t = \frac{\bar{X} - \mu}{\sigma_X} \]  
(2)

4. Experimental Results

4.1. Physical Fitness of Students after Experiment

|                  | Experimental group | Control groups |
|------------------|--------------------|----------------|
| 50 meters(s)     | 7.16±0.51          | 7.28±0.45      |
| 1000 meters(s)   | 243.7±6.9          | 248.9±14.5     |
| Pull-ups (PCS)   | 11.15±7.18         | 10.08±7.24     |
| Standing Long Jump (cm) | 224.4±20.2       | 221.17±19.85  |
| Front of seat body (cm) | 15.24±5.18       | 13.13±5.26    |

As shown in table 1, after the experiment, through to the students of class two physical quality index, an independent sample t-test, it is concluded that the students of class two in 50 meters, 1000 meters, pull-ups, standing long jump or Front of seat body proneness test index P values are less than
0.05, shows that after the experiment, the physical quality of the students in two class each index exists significant difference, significantly higher than that in comparative classes the students' physical quality level experimental classes. Therefore, it can be concluded that in the elective teaching process of free combat in colleges and universities, the application of artificial intelligence technology has more advantages and effects than the conventional teaching method in the improvement of students' physical quality.

4.2. Test of Students' Free Combat Skills

As shown in Figure 1, after the experiment, according to the technical evaluation standards of free combat elective courses, the six technical evaluation indexes of footwork, boxing, footwork, wrestling, combined movements and actual combat skills were tested. After the experiment, students in the experimental class were higher than those in the control class in the technical step, fist, foot, throw, combined movement and actual combat skills, and P <0.05 was obtained through the statistical independent sample T test, indicating that there were significant differences in the sports skills of students in the two classes. Therefore, it can be concluded that the artificial intelligence technology is better than the conventional teaching method in improving the students' free combat motor skills in the elective course of free combat in colleges and universities.

4.3. Examination Results of Student Free Combat Course

As shown in Figure 2, the number of students in the experimental class with excellent grades is 7, the number of students with good grades is 18, the number of students with passing grades is 5, and
there are no students with failing grades. In contrast, in the control class, there were 3 students at the excellent level, 11 students at the good level, 15 students at the passing level and 1 student at the failing level. In terms of the number of excellent students, the experimental class had more than the control class by 4 students; in terms of the number of good students, the experimental class had more than the control class by 7 students. It can be concluded that the application of artificial intelligence technology can effectively improve the excellent rate and good rate, control the pass rate and reduce the failure rate in the selective teaching of free combat courses in colleges and universities.

5. Conclusions
The fourth industrial revolution brought about by artificial intelligence is having a profound impact on education and teaching, and it is also gradually affecting the learning mode of students and the education mode of teachers. The era of technological change education is coming. In the face of such time background, a detailed analysis of artificial intelligence teaching reform, based on the artificial intelligence to promote teaching reform teaching application, artificial intelligence and artificial intelligence technology content of the profound research and related theory, through interviews with relevant scholars to carry out the content and grasp how artificial intelligence will affect the teaching process, teaching factors and grasp what will be affected by artificial intelligence, to determine the analysis process. Through the experiment of this paper, using artificial intelligent technology and conventional teaching method in college free combat elective teaching, the number of students in different stages of the free combat course examination results from students, using artificial intelligence technology in improving students free combat course examination performance excellence and good rate, control the pass rate and reduce were not for sheer effect is remarkable.

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