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## Research on the Challenges and Solutions for Online Physical Education in the Post-Epidemic Era

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#### **Abstract**

Online education has gradually become familiar to the public in the information age, and it has become the norm to carry out online lectures, conferences, and training, but due to the special nature of sports, online sports have not been a hot topic with the participation of the public. With the state's designation of NCP as a "Class B", the public's life gradually resumed normalization, and the online sports boom gradually receded. The current situation and teaching dilemmas of online physical education (OPE) have been studied in this study to explore the constraints encountered in its current practice, to study its common problems, and to provide countermeasures for OPE in the post-epidemic era. This will enable OPE to better integrate the characteristics of the Internet and lay the foundation for the formation of an online teaching method with physical education characteristics. To sort out the constraints of online sports development in the post-epidemic era and explore countermeasures for online teaching, so as to provide a boost for the future development of online sports teaching. The arrival of the new crown epidemic has made online sports a home fitness program for the general public, and this rare practical approach provides valuable experience for the development of online sports. With the theme of online teaching development, this study analyzes the constraints on online sports development and proposes targeted countermeasures through literature, interviews, and logical analysis methods. In the post-epidemic period, OPE is constrained by both endogenous factors (students' individual needs, lack of necessary supervision, and untimely communication) and exogenous factors (instructional design of online courses, quality teaching resources, and environmental and peer factors). By 1) improving the way to enhance students' participation in online sports, 2) establishing a diversified evaluation and supervision mechanism, 3) determining the role transformation and role of online sports courses, and 4) strengthening the construction of online sports teaching resources and teachers' capacity development. The above four measures can improve the effectiveness of OPE to some extent.

#### **Keywords**

Post-Epidemic Era, Online Physical Education, Live Fitness, Constraints, Countermeasure Research

#### 1. Introduction

The arrival of the COVID-19 epidemic has produced changes in the original teaching programs and teaching methods (Ammar et al., 2020), making online forms of physical education an important way of public fitness and physical education during the epidemic period, receiving attention from educators and learners, and the change in the physical education environment has been refreshing for many traditional sports participants (Guo & Fussell, 2022). Online courses are not new; as early as 1994, the American scholar Hiltz S. proposed the concept of online teaching, using the Web as a medium, where teachers or schools submit classroom content to the corresponding knowledge model (Hiltz, 1994), as well as in 1998, the domestic scholar Cheng Zhi proposed that teachers and students teach and learn mainly by virtue of the Internet, making the dissemination of information and the corresponding feedback more time-sensitive (Cheng, 1998). With the rapid development of the Internet, the state also attaches great importance to networked training, and the Ministry of Education and the General Administration of Sports have issued relevant documents to guide the promotion of online sports courses. With the arrival of the COVID-19 epidemic, physical education courses were changed to online courses, and teachers offered online courses for students through nailing, Tencent meetings, and live streaming platforms (Chen et al., 2021), practicing the initiative of "stopping school without stopping class", and integrating physical education into the embrace of the Internet+, with a variety of initiatives to help students. The program is designed to support home sports. With the convenience of smart devices and the Internet, fitness apps and smart devices have become the way and means of online physical education (OPE) and exercise (Jo et al., 2023), and with the intervention of live streaming, online fitness has become popular among the public (Chen et al., 2020), and live fitness has become the buzzword of the year in 2022.

With the national designation of COVID-19 as a "Class B," the public life gradually resumed normalization, and the online sports boom gradually receded. This study aims to sort out the constraints of online sports development in the post-epidemic era through the current situation of online teaching and explore the countermeasures of online teaching to provide a boost for the future development.

opment of online sports teaching.

# 2. The Current Situation of OPE and the Problems Raised2.1. Current Status of Online Teaching and Learning

Physical education, as a physical skills curriculum, has educational significance for students' quality of will, health knowledge, motor skills, and emotions (Bailey et al., 2009; García-Calvo et al., 2014), and OPE, as an extension of the physical education curriculum, has both educational and promotional sports guidance roles. From the initial attempts during the epidemic period to the use of courses, live streaming, short videos, fitness APPs, and other means, online sports has proposed a variety of ways to implement online sports teaching and has established a new type of exercise called "cloud fitness". Online teaching promotes educational equity, allowing students of different ranges to enjoy equal access to educational resources and information. Its convenience, spatiality, and repeatability make it different from traditional face-to-face classes, allowing students to better review and self-learn.

Shown in **Figure 1**, teaching eaching has undergone several changes supported by technological development, starting with audio-based speech in addition to traditional teaching, followed by video dissemination with recorded instructional videos, then short video-based, and now teaching with multimedia technology and smart devices (Liu & Luo, 2022; Liu et al, 2022; Zhong, 2021). In terms of OPE teaching research, it increased year by year from 2019 to 2021, reaching 118 articles in 2021, and physical education became the focus of OPE teaching, which is related to the current situation of teaching after the epidemic, and researchers take a problem-oriented approach to online teaching.

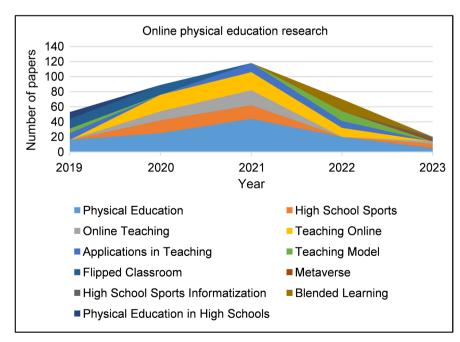


Figure 1. OPE research (Data from CNKI May 2023).

From the study of the current status of online teaching, OPE courses are mostly a continuation of the offline physical education course approach, and there are also schools that adapt the online courses to programs that can be operated online (Zhang et al., 2020), such as tai chi, dance, and fitness exercises, or carry out OPE knowledge lectures (Cao et al., 2021; Zhang et al., 2020). However, students' evaluation of OPE is mixed (Sun et al., 2020), as is the differentiation between male and female students for program learning and the influence of equipment, internet speed, and environment on distance education (Su, 2022), resulting in a weaker sense of manipulation between teachers and students. Technology empowerment allows OPE courses to run smoothly, but teachers cannot effectively control students' participation in the course due to the inability to directly observe students' status behind the screen (Dong et al., 2020). From the previous studies, OPE research has not formed a wide range of reference effects, and most of the studies are investigations of current problems but do not give detailed solution strategies and ways for problem solving. There is also a lack of practical research on current OPE problem solving.

Liu Siqiang's study on the effectiveness of online learning for 11,443 students of different majors showed that nine exogenous variables of teachers' teaching behaviors and activities had significant positive effects on students' online learning satisfaction, with three variables, course assessment, course content, and learning resources, having the most explicit effects on online teaching satisfaction (Liu & He, 2022). Su Yangyang's survey of 113 physical education teachers showed that 71% of teachers chose live online teaching, and because the change of teaching environment on equipment, venues, network problems, and teaching methods needs to be targeted, the study concluded that to ensure the fluency of the teaching environment, the frequency of teacher-student interaction, and reasonable teaching evaluation are necessary ways to implement effective online teaching (Su, 2022). Zhang Chenggang's survey of 3104 freshman and sophomore students showed that 66% of students were able to accept OPE, and the acceptance of students in the dance and dance program was at 74%, related to the characteristics of their own programs (Zhang et al., 2020). Chen Chai's study showed that from 2016 to 2019, the increase in physical education courses reached 388%, but physical education courses only accounted for 1.54% of the increase in all online courses (Chen, 2021).

The number of OPE teaching resources needs to be further improved; compared to other courses, OPE teaching courses are slow to be built, and OPE teaching methods and related supporting measures are not arranged in a timely manner, which is also the key to the implementation of the course. The high concern of students for teaching evaluation, learning content, and learning resources also shows again that OPE is not only teaching content but also a learning subject for students, who need to clearly understand the teaching assessment requirements and the situation of supporting learning materials, etc (Liu & He, 2022). Only by changing the teaching strategy can OPE be more re-

levant to students' learning needs and become an online course recognized by students.

#### 2.2. Problem Formulation

Asit enter the post-epidemic era, online sports are also undergoing a transformation. From the current perspective, online sports are still part of the teaching, providing teaching resources for some students who are not present to participate in the course for various reasons (epidemic, illness, etc.) so that they can participate in the teaching normally. Secondly, online teaching plays a more complementary role to the classroom as a theoretical or knowledge supplement to the physical education curriculum, making online sports a way of flipping the physical education classroom so that students can have a vivid image of the many aspects of sports. Secondly, online sports are changing the behavior of participants in a subtle way. In the post-epidemic era, the public has more selectivity in fitness, and online fitness has become a new type of fitness, which has caused a craze for universal participation.

Online sports as the development trend of physical education, the study of how to carry out a good online sports course, is the new era of online sports teaching. The urgent ending of the problem is only to analyze its impact constraints in order to better provide effective strategies for the development of online sports courses, so that online sports courses become effective and students love teaching courses.

#### 3. Analysis of the Constraints of OPE

OPE is not only a display of offline teaching but also a good use of information technology to fully demonstrate the characteristics of sports and play the role of physical exercise. Looking at the current situation of OPE, mainly divided into student participation factors, teacher online teaching design, learning quality, equipment, technology, and other factors, according to the American social psychologist Fritz Heide's attribution theory (Heide, 1958), combining internal and external. Showing in **Table 1**, the internal factors include the influence of teaching factors, communication, and evaluation on students' intrinsic motivation to learn, and the external factors include the influence of external influences such as equipment and environment on students' motivation to learn.

This study's constraint viewpoint is formed after synthesizing previous studies as well as combining actual online teaching and student interviews. Firstly, this study agrees with previous studies that the ad hoc initiatives of online sports teaching make online teaching lack systematic arrangements in terms of course design, course reference, and course grading, thus causing an inherent deficiency in online teaching. Secondly, because the lack of quality teaching resources, supervision and evaluation mechanisms, and other aspects of the system in the early stages due to the construction of online sports resources did not cover most of the sports, it became an external factor that restricted the development

Table 1. Restrict factors analysis.

Internal factors	External factors
Universality of the curriculum, which affects willingness to participate	Universality of the curriculum, which affects willingness to participate
Lack of quality teaching resources affects students' course learning needs	Lack of quality teaching resources affects students' course learning needs
Lack of sport-specific online design affects students' interest in participation	Lack of sport-specific online design affects students' interest in participation
Lack of a sports environment and atmosphere, which affects students' participation initiative	Lack of a sports environment and atmosphere, which affects students participation initiative

of online sports (Su, 2022; Chen, 2021). Finally, this study argues that the lack of a sports environment is also an extrinsic factor that contributes to the constraints on the development of online sports. Online sports teaching does not take advantage of its offline sports atmosphere to form a competitive, mutual aid, and united sports atmosphere among students, which is somewhat related to the previous study that online sports have less impact on team sports, but in practice, individual sports also do not form a good sports atmosphere and environment.

#### 3.1. From the Internal Causes

#### 3.1.1. Personalized Student Needs Are Not Responded To

College students' recognition of the exercise intensity and learning objectives of online courses affects their willingness to participate in OPE courses (Liu & He, 2022). According to the theory of individual optimal functional zone (Hanin, 1989), each individual has an ideal functional zone of his or her own, and the best operational performance can be obtained only when the anxiety level is within this zone. The discomfort of OPE programs with uniform goals and content and a lack of individualized adjustments makes students lose motivation to participate in the process (Kim et al., 2021). Online courses are limited by the venue factor, and ball and group sports are difficult to implement effectively online (Yu & Jee, 2021). How to actively integrate students into online teaching through effective online means becomes a key factor in meeting students' needs.

### 3.1.2. Inadequate Monitoring and Feedback Mechanisms for Online Courses

The lack of necessary monitoring and feedback mechanisms creates a slack herd mentality among students. The technicality and operability of sports are strong, and in the practical exercises, not only the quality of movements should be checked (Tang & Chen, 2021; Dong et al., 2020), but also the intensity of training should be adjusted, and only with the appropriate intensity and immediate feedback can students gain the corresponding gains (Liu et al., 2022; Yin et al.,

2012). Due to the lack of necessary feedback mechanisms for online teaching (Su, 2020), problems such as the quality of students' movements and fatigue emerge, so that students gradually develop a slack mentality and the quality and participation of online teaching gradually decline.

### 3.1.3. Poor Communication in Online Courses and Formation of Rebellious Attribution Mechanism

Since the courses are played in recorded or video form and the teachers lack the necessary communication when operating, students lack exercise communication mechanisms when participating, forming a reverse attribution to sports. Physical exercise itself can only have an exercise effect if it is at the appropriate intensity; on the contrary, too high or too low intensity can produce feelings that affect the participants (Ji et al., 2022). There is a greater need to form correct attribution mechanisms for muscle reactions after online physical exercise (Heide, 1958). The pain-pass reaction, fatigue, and exercise problems after online exercise (Ament & Verkerke, 2009) can cause students to develop a rebellious attitude towards exercise and attribute the problem to exercise side effects or their ability to participate in the sport, thus reducing their willingness to participate in online sports.

#### 3.2. Exogenous Perspective

#### 3.2.1. Lack of a Proven Online Teaching Strategy

In terms of course quality, teaching design and teaching methods play a key role in the effective implementation of the course (Yu & Jee, 2021), and the initial implementation of OPE is more based on offline teaching mode, focusing on movements and exercises. Some studies point out that the effectiveness of teaching effects is affected by the changes in teaching behaviors that prevent teachers and students from synchronizing, lacking emotional communication, and being unable to observe students' behaviors (Dong et al., 2020). The reason for this is the problem of teachers' technical use of online teaching methods. Online teaching is subject to the influence of recording and editing technology, teaching strategies, and atmosphere-driven factors (Varea et al., 2022), as well as the lack of relevant technical knowledge compared to teachers who are familiar with offline teaching.

#### 3.2.2. Lack of Quality Online Sports Teaching Resources

In terms of teaching resources, good teaching resources can provide strong support for student learning, but the development of sports online course construction is unsatisfactory and still needs to be strengthened (Chen, 2015). Among the online open courses of national quality recognized by the Ministry of Education, there were only 3 sports courses out of a total of 490 in 2017, accounting for 0.61%; among the 801 courses recognized in 2018, there were 8 sports courses, accounting for 0.99% (Chen, 2021). The online courses during the epidemic period, most of which are shot in short videos or at home, are not suitable for

long-term online teaching use, and the construction of high-quality online course resources can provide a strong guarantee for students' online learning. The construction of high-quality online courses has become one of the constraints to the development of online sports.

#### 3.2.3. Lack of Movement and Atmosphere in the Online Environment

The constrained nature of the home environment lacks partners and environmental ambience. OPE courses are not constrained by venue and space, but most students will choose to participate in the home environment, and some studies suggest that this absence will help to release students' tension and release their energy more easily; in contrast, some researchers also suggest that the lack of partners and exercise atmosphere will reduce the continuity and activity of online physical exercise (Yarmand et al., 2021). The physical activity atmosphere has a reciprocal effect in that it not only enhances the participants' friendship with each other during exercise but also stimulates their own potential. There are still reasons such as untimely communication and inconvenience in the process of online sports exercise, which form a discrepancy with the intuitive way of support, help, and shouting in offline sports exercise, and this psychological release and attention-getting behavior is not responded to, which affects the online sports participation experience.

## 4. Discussion of Countermeasures for Online Sports Development in the Post-Epidemic Era

## **4.1. Developing Suitable Online Teaching Strategies to Enhance Students' Online Sports Participation**

## 4.1.1. Respecting the Main Role of Students and Stimulating Their Enthusiasm

Clarify the main role of students and the leading role of teachers. Play a good role in information technology, start from many aspects to cultivate and enhance students' initiative and participation, and develop suitable strategies and modes of online sports teaching. Online teaching is different from offline teaching, which enables students to get out of the constrained environment and better show themselves. Online teaching should use good information technology to promote students' participation and enthusiasm. For example, in terms of the 5 characteristics of participatory pedagogy, the course characteristics of subject participation, interactivity, democracy, openness, and diversity give us some inspiration (Lambert et al., 2023). Online sports should explore diverse ways to make students stand at the center of the classroom so that they can participate in the teaching design and fully motivate students to learn.

#### 4.1.2. Setting Graded Goal Schemes to Motivate Students' Participation

From the perspective of teaching objectives, due to individual differences, teachers should set graded exercise goals according to the different characteristics of each student so that students can participate in the teaching program and set

reasonable completion goals for themselves, thus stimulating students' willingness to participate (Liu & He, 2022). Online teaching courses have a large number of participants, from zero-based to students who have undergone certain studies, and it is necessary to set different levels of difficulty of assignments according to students' levels so that students can all have different levels of gains in their participation.

### 4.1.3. Making Good Use of Technology to Stimulate the Atmosphere of Student Participation

In the form of comments and communication, revitalize the communication channel of online physical exercise, and moreover, give full play to good information technology to obtain students' feelings in the form of indexes of setting up group discussions, feedback on subjective fatigue, and learning comprehension. Teachers in online teaching should pay attention to the change of role, not only as educators but also as question-answers, guides of exercise habits, and caregivers of exercise feelings. Online teaching in a virtual environment needs not only guidance but also an equal and democratic teacher-student relationship in order to keep the spirit, value, and meaning of sports in online teaching (Sun et al., 2020).

#### 4.2. Supervision and Evaluation of Online Sports

The supervision and evaluation of the course are the keys to the quality control of teaching, and they are also the tests of the effect of "teaching well and learning well". An online sport teaching has the characteristics of being subject to many factors, fast dissemination, a virtual teaching environment, etc. The necessary supervision and evaluation can effectively avoid the emergence of public opinion in teaching as well as test the learning process of students.

#### 4.2.1. Ways and Measures of OPE Supervision

OPE teaching supervision is the supervision of teachers' teaching and students' learning, which is necessary for the comprehensive and effective implementation of teaching objectives. The online teaching supervision of teachers is to evaluate the teaching plan, teaching design, teaching strategy, and teaching content. The online teaching environment is different from offline, and the virtual environment requires more supervision in many aspects before, during, and after the process to control and evaluate the implementation of the course. For teachers to enhance and promote teaching, mainly for teaching implementation, student feedback and course participation supervision, so that teachers can better use information technology for OPE.

Students' virtual classroom learning is challenging in terms of classroom order, study habits, and self-awareness and requires some supervision in terms of the learning process, class participation, and physical education assignments to develop the necessary study habits. Compared to offline, online environment supervision means more diversified online platform usage, participation and interaction frequency, homework completion quality, and other online intelligent

supervision; home-school co-education, necessary supervision, and feedback of home sports practice to make up for the lack of real-world virtual environment learning (Sun et al., 2020); fitness software linkage, reasonable use of AI's evaluation and supervision role, so that online sports supervision form is more integrated into the information-based approach (Liu & Luo, 2022).

#### 4.2.2. Informative Evaluation Strategies for Online Sports

Contemporary research is mostly based on the continuation of offline teaching evaluation, as online teaching should be more student-centered using diversified evaluation tools, evaluation of learning satisfaction, participation, teacher-student interactivity, and other aspects to establish an evaluation system suitable for online sports teaching. Combined with the online course, home, school, and "social+" should play a synergistic role so that online sports are not only limited to online completion but also provide feedback to guide offline sports to achieve the goals and effects of physical exercise. Teachers' evaluation should also focus on the operability of online technology, the form of classroom interaction and inspiration, and the technical means of online teaching, in addition to teaching, to evaluate teachers' information technology teaching ability and promote their online teaching ability. Students' evaluations focus on learning, practicing, and using. Combined with the online teaching format, students can understand the meaning and role of sports more thoroughly and evaluate their learning effect, participation, knowledge comprehension, and platform usage. There are individual differences in online sports practice, and more universal problems and mistakes are explained. As a subject with strong practice, classroom learning is to provide guidance and direction for students' sports, and online learning should focus more on students' practice, such as feedback on weekly exercise in the fitness app and exercise form after class, so as to evaluate students' learning after class.

#### 4.3. The Role and Function of Online Sports

As teaching returns to offline in the post-epidemic era, clarifying the role of online sports is the foundation for the future development of online sports. In terms of educational trends, online sports will certainly become an important way of teaching physical education in the future, providing support and a guarantee for physical education in many aspects. With the continuous integration of technology and education, OPE courses are a necessary stage for the integration of physical education subjects into information technology, and after the exploration and development in recent years, it is more important to "rise to the occasion" and gradually form an online course model with physical education characteristics by combining physical education characteristics and intelligent information technology (Brame, 2016).

As an online version of physical education, online sports should have the same role as physical education and should have the ability to provide standardized online course content for students to adapt to the needs of different students.

dents and to better promote educational equity so that every student can receive the same educational resources under the same conditions. Secondly, online sports can also be used as supplementary content for physical education courses. Due to the special nature of the physical education course environment, the lack of the necessary video, projection, and other equipment makes it impossible to image display sports knowledge. Teaching competition videos and online teaching can well make up for the lack of theoretical resources, providing students with a variety of teaching forms. Secondly, online sports is a scientific platform for sports, and combined with information technology, it can image mark the angle of kicking action, shooting direction, action posture rationality, and other information, clearly showing the "language" of sports and making it easier for students to understand the direction of technical force and technical elements. Secondly, virtual reality and other technologies provide a boost to enhance the enthusiasm of students' sports participation, and the virtual environment of online sports is more interactive, so that students can better integrate into the online sports environment and teaching situation in online sports.

### 4.4. Construction of Online Sports Resources and Online Technology Development for Teachers

The arrival of the epidemic has made most sports online courses hastily available, which itself lacks reasonable arrangement and design and only serves as a temporary teaching resource during the transition period. On the contrary, the current popularity of live fitness, with its action design, teaching format, and interactive methods all carefully designed, is well liked by the public and has become a popular fitness method in the new era at a stroke. The post-epidemic era should target online sports vulnerability to check the gaps and fill in the gaps, promote the construction of online sports resources, cultivate high-quality online sports courses, and focus on online teaching strategy research so that online sports courses can better adapt to the development needs of students in the new era. Nowadays, "online classes" have become a common phenomenon in teaching, and physical education, as one of the basic subjects, should actively integrate into the development trend of education and develop physical education resources suitable for online teaching by combining information technology resources.

The teacher is not equal to the anchor, and physical education teachers face the problems of empty cameras and untimely feedback in online teaching, which affect the teaching effect and teaching pace (Yarmand et al., 2021). Online teaching strategies, teaching methods, video production, and live streaming software all play a role in the effective implementation of online teaching, especially for physical education, which requires demonstration and observation of student feedback and has problems such as untimely communication and unclear camera exit or audio delivery. Online technology should provide comprehensive training for strategies such as live streaming skills, sound, and interactive methods, as

well as techniques such as equipment use, filming and editing, and feedback evaluation, to get teachers out of online teaching dilemmas (Yu & Jee, 2021). Online technology training for teachers is a prerequisite and guarantee for the effective implementation of teaching and learning, and teachers in the new era need to have information-based teaching tools to meet the needs of the current social development.

#### 5. Summary

The mission of online sports in the post-epidemic era is still daunting, and after the experience of "crossing the river by feeling the stones" in the early stage, the problems of online teaching are gradually highlighted. The study also proposes research strategies for related difficulties by improving ways to enhance students' participation in online sports; establishing a diversified evaluation and supervision mechanism; determining the role change and role of OPE courses; and strengthening the construction of OPE teaching resources and teachers' capacity development. It can improve the effect of OPE to some extent.

The construction of OPE courses is the trend of education informatization, and it is an effective way to promote the sharing of physical education course resources and achieve educational equity. Combined with the current situation, students can accept OPE, but the evaluativeness of their learning effect is still subject to certain constraints. Teachers' online teaching abilities and methods still need to be optimized and improved according to the transformation of teaching methods so that they can conform to the characteristics of information-based teaching and allow students to move and practice behind the screen.

This study concludes that the development of online sport is still constrained in many ways, especially in terms of online sport teaching formats, evaluation and supervision mechanisms, and course design (Dong et al., 2020; Yu & Jee, 2021). Only by improving teaching supervision and evaluation mechanisms can online sport teaching function better and more effectively. In particular, the lack of personalized instruction and the lack of a sports atmosphere in online teaching make OPE a rigid fitness exercise, and the education of sportsmanship and sports ethics is lost. This study believes that the role and value of online sports can only be well reflected through various forms of activities, using online and offline resources to open up the idea of sports, combining interaction, display, platform use, etc. online and offline through family exercise, fitness APP virtual competition, social "cloud" competition, etc., so that online sports become "moving". Sports become a "moving" course.

The task of building online sports courses is very difficult, and there is still a need to further develop and improve high-quality courses, evaluation and supervision mechanisms, as well as online teaching strategies and models, especially the need to combine the characteristics of sports to develop online teaching methods in line with sports practice models. In the post-epidemic era, OPE courses should be configured with "prescriptions" for "difficult and complicated

problems". Teachers should change their teaching mindset, transition from being the leader of the course to being the guide and supervisor of the course, combine online teaching resources to better show students the theory, spirit, and culture of physical education, and combine them with the actual situation. In addition, they should respect the students' main role and actively guide them to set exercise and implementation goals, set a hierarchical goal system, and let them set personalized exercise goals according to their own conditions. Through subjective fatigue, task difficulty, completion, and other indicators to evaluate student exercise and learning, only by improving the inherent teaching concept can OPE have a better leading effect.

Good teaching requires perfect evaluation. The study believes that online teaching should make full use of online technology so that information technology can help physical education through online participation, viewing time, completion, "cloud" sports participation, home exercise feedback, and other aspects of student evaluation, combined with big data analysis to form a diversified evaluation model. It also transforms the original technical evaluation and ability evaluation into sports participation evaluation, habit formation evaluation, and family co-education evaluation, which enriches the way of sports evaluation, makes the course of the online sports "live" and "move", and becomes a course that students can love and families can participate in. It is a course that students can enjoy and families can participate in.

#### **Conflicts of Interest**

The author declares no conflicts of interest regarding the publication of this paper.

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