# Research on Design, Development and Practice of Aerobics Interactive Network Course

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**Abstract:** With the continuous deepening of physical education reform, college physical education teaching models have gradually exposed more and more problems. According to the survey, most students believe that the physical education curriculum is too small, they are eager to learn more fitness knowledge and sports theory, and the current physical education curriculum design cannot meet the students' needs, plus the current students are pursuing personality. Therefore, it is very necessary to develop an interactive online course that integrates sharing, autonomy, openness and collaboration to make up for the shortcomings of traditional physical education.

## 1. Introduction

With the rapid development of science and technology, a large number of new technologies and new knowledge have emerged in China, and the content of physical education has become more and more abundant. However, due to the short time of physical education, there is a clear conflict between its teaching content and class hours. Aerobics is an important part of physical education. It belongs to a new type of gymnastics. Whether it is a university, a middle school, a kindergarten or a primary school, aerobics performances or competitions can be seen everywhere and students are deeply loved, promoting "beauty education" and "sports." "Education plays an important role. However, the traditional aerobics teaching method can not meet the development needs of the times. Therefore, it is urgent to develop a new and effective aerobics teaching method.

## 2. Design and Development of an Aerobics Interactive Online Course

### 2.1 Pre-Analysis.

The pre-analysis is mainly divided into three parts: learner analysis, learning background analysis and learning task analysis. When developing the design course, by analyzing the learning tasks, the subject content structure and the type of learning tasks can be fully grasped; by analyzing the learners, the learner's starting level can be fully grasped, the teaching starting point can be set reasonably, and the learner can be clearly grasped. Learning habits and personality characteristics; through the analysis of the learning background, can deeply grasp the application conditions, application objects, constraints and application background of teaching design results [1]. Only by doing a preliminary analysis can we develop a specific course content and course objectives to ensure the scientific design of the course.

### 2.2 Defining the Course Objectives.

The online course teaching has an obvious feature, that is, it has multi-level and diversified teaching objectives. The online course is no longer simply teaching the course content, providing students with diverse learning materials to help students master the knowledge, and more importantly, for students of all basic levels and learning different content, the design has the corresponding curriculum objectives, and the development of targeted learning programs to ensure the better development of all students. The author suggests that you can refer to the five learning outcomes (wisdom skills, motor skills, verbal information, cognitive strategies, emotional attitudes) proposed by R•M•Gagne and the three areas proposed by Bloom (action skill field, cognitive field).

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The author believes that the following eight kinds of abilities can be cultivated as the goal of the network course: first, the ability of aerobics research; second, aerobics training and teaching ability; third, the ability to compile aerobics teaching documents; fourth, application, acquisition of aerobics knowledge The ability to manage and convene aerobics competition; the sixth is the ability to innovate aerobics; the seventh is the ability to compile aerobics training programs; the eighth is the ability to evaluate and self-evaluate [2].

### 2.3 Design Course Content and Resources.

The selected course content should be more advanced, systematic and scientific, and the expression should meet the requirements of relevant standards and norms. The selected teaching content should meet the requirements of the curriculum standards, and must fully reflect the frontier of the subject.

The content of this course is mainly based on the "Sports Drawing" compiled by Thunder, the "Aerobics" formulated by Zhang Ping and Ma Hongjun, and the "Aerobics and Rhythmic Gymnastics Creation and Teaching Training Guidebook" by Li Jiankun and Wang Yuquan. The course content includes two parts, namely aerobics skills and technical teaching content, theoretical course content [3].

The content of the course can be organized in a modular way. The division of modules should be relatively independent, based on the teaching unit or knowledge point. All teaching units should cover the exercises, learning objectives, reference teaching resources, teaching content and test questions.

Using multimedia technology to present network courseware in the form of sound, text, images and pictures, the pictures can be in GIF, JPG and other formats, which can be produced by shooting, drawing, web search, scanning, etc.; , Mp3, Wav and other formats, can be produced by Cakewalk 9.1, Goldwave, Cool Edit 2000, Sound Forge 8.0 and other software; video files are mainly in Mpeg and Wmv formats, through VideoStudio Ulead Video Studio 8 and Adobe Premiere Software such as Pro V7.0.C522 is produced, formatted and uploaded to the media. The courseware is mainly produced using Microsoft Power Point software [4].

The teaching measures and activity design of the aerobics online course are shown in Table 1 below.

Table 1 Teaching Strategies and Activity Design for Aerobics Online Courses

| Specific learning task | Learning measures | Activities |
|---|---|---|
| Knowledge mastery | Problem learning measures | Design thinking |
| | Resource learning measures | Follow the tips to read the courseware and webpages and learn about the lectures and literature. |
| | Interaction measures | Establish a special forum for exchange seminars |
| | Evaluation feedback | Repeated training and testing |
| Learning action | Auxiliary learning measures | Self-study by characterizing the video and depicting the action diagram |
| | Communication guidance | Establish a special forum for communication, answering, and discussion of issues |
| | Intuitive learning measures | Through the understanding of movements and video previews to form action representations, deepen the understanding of technical movements and the concept of movement |
| | Collaborative learning measures | Set up study groups and focus on cooperation |
| | Intuitive feedback | Record the learner's action video and upload it to the multimedia library to optimize the action by comparison |
| Basic theory | Self-directed learning | Select the theoretical knowledge reading points according to the prompts |
| Complete aerobics | Situational incentives | Inspire the learning enthusiasm by viewing the video data in the multimedia resource library, and initially understand the action |
| Editing action combination | Interaction measures | Establish a special forum for discussion, design cooperation tasks and independent tasks |
| | Self-directed learning | Using video self-learning combined action, teachers guide students to build their own curriculum resources |
| | Resource learning measures | Collect action data, build and share resources |
| | Task learning measures | Design aerobics editing tasks, pointing out the requirements |
| | Intuitive feedback | Record the action and record it for adjustment and optimization |

Learning evaluation design is mainly used to evaluate students' learning effects and learning ability. According to the learning environment characteristics of online courses, the learning evaluation items are set to aerobics technical movements, self-editing operations, daily performance, and theoretical knowledge.

## 3. Practical Research

This paper takes a domestic university as the research object, and adopts the aerobics interactive online course teaching mode for students who are specialized in aerobics specialization, social sports professional fitness gymnastics class and physical education major aerobics compulsory course. The teaching of this course is based on the classroom teaching activities organized by aerobics teachers. With the help of diverse network resources, rich knowledge, open network environment and convenient interpersonal interaction tools, the classroom environment is achieved in terms of space and time. At the same time, according to each student's differentiated learning style, actively guide students to learn independently, take the initiative to participate in extracurricular learning activities, and divide students into multiple groups to guide them to cooperate and strengthen interaction, so that students' learning activities can be extended to In a network environment that is not subject to time and space constraints. Through practical analysis, it is found that this interactive aerobics teaching method not only helps to stimulate students' enthusiasm and interest in learning, but also helps students to improve their inquiry learning ability, innovation ability, communication ability and self-learning ability, and deepen their understanding. The mastery of aerobics theory knowledge also helps to stimulate students' ability to create aerobics. It is a more effective and feasible physical education model, which deserves the attention of schools and all educators.

## 4. Conclusion

In the process of comprehensively promoting the development of quality education, physical education has gradually been paid more and more attention by people, especially aerobics teaching. When conducting aerobics teaching, it is recommended that educators should make full use of existing computers and networks. The teaching of aerobics interactive online course belongs to a new type of teaching. This article is only a superficial study on the design and practice of aerobics interactive online course, and there are many places worthy of further exploration.

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