Dance Teaching Activities in the Context of Informatization

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Abstract. In the context of the rapid development of the Internet in the information age, the deepening of resource sharing concept and the enhancement of information reform awareness in the field of higher education have played a catalytic role in the development of MOOC and the rise of SPOC. This paper mainly studies the design of dance teaching activities under the background of informatization. This paper makes full preparations for the model construction and teaching design by using the preliminary analysis, and at the same time synthesizes the curriculum foundation of many subjects involved in the teaching of physical dance, and chooses the professional course of physical dance as the medium for the next teaching experiment. In the teaching effect verification based on summative evaluation, 40 students majoring in dance performance in an art college were selected as experimental objects, and SPSS22.0 software was used to test homogeneity within and between the experimental group and the control group, respectively. It is feasible to apply the MOOC+SPOC based hybrid teaching mode to the external conditions, internal motivation, emotion and other support of sports dance teaching in universities.

Keywords: Information Technology, MOOC Platform, Dance Teaching, Mixed Teaching

1. Introduction

With the gradual expansion of the "Internet +" business model and the deepening of the reform of educational informatization, the globalization of educational resources, personalized teaching and independent learning are also deepening. Therefore, in order to secure online education platform for media, provides the high quality of network education services, at the same time for the combination of online and offline actively explore the hybrid mode, will become "Internet + education" strategy to optimize the major breakthrough, and for the application of the model under different environment carries on the depth and breadth of research, is combining theory and practice, coordination between ideal and reality, and solve the problem of specific cases the actual path [1]. Sports dance in colleges and universities student learning sources rely mainly on sports dance teaching in colleges and universities, and the current university sports dance teaching mode is the phenomenon of increasingly
unable to meet their development needs, is to expand students' knowledge source and the way to learn, to seek a more appropriate teaching mode, is to improve the present situation of sports dance teaching in colleges and universities. Therefore, in the university sports dance teaching, can absorb cMOOC, xMOOC, synchronous SPOC, asynchronous SPOC network curriculum system is applied to the teaching experience, with the help of a mature network platform, the network teaching link to join the university sports dance teaching, realize the pluralistic hybrid teaching, flexible allocation of mixed proportion at the same time, reasonable teaching plan, give full play to students' subjective initiative and the teacher's leading role.

As for MOOC teaching, scholars at home and abroad have focused their attention on SPOC derived from MOOC and a series of related mixed teaching modes, and a new research field has gradually formed. Hesse and others, from the perspective of the technology tools in the application of the hybrid teaching, through the teaching experiment proves that the asynchronous tools (podcasts, video broadcasting, online testing, online vocabulary and BBS) in the foreign language learners of English grammar teaching practical experience and practice English grammar, the potential of the natural environment, and affirmed the online in continuous assessment and students self assessment the supplementary role [2]. Dehua et al. made a detailed comparative analysis of B-learning and traditional F2F mode from both theoretical and practical aspects. The teaching experiment results show that B-learning mode is more effective than traditional F2F mode in improving students' performance in QBASIC programming language [3].

From the perspective of curriculum reform, this paper takes blended teaching as a springboard and integrates online teaching with offline physical classroom, so that the former can better serve the latter and achieve the effect of "one plus one is greater than two", providing theoretical support for optimizing the teaching of sports dance in colleges and universities.

2. MOOC SPOC - Based Dance Teaching

2.1. An Overview of MOOCs

(1) The MOOC

At present, the international definition of MOOC is still relatively uniform, MOOC is the abbreviation of Massive Open Online Course, which is also the abbreviation of Massive Open Online Course. M (Massive) means a large number of participants, which can be in the tens of thousands or more. O (Open) means that there are no access conditions, that is, the course resources are open to the whole world, regardless of gender, age, identity and other factors. As long as you register through the email, you can learn for free. O (Online) means network as the carrier, that is, all learning resources are disseminated and participants' information exchange relies on the network. A MOOC is, in essence, a Course.

Since the operation of MOOC needs to be carried out on a platform supporting large-scale registration and the technical requirements are high, it is difficult for a university to complete the MOOC process independently. Therefore, in the MOOC process of carrying out the blended teaching of sports dance in universities, the MOOC platform which is relatively mature in the world can be used to reasonably select teaching materials and strictly design teaching according to the actual teaching needs[4].

(2) The SPOC

Scholars at home and abroad generally believe that SPOC is a small-scale limited online course corresponding to MOOC which is open on a large scale. Through the analysis of domestic and foreign cases and studies, it is found that there are mainly two types of SPOC development in the application. The first one, oriented by the value of pursuing high achievement, implements S (Small) and P (Private) standards globally, and sets access conditions for students. Only those who meet the requirements can get the opportunity to study in SPOC, and strictly controls the number of students in SPOC to dozens to hundreds. The second is the flexible policy adopted by colleges and universities to better cooperate with the physical classroom teaching. Generally, one or several colleges and universities are targeted at the teachers and students of the university. The SPOC referred to in this study is the formal category [5]. Regardless of the type of implementation, SPOC is proven to be a small number of participants, access conditions, targeted, network based curriculum system.
SPOC, as an online course system with a smaller scale and fewer audiences than MOOC, can fully implement customized teaching management for students at the technical level by relying on campus websites or small online resource platforms, and guide students to learn in the SPOC link of mixed dance-dance teaching in colleges and universities [6].

To sum up, in the teaching activities, to carry out the university sports dance hybrid MOOC SPOC and two network based course system for the flexible combination of MOOC + SPOC, not only can strengthen the binding force in university sports dance teaching, can for the teachers and students enjoy vast learning resources all over the world and the way of information, reduce the cost of university sports dance hybrid teaching stimulates the student sports dance learning vigor and sports dance teachers teaching enthusiasm, thus improve teaching efficiency.

2.2. Teaching Model and Learning Theory

(1) Mixed Teaching

Hybrid teaching is not a new teaching method. Because its connotation is very broad, so the academic circle at home and abroad has not made a unified and authoritative definition of mixed teaching up to now. Nevertheless, after consulting a large number of literatures, we can roughly divide mixed teaching into two categories: a narrow sense and a broad sense. In the narrow sense, mixed teaching generally refers to the teaching environment that includes both online and offline teaching methods. In a broad sense, mixed teaching is the organic combination of traditional teaching and digital teaching in the information age. In addition to the mixing of teaching environment, more importantly, it is the mixing of various teaching concepts, learning concepts and teaching concepts [7-8]. The mixed teaching studied in this paper is the mixed teaching in a broad sense.

Hybrid is a dominant and the students' subjectivity in the teachers' teaching principle, the organic integration of network and the real advantage of classroom teaching, from the aspects of learners and teachers of the double demand for preliminary analysis, based on the teaching goal, teaching environment, teaching resources, teaching content, teaching time, evaluation standard, teaching evaluation teaching design for mixed at seven o'clock, in order to improve the teaching efficiency for the purpose of a kind of teaching mode, inclusive and flexibility.

Decided on based on the concept of hybrid teaching MOOC + SPOC of university sports dance teaching of hybrid model design and construction, teaching activities, should strictly follow the principle of teachers' domination and students subjectivity, based on the university sports dance students and the teacher needs to master the hybrid supporting teaching activities, and then according to the characteristics of the university sports dance hybrid teaching closely detailed teaching design, and according to the actual teaching situation, for the purpose of improving teaching efficiency, timely and flexibly based on the hybrid of MOOC + SPOC to adjust the teaching activities.

(2) Constructivist Learning Theory

Constructivism can also be translated into structuralism, while constructivism learning theory is an organic combination of constructivism and learning theory in its long-term development.

From a philosophical point of view, constructivist learning theory is an inevitable outcome of the development from behaviorism to cognitivism. Therefore, there are as many constructivist learning theories as there are constructivist ones. The reason why these theories with different research perspectives and different terms are all constructivist learning theories is that they are constructivist because of their commonness [9]. First of all, constructivist learning theory believes that learning should take place within the individual learner, and learning behavior should be a process of active learner construction, that is, students should have subjectivity, and this nature is not endowed by the outside world but exists naturally in students themselves. Secondly, teachers should play a leading role in learning behavior, that is, the meaning construction of the situation should be to create a student-centered learning environment rather than a teaching environment. Finally, the constructivist learning theory should include at least four elements: context, collaboration, conversation and meaning construction.

Based on MOOC+SPOC, the blended teaching mode of sports dance in colleges and universities strictly takes the constructivism learning theory as the criterion and follows the principle of student
subjectivity and teacher dominance. Terms of the construction and operation mode, teaching design and implementation, evaluation and feedback information to the students as the center, to stimulate the students' subjective initiative, the creation of university sports dance learning environment, conforms to the situation can be constructive, it is based on the constructivism learning theory can MOOC+SPOC of university sports dance hybrid teaching model research provides theoretical guidance [10].

3. Dance Teaching Experiment under MOOC+SPOC

3.1. Experimental Subjects
In this paper, 40 students majoring in dance performance in an art college were taken as research objects, and 40 students were divided into experimental group and control group. Before the experiment, all the experimental subjects were pretested, and their individual scores were obtained and recorded by the SCORING method of WDSF2.1 scoring system. Meanwhile, based on technical quality, sports and musicality, dance combination skills, choreography and presentation, SPSS22.0 was used to conduct homogeneity test for the experimental group and the control group, and to verify whether there were differences between the two groups.

3.2. Experimental Methods
(1) Questionnaire Survey
Following the basic principles of pedagogy questionnaire design and referring to the same type of questionnaire, the evaluation feedback questionnaire is designed for students. Student learning feedback questionnaire mainly from the network learning and its platform evaluation, hybrid teaching mode and teaching activities, value evaluation, hybrid teaching engagement, and problem solving methods, knowledge situation, acceptance/satisfaction/view, hybrid hybrid teaching according to the deficiency in six dimensions of teaching.

(2) Mathematical Statistics
In this study, Excel and SPSS22.0 Chinese software were used to build the database, and the data were calculated and analyzed. Excel was used to sort out and classify the collected data, as well as to complete the preparation of the chart, while SPSS22.0 was used to test the homogeneity of the samples. Paired sample T-test was used to verify the differences between the scores of the experimental group and the control group before and after the experiment. Independent sample T test was used to verify whether the experimental group and control group had homogeneity before the experiment, and whether there were significant differences between the experimental group and control group after the experiment.

(3) Correlation Formula
The T-test formula used in this paper is as follows:

\[
t = \frac{X - \mu}{\sqrt{\frac{1}{n} + \frac{1}{m}}}
\]  

(1)

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

(2)

4. Experimental Results of Dance Teaching under MOOC+SPOC

4.1. Average Scores of Experimental Group and Control Group

|                   | Technical quality | Motor musicality | Dance skills | Choreography |
|-------------------|-------------------|------------------|--------------|--------------|
| Experimental group| 9.38              | 9.84             | 9.02         | 8.19         |
| Control group     | 6.81              | 8.62             | 7.69         | 7.43         |
As shown in Table 1 and Figure 1, the average scores of the experimental group were higher than those of the control group. At the same time, the average scores of the two groups were improved compared with those before the experiment. SPSS22.0 software was used to conduct independent sample T test on the average scores of the experimental group and the control group after the experiment. In the independent sample T test, \( P = 0.00 < 0.01 \), showing an extremely significant difference level, indicating that there was an extremely significant difference between the experimental group and the control group after the experiment. After the experiment, the Latin dance level of the experimental group was higher than that of the control group, and the performance improvement of the experimental group was greater than that of the control group.

4.2. Learning Platform Related Evaluation

Table 2. Students evaluate the learning platform

|                  | Very good | Good  | General | Not so good | Bad  |
|------------------|-----------|-------|---------|-------------|------|
| Network resources| 4         | 14    | 2       | 0           | 0    |
| Online platform  | 7         | 10    | 2       | 1           | 0    |
| Offline class    | 12        | 7     | 1       | 0           | 0    |

As shown in Table 1, from the perspective of students' evaluation of the value of network resources and the support degree of network platform, there are 18 students who think network resources are very valuable and relatively valuable, and 2 of them choose general, believing that the online courses arranged in the learning process are not enough to meet their own learning needs. At the same time, considering the students' support for online platform and offline classroom, the support for physical classroom learning is better than that for online learning. This not only indicates that online learning has a significant auxiliary effect on the entity classroom, but also indicates that the attraction of online course resources for students needs to be improved. Therefore, the selection or production of high-quality online course resources to meet students' online learning needs will be a major focus of the implementation of MOOC+SPOC based blended teaching mode in university danceschool dance teaching in the future.

4.3. MAE Values of the Algorithm under Different Data Sets
As shown in Table 2, from the perspective of students' acceptance of teaching, the vast majority of students highly accept and are satisfied with the blended teaching mode of sports dance in colleges and universities based on MOOC+SPOC, and all of them believe that it can surely promote knowledge learning better. In addition, the experimental classes of students think that the teaching activities to strengthen the theory knowledge, improve the technical level, at the same time to the curriculum participation, communication ability, self-learning ability has also improved, and the main attraction of their time in addition to a more flexible, more abundant resources, convenient communication, and this mode unique curriculum design and innovative teaching methods.

5. Conclusions
It is feasible to apply the MOOC+SPOC based hybrid teaching mode to the external conditions, internal motivation, emotion and other support of sports dance teaching in universities. After 48 class hours of teaching experiment, both the experimental group and the control group improved their level of physical dance and scores of specialized courses, but the experimental group improved more than the control group. The mixed teaching mode based on MOOC+SPOC has a promoting effect on physical dance teaching in colleges and universities, and the effectiveness of this mode is significant. Based on the comprehensive analysis of the feedback information from the summative evaluation and the process evaluation, it is found that the mixed teaching mode of university sports dance based on MOOC+SPOC can make the traditional lagging university sports dance teaching revitalized, which is necessary. Both teachers and students hold a positive attitude towards the MOOC+SPOC based blended teaching mode of sports dance in colleges and universities, and a positive attitude towards its teaching effect. Moreover, this mode has a broad application prospect and can be promoted in the teaching of other sports skit-oriented majors.

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