

Research on the Teaching Model of Public Computer Basic Course Based on SPOC

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Abstract: SPOC (limited online courses) is a new mixed education environment suitable for online learning. In addition, it is also suitable for online and offline mixed class education in multimedia network classroom and intelligent classroom. In this paper, by analyzing the characteristics of SPOC and public computer basic course education, the construction of basic SPOC course of public computer basic course education is discussed, and the teaching methods are compared according to the two modes of SPOC. In the case of flexible use, we can establish a “student learning center, teacher-led” to effectively improve students' learning ability and comprehensive quality.

1. Introduction

The original proposal was SPOC (a limited online course), which was proposed and used by Amanda Fox, a professor at the University of California, Berkeley. Unlike mooc, SPOC students are generally in the range of tens to hundreds of students. Students limit higher completion rates and conditions. In general single and comprehensive universities, SPOC is easy to control, and it is more advantageous to conduct online and offline mixed teaching. Public computer courses are usually arranged in multimedia computer network classrooms [1], because it requires experimental education to provide the necessary conditions for mixed online and offline teaching based on SPOC. This report is based on the author's implementation of the basis of web production as an example.

2. SPOC Summary

Spoc is MOOC in essence. In addition to a small range, compared with MOOC, SPOC is usually paid for and limited to combined learning. Like traditional classrooms, SPOC is a small group of students, while MOOC's “large-scale” classrooms are designed by uncertain participants. Therefore, the SPOC route is a very objective and more effective implementation.

SPOC has two application methods: one is for the education of school students, the other is online curriculum education including social learners. The former is a hybrid learning model of combination classroom education and online education. The implementation of jump-type classroom education. The latter is based on the set application conditions. The video of the venue serves as the medium. The videos of the venue can be completed, tested and tested through other hardware facilities. The learning conditions (usually tens to hundreds of people) of the routes completely adopted meet the requirements based on the number of examinees.

The construction of SPOC platform for SPOC route is for the use of charging standard or open online learning management system [2], or for the construction of site platform for providing free service network, and so on. Various online education management platforms can rely on the secondary basis.

3. General Situation of Public Computer Course Teaching

Under the guidance of “society, specialty and student mastery”, the public computer curriculum system of our school is divided into two levels: information control and the cultivation of computational thinking, students' basic computer knowledge and basic technology. The initial level was the Computer Foundation. The second level is the computer application course, as shown in

Table 1. The multimedia computer network research institute adopts the teaching mode of “speaking, practicing and designing”, and practices all the programs.

Table 1 Public computer course system

Arrangement	Course Name	Object	Class hour
Basics	University Computer	Majors	40
Application	MATLAB Foundation and Application, Chemical and Chemical Software Application, Computer Language and Programming, Database Technology and Application, Computer Aided Design, Multimedia Technology and Application, E-commerce Website Construction and Management, Website Construction and Maintenance, Multimedia Courseware Making, Animation Making and Artistic Word Processing, Computer Stenography Technology Technology, Office Automation Advanced Applications, Digital Image Processing, Web Page Production Foundation...	Majors are selected: one or more courses, or courses that can be tailored to their needs.	48

The production basis of web page production is mainly for the second level courses of various professional colleges. The goal of the course is for students to learn the basic theory of web production and to make simple websites using software with relevant tools. Through learning, students have specific Web design and Web site construction and maintenance functions, using the ability to display and share information on the Web page. This course is mainly non-computer major. Like other courses, there are many problems, such as shortened time, practical skills and lack of learning intensity. It is necessary to reform the content and mode of curriculum [3].

4. SPOC Course Construction

SPOC curriculum is divided into three main modules: the design of learning objectives, organization and evaluation of learning content. The main purpose of the course's learning goal design is to determine the actual learning goal with the students, and combine the graduation conditions of the professional training project to analyze the students. The core of the course is the design of organization and learning content. According to the learning objectives of the course, it focuses on the key and difficult contents, and uses various information demonstration and learning methods for different contents.

The simple method is to optimize the organization and design of learning content by referring to a good platform, such as learning network. SPOC cyclic resources include video and non-video resources. Video resource is the key factor of SPOC course [4], and its quality is directly related to the course learning results. Video resources can be constructed by importing, self-assembly and transformation. Like mooc, SPOC focuses on formation assessment. On-line course content learning and effect evaluation, on-line distribution, puzzle guessing, mid-term examination.

In the SPOC course of “Web Page Making Foundation”, the design of learning objectives is carried out according to the training plan of relevant professionals, and repeated preparation is carried out to design learning content. In this route, because it contains more practical software operations, the video resources are mainly self-constructed, and the original video is used for post-edited recording pictures. For theoretically strong content segments, you can create videos directly using higher versions of PowerPoint.

5. Teaching Mode of Public Computer Course Based on SPOC

At present, mixed learning is the main mode of SPOC-based teaching in single and

comprehensive universities. For blended learning [5], he points out that blended learning combines the advantages of traditional learning methods with the benefits of E-Learning (i.e., digital or online learning). Mixed learning model, not only the main role of teachers, not only regeneration, guidance, inspiration, timely seize the opportunity, display, give students the initiative, enthusiasm and creativity to stimulate efforts to reflect the main role of students. Through the combination of the two, the best learning results are obtained. In the education of SPOC course of public computer, there are two appropriate modes, one is the frilly classroom from the west, the other is the local bisection course in China.

5.1. Educational model of flipped classroom

The main feature of flipped classroom is that “learning after learning” reverses the two stages of knowledge transfer and knowledge internalization in traditional classroom [6]. Knowledge-based in the classroom, information transfer in information technology. With the help of classmates, the teacher's help was completed. The general process of class reversal is as follows: students are provided with mini-videos according to the teachers in advance, and online detection problems are carried out. In order to provide the list of learning tasks for the teachers before the class. Schools will first solve problems under the guidance of teachers. Then, the teacher will instruct the target coach based on the results of the test feedback and the students' performance in the classroom [7].

5.2. Divided classroom teaching model

Compared with the Lotus Edge Classroom, the main feature of the “split classroom” is “the doctrine after learning”. “Classification” is a new guidance model proposed by Professor Zhang College of Huadan University. The core of this concept is to allocate half of the class to teachers and half of the other students. A series of educational practices started in 2014 show that secondary classes are classrooms that are in line with China's educational reality and local characteristics. We should inherit the wisdom of traditional education and improve the methods of guidance and discussion.

Figure 1 illustrates the typical sub-classroom teaching. Teachers will teach new content in the second half of the class. Teachers provide guidance and framework lectures to enable students to learn what, what and how to learn. Internalization and absorption of students. Students watch videos and complete homework on the basis of reading textbooks or research task lists. Timely reflection, formation of Research Report materials, preparation for group discussion. The class behind the class made the first half of the controversy. Teams of four to six people need to discuss learning content, assignments and reflections, and involve each student in the debate. You can organize one or two speeches. The main purpose of the discussion is to solve low-level problems and integrate high-level problems. Thereafter, according to the actual situation [8], the students' dialogues, the learning effect of group checking, Abstracts and high-level problems can be solved.

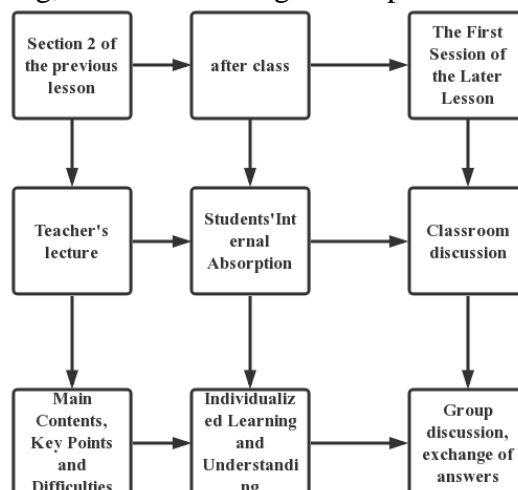


Fig.1. Pairwise classroom teaching model

5.3. Comparison of two teaching models

The basic route of making web pages can be flexibly used in the learning environment and other reasons of students after school. Considering the classroom model and its variants, the “in-class flip” and the “in-class split” mode of auxiliary classes and their variants, the teaching method can be flexibly adopted [9]. The so-called college flip-over method and the division method refer to the steps of turning the classroom over and completing the division in a classroom. Student's attractive knowledge can subvert the teaching mode and separate the classroom teaching mode for training applied talents.

There are important differences between classroom guidance and classroom guidance. Make the classroom focusing on learning in the first place reverse, and carry out sub-Focus education and learning. The former is to internalize the students with new content in the process of self-learning and guidance according to the teaching content. The latter is the internal absorption of learning after the teacher has explained it. The latter has a full discussion of the conversation. Everyone must participate in group discussions at the same time. In the student discussion class, the teacher must listen to the content. In class, when your students complete their self-study, you may be asked to ask the teacher for new content in a spin. In the stage of internalization and mutual discussion among middle school students, teachers are not busy answering students'questions, but should pay attention to students' classroom learning. State.

6. Conclusion

Based on SPOC, the online and offline mixed teaching of public computer courses can adopt the folded classroom teaching mode and the split classroom teaching mode. Both are guided by new guiding concepts, which can effectively “take students as the main body, and guide as teachers”. At the same time, it can effectively improve students'learning ability and comprehensive quality. From the point of view of installation effect, the education mode of the auxiliary classroom is very close to the previous education mode in the public computer programs such as the production basis of Web pages. Teachers and students have high adaptability, which can effectively improve students'main body skills and comprehensive quality. In the future, SPOC will be the regular state of university curriculum education. Professor design and learning evaluation of SPOC online and offline hybrid teaching are worth studying.

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