

Application of "Three-layer Blended Structure" Teaching Mode in Computer Teaching in Medical Colleges

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Abstract: Online plus offline teaching mode is a blended teaching mode that combining conventional classroom teaching (offline) with online teaching. With the continuous deepening of educational informatization, blended teaching has been endowed with more abundant connotations especially for the rise of MOOCs. How to scientifically develop blended teaching in colleges and universities based on their own actual conditions has become a new topic of discussion. Based on the author's learning and practical experience, this work first analyzed the meaning of "three-layer blended structure" teaching mode, then summarized the advantages of online and offline teaching mode, and finally put forward the methodology to apply and implement "three-layer blended structure" teaching mode.

1. Introduction

The ministry of education issued the "40 New Articles of Higher Education" document in October 2018, which was mainly about accelerating the construction of high-level undergraduate education to comprehensively improve the ability of personnel training [1]. Article 11 clearly pointed out that "promoting the classroom teaching revolution", with the key points focusing on student development, and we will actively build a blended teaching model that combining online and offline. According to class conditions, it is necessary to choose teaching methods to improve the quality of classroom teaching and enhance students' self-learning ability. The rational application of online plus offline blended teaching in the teaching of "Computer Culture Fundamental" course can stimulate students' enthusiasm for computer course learning, cultivate students' independent learning ability and improve the teaching effect [2].

2. The Meaning of "Three-layer Blended Structure" Teaching Mode

The online plus offline teaching mode refers to that teachers build online teaching platform based on mobile Internet technology and use information means including cloud computing, big data and mobile devices, and upload teaching resources such as teaching video, teaching task list and courseware to the online teaching platform to set up evaluation and interactive modules. Students can study these online materials in their spare time and interact with teachers. Teachers focus on teaching difficult problems after collecting and sorting out the feedback from students in offline classes, so that students can better master the teaching content. In the online plus offline teaching mode, students are assigned learning tasks before class, which are driven by problems and allow them to carry out independent learning with problems [3]. The online plus offline teaching mode requires teachers to integrate classroom teaching with online teaching in the course setting, teaching design, knowledge transmission and question answering, so as to realize the organic combination of "offline" and "online" teaching process and improve the teaching effect, as shown in Figure 1.

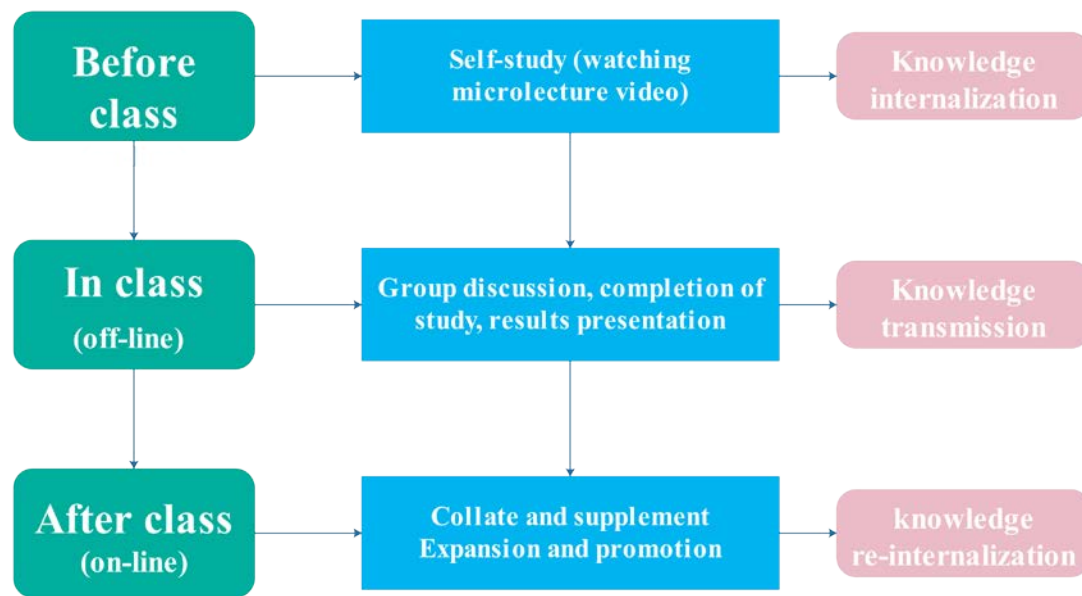


Fig.1 "Three-layer blended structure" teaching mode

3. Advantages of Online and Offline Teaching Mode

Fundamental computer course is a compulsory public basic course for non-computer major students in higher vocational colleges. This course involves information technology, basic operation of operating system, office software, web page and digital multimedia technology. The computer language course is a medium-difficult one, and is more suitable as a computer learning course for beginners who are learning computer. Many of these links require practice and are highly practical. Therefore, online video teaching and offline teachers are needed. Video teaching in the process of operation can make students have a sense of substitution in learning, which is of great help to cultivate students' computer application [4]. Together with teachers assisting teaching, and the combination of the two is the best teaching. To change the past solid thinking and cram teaching, rational teaching with the help of modern scientific resources is the mainstream. Because the online plus offline teaching mode is a flexible teaching mode, students have the initiative of learning, so the application of online plus offline teaching mode in the teaching of "Computer Culture Fundamental" can make students change from passive learning to active learning. Students can understand and master the teaching content through the "online" self-study before class, and then teachers guide students to carry out the discussion and communication in the "offline" process of learning technology, and they can also explore the mystery of technology through practice, so as to improve their teamwork ability and work practice ability [5].

4. Application and Implementation of "Three-layer Blended Structure" Teaching Mode

Application and implementation of methodology course teaching is the main body of vocational education teaching, online plus offline blended teaching mode can make the target students get good learning and guidance regardless of place and time. The online plus offline teaching mode is a blended classroom structure spanning virtuality, which can realize online and real-time communication and involve collaboration of various elements (teachers, students, themes, learning materials and situations). This kind of blended teaching can make use of the "flipped classroom" mode, which is strongly advocated at home and abroad in recent years, to carry out teaching from multi-dimension and multi-stage. In terms of time, it is divided into pre-class, in-class and after-class stages [6]. Spatially, it is divided into online, offline and online stages. In terms of knowledge, it is divided into transmission, internalization and reinternalization stages. Next, I will take the computer network professional course "Network Architecture (construction and maintenance of corporate office network)" as an example, and introduce the specific application and

implementation of online plus offline blended teaching mode by completing the teaching content of "isolation of network segments between corporate office networks".

4.1 Online independent learning and information acquisition before class

Taking the Internet as a learning platform and using the offline plus offline blended teaching mode for teaching is the product of the development of the times. It not only breaks the existing teaching management concept and mode, but also online plus offline education will lead vocational education to a new teaching reform direction. Students can study online at any time, anywhere, or by any teacher [7]. However, there is still a lot of work to be done to shift from the existing teaching model to the online plus offline blended teaching model. When completing the knowledge content of "isolation of network segments between office networks of companies", teachers should provide online learning platform for students to facilitate online learning and problem feedback. At the same time, teachers should make teaching micro-video (short, concise, easy to understand), PPT and other digital resources, by defining knowledge points and key issues, to facilitate students to conduct independent learning. In addition, students are encouraged to ask questions and stimulated learning enthusiasm through the design of the problem. Students learn independently through class, watch videos online, review course materials and knowledge, complete tests and feedback the learning effect before class. Teachers collect students' confused information through online platforms, and provide learning support for students timely and effectively through online guidance and q&a.

4.2 In-class offline effect detection and implementation of teaching

For classroom teaching, i.e., offline teaching, teachers should adjust the conventional teaching mode and improve the conventional classroom teaching content. Classroom teaching is not only limited to teaching the basic content of the course, but also to consolidate what students have learned, solve problems encountered by students online, improve students' understanding and deepening of knowledge, and focus on training students' practical ability and knowledge transfer and application ability. Therefore, it is very important to strengthen the teaching experiment link. Offline teaching is the main factor that reflects the quality of students in different schools, so offline teaching mode is very important. When completing the learning content of "isolation of network segments between office networks of the company", students first set up learning groups under the organization of teachers "to help and guide". Teachers design leading questions, test the online learning effect before class, collect students' online learning problem information, summarize and extract, and determine the content of classroom implementation. Student groups develop their ability to explore and solve problems through inter-group and intra-group discussion and cooperation [8]. Teachers conduct tour guidance during students' discussion and classroom implementation to cultivate students' knowledge transfer ability. In view of the students' common problems, the teacher gives a unified explanation. After group discussion, cooperative implementation and learning problem solving, finally, teachers and students participate in the completion of relevant evaluation activities with the help of classroom implementation evaluation system, and mainly summarize and report learning achievements by group representatives. In the evaluation process, self-evaluation within the group, mutual evaluation among groups and comprehensive evaluation of teachers can be adopted, and enterprise evaluation can also be introduced. Teachers, students or enterprises are the evaluation subjects together in the evaluation process.

4.3 After-class online development and improvement, and personality guidance

Teachers reflect on the results and problems in the implementation of the online plus offline blended teaching mode, and constantly improve and optimize the teaching plan in the follow-up practice teaching to further improve the follow-up teaching effect. According to the design of this work, the knowledge of "network segment isolation between office networks of companies" is completed and implemented through online plus offline blended teaching, aiming to promote and enhance students' learning initiative, guarantee teaching effect and improve teaching quality.

Therefore, after the end of the classroom teaching stage, teachers should sort out and summarize the problems that students are prone to have in the classroom exploration and publish them on the online BBS of the network platform. On the one hand, students further think, consolidate, expand and improve their knowledge according to the questions raised by teachers and relevant learning materials. Meanwhile, students can share their learning experiences online. On the other hand, it is convenient for teachers to deeply dig into the learning situation and master the visiting content, frequency, learning path and learning preference of students' online learning. Combined with the results of the analysis, the students are guided and supervised in a targeted manner, and individual tutoring is provided for students who have difficulty learning.

5. Conclusion

The online plus offline blended teaching mode is an integrated open teaching that has emerged in recent years. It uses a blended online learning platform for interactive monitoring, and meanwhile introduces a flipping classroom teaching mode in teaching. This mode is also a new educational and teaching form emerging in recent years, which subverts the conventional classroom teaching mode. It is inevitable to encounter some difficulties and challenges in the reform practice of combining the two organically and applying them to the teaching of professional courses.

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