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**CONSTRUCTION OF THE FLIPPED CLASSROOM TEACHING MODE IN THE  
LITERATURE RETRIEVAL COURSE**

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**ABSTRACT**

In view of the current teaching situation of literature retrieval course, the introduction of flipped classroom, an emerging teaching mode, into the teaching of literature retrieval course can effectively enhance the attraction of literature retrieval course, so as to achieve independent learning before class, efficient and concentrated exploration and solution of problems in class, and consolidation and improvement of teaching objectives after class. Starting from the current situation of literature retrieval course teaching, this paper discusses the significance of implementing flipped classroom teaching mode of literature retrieval course and the learning process of flipped classroom of literature retrieval course, and puts forward the construction of flipped classroom teaching mode of literature retrieval course.

**Key Words:** Literature retrieval courses; flipped class; information literacy education

**1. INTRODUCTION**

The literature retrieval course is a methodological course designed to cultivate students' ability to acquire and use information. It is an important part of university information literacy education. The teaching content involves the retrieval and utilization of various information resources, including the collection of paper resources, different types of commercial databases, audio and video materials, e-books, and network information resources. These resources can be displayed in the form of micro video, audio, pictures, etc., and become part of the teaching of the textbook [1]. Flipped classroom is a teaching mode in which the traditional learning process is turned over. That is, students watch the teaching videos online to complete the self-learning of knowledge before the class. The classroom is a place for teachers and students to interact face-to-face, mainly for answering doubts and discussing exchanges. Thereby improving the efficiency and effectiveness of classroom teaching. It can be seen that flipped classroom subverts the traditional teaching process. It puts the process of "knowledge transfer" before class and changes from "teaching before learning" to "learning before teaching", realizing the premise of knowledge internalization. Therefore, it is necessary for the university library to apply the theory of flipped classroom to the teaching practice of literature retrieval course, give full play to the

advantages of flipped classroom, and realize the continuous innovation of literature retrieval course teaching.

## **2. LITERATURE RETRIEVAL COURSE AND FLIPPED CLASSROOM**

### **2.1 Teaching status of literature retrieval course**

With the deepening of the reform of China's education system, in the field of higher education, more attention should be paid to cultivating talents with innovative consciousness and innovative ability. In particular, the cultivation of information literacy needs to be incorporated into the education system. At present, the main way for information literacy education in colleges and universities is to open a literature retrieval courses. According to the "Basic Requirements for the Teaching of Literature Retrieval Courses" issued by the Ministry of Education, the teaching task of this course is to let college students understand the basic knowledge of their respective majors and related professional literature, and learn how to use commonly used search tools and reference books. Acquire and use literature information to enhance self-learning and research capabilities. Regrettably, as a better form of cultivating college students' information literacy, the courses offered are limited to some majors and have not been popularized by most students. Secondly, the information ability of college students needs to be improved. According to the survey, the ability of college students to use and accumulate information resources in a targeted manner is poor. Many students usually do not read books and magazines with purpose and plan. Most students do not have the ability to identify, screen and use information, and often do not know how to start, resulting in blind borrowing situation. Finally, the literature retrieval course theory is too much, and the practice is too little. Most teachers use traditional cramming teaching methods in the classroom. New teaching methods and teaching modes are often shelved, even if the school has modern multimedia classrooms and network information. Equipment is often abandoned because it does not use or is unwilling to spend time exploring new teaching models [2].

### **2.2 Provide a model for the teaching reform of the literature retrieval course**

As a new teaching mode, flipped classroom has become a hotspot for educators at home and abroad. There has been a wave of research and practice flipped classrooms around the world, such as the Emmon Lake Primary School in the United States, Juque Middle School in Chongqing, and Gumei Middle School in Shanghai, etc., are the successful case of implementing a flipped classroom.

At present, the flipped classroom has been promoted and applied in the practice of primary and secondary education, and has also received widespread attention in university education. For example, 115 universities in the MOOC platform of Chinese universities have opened 643 courses. It provides rich learning resources such as video and courseware for the popularization and application of the university's flipped classroom.

In our country, the case of trying to flipped classroom in university education mainly focuses on practical and operational experimental courses, such as university computer foundation, multimedia course, college English, mechanical engineering, literature retrieval course,

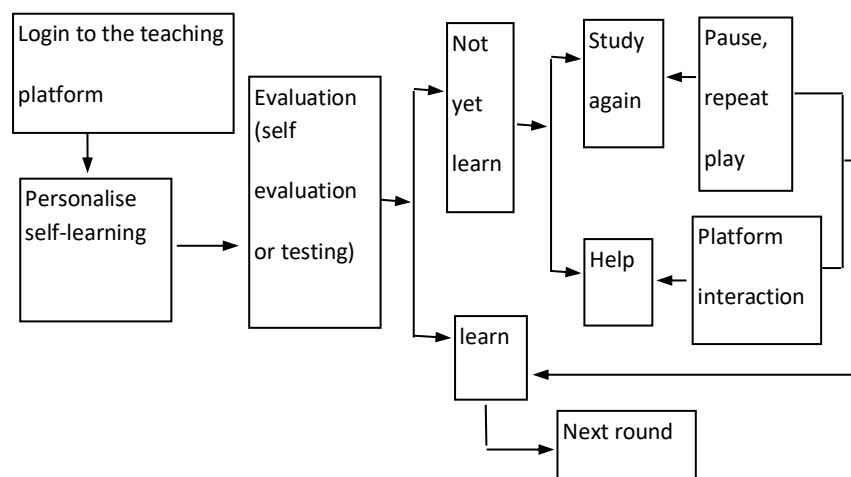
mathematics, information technology and other courses. In fact, the Ministry of Education's "2016 Education Information Work Points" clearly states that colleges and universities should use on-line open courses to explore the reform of teaching methods such as flipped classrooms and hybrid teaching. As a teaching model that promotes the transformation of teaching structure and contributes to teaching students in accordance with their aptitudes, the flipped classroom takes the opportunity of redistribution of teaching time as an opportunity to subvert the traditional thinking of the classroom, and rationally allocate classroom time and class time. When more time is given to the students, the initiative of learning, the subjective status of learners is also returned to the students, which undoubtedly provides an ideal mode choice for the reform of classroom teaching in colleges and universities [3].

### **2.3 The significance of the implementation of the flipped classroom teaching mode in the literature retrieval course**

The significance of the implementation of the flipped classroom teaching mode in the literature retrieval course is: first, in order to cultivate students' information awareness, students have the strong desire to grasp the information, apply the sensitivity and consciousness of the information, and continuously acquire the latest knowledge. The second is to train students to acquire and use information knowledge, and to give students the key to open the treasure house of knowledge, so that they can make full use of the information they have mastered to maximize and realize the use value of information without violating the information ethics laws. The third is to cultivate students' information innovation. Due to the characteristics of the literature retrieval course, students are required to learn to acquire and use information, constantly update the information, and learn about the latest developments, and carry out information innovation on this basis [4].

### **3. THE LEARNING PROCESS OF FLIPPED CLASSROOM IN LITERATURE RETRIEVAL COURSE**

Before the class, the teacher produces the teaching video of the literature retrieval course and arranges the self-learning task list. The student login to the online teaching platform to learn. The students with strong learning ability can basically master the learning content after reading the video and enter the next round of learning; Students with poor learning ability can control the progress of learning by suspending or repeatedly playing, and give themselves time to think and digest. If they can't solve the problem, they can also provide timely feedback through the platform, request the help of teachers and peers, and finally master what they want [5]. The learning process of the flipped classroom in the literature retrieval courses is as shown in Figure 1.



**Figure 1** Learning process of course flipped classroom in literature retrieval course

#### 4 CONSTRUCTION OF THE FLIPPED CLASSROOM TEACHING MODE IN THE LITERATURE RETRIEVAL COURSE

In accordance with the basic process of “autonomous learning -- collaborative discussion -- teacher guidance -- evaluation and feedback”, flipped classroom of literature retrieval course takes students as the main course and teachers as the auxiliary course, maximizes students’ personalized learning needs, and focuses on training students’ practical skills of obtaining information.

Based on the previous studies, this paper constructs teaching mode of the flipped classroom in literature retrieval course, as shown in figure 2. The teaching mode is divided into three stages: pre-course, in-class, and after-class in the time dimension; In the knowledge dimension, it is divided into three stages: knowledge transfer, knowledge internalization, and knowledge reinternalization; In the spatial dimension, it is divided into three stages: online, offline, and mixed.

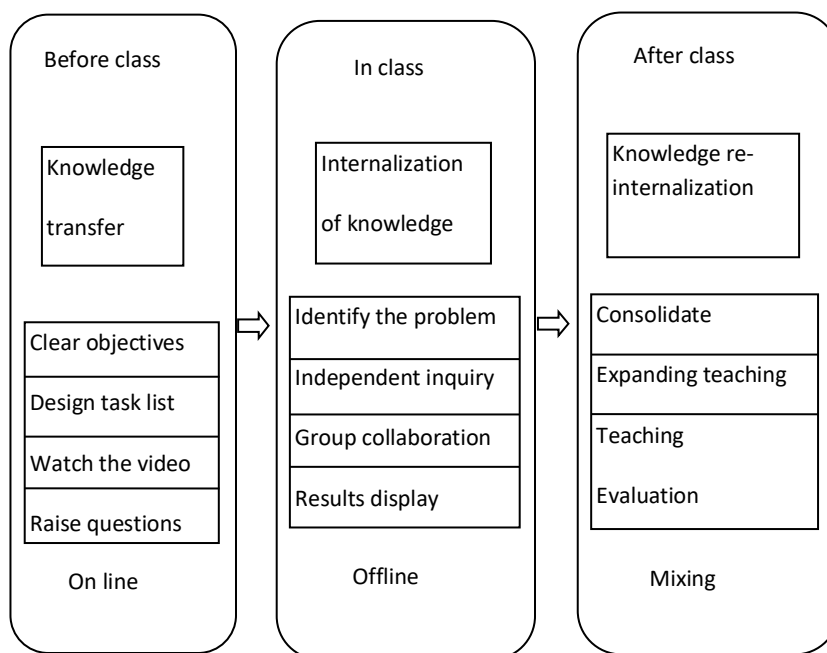
##### 4.1 Knowledge transfer before class

Use the network teaching platform to realize the knowledge transfer and complete the basic teaching.

First, clear teaching objectives and create instructional videos. Before the course begins, the teacher must clarify the teaching objectives, develop a syllabus, and determine that students reach different goals and knowledge points at different time periods. According to the understanding of knowledge points, the teacher processes the existing teaching materials into the teaching videos of the literature retrieval course. The content of the teaching videos is consistent with the teaching objectives and the content of the classroom training, and can clearly and concisely explain the knowledge points and theme points.

Secondly, design independent learning task list. For each knowledge point, the teacher should assign a practical task in advance, and guide students to study independently by task-driven and problem-oriented means through task list.

Third, watch the instructional video. Under the guidance of the task list, the students log on to the online teaching platform to watch the teaching video of the literature retrieval course, and complete the test questions arranged by the teacher. In this process, the students can learn independently according to their own rhythm and way, and the students with strong learning ability accelerate the learning. Students with poor progress can learn to slow down or play video repeatedly to learn; Students can also read the test questions first, watch the literature retrieval course videos with questions, and find answers in them.



**Figure 2** Teaching mode of literature retrieval course flipped classroom

Fourth, raise questions. Students may have doubts in watching videos of document retrieval courses and doing test questions. To this end, students can search for information and enhance their self-learning ability. They can also communicate with teachers or exchange with each other through the network platform. On the one hand, they can put forward opinions and suggestions on the content of video of document retrieval classes for future improvement; on the other hand, students can improve the content of video of document retrieval classes in the future. They can mark their own knowledge which is not in place or relatively confused, and take it to the classroom for communication and learning between teachers, students and students.

#### **4.2 Internalization of knowledge in class**

Use traditional classrooms to internalize knowledge and complete basic teaching.

First, identify the problem. In class, teachers analyze and summarize the difficulties and problems that students' feedback after independent learning, determine the problems that students generally find difficult to understand and have exploration value, and communicate and discuss with students together, so that students can master the knowledge points more firmly [6].

Second, independent inquiry. After asking probing questions, teachers create personalized learning environment for students. First, the students conduct independent inquiry, and then the teachers implement the "one-to-one" teaching method for the problems encountered in the process of independent thinking and inquiry to guide the students and help them solve the puzzles encountered in the process of understanding, thinking and inquiry.

Third, group collaboration. After giving the students some time to explore independently, the teacher requires the students to discuss in groups, let the group work together to solve the problem, let the students in the discussion to make their ideas to solve the problem gradually become clear, and then achieve the goal of solving the problem. Each student has different ways of thinking, and they can explore problems through group cooperation to help students complement each other and improve their academic performance together.

Fourth, display of results. Through the analysis and exploration of the application of knowledge, students can get different degrees of harvest. Results display requires students to collect and organize the results of independent research and group collaboration, and the forms of achievement display are various. For example, in the section of "academic paper writing" in the literature retrieval course, the teacher cultivates students' writing ability according to the course objectives of the literature retrieval course, and adopts the lecturing case teaching mode, namely, presenting cases, setting problems, interactive exploration, and summarizing. This contains teaching links such as case and problem setting, teacher guidance and solution, group discussion and conclusion. During the class, the teacher patrolled the classroom to answer questions and help solve the puzzles and problems raised by the students [1].

#### **4.3 Knowledge re-internalization after class**

The traditional classroom and network teaching platform are used to re-internalize knowledge. Teachers complete the consolidation and expansion of teaching according to students' different learning behavior characteristics and problems in the early stage of teaching. Finally, teachers and students jointly evaluate and summarize the teaching effect.

First, consolidate. Before the end of the classroom teaching activities, the teacher should arrange a certain amount of homework assignments to consolidate the knowledge points of the course, and at the same time, arrange new tasks to prepare for the next round of learning; Teachers should summarize the problems that are easy to occur in each teaching unit, refer to relevant materials for problems and conduct research and collation, and then enrich relevant contents into literature retrieval course video, so as to make teaching video more extensive and in-depth.

Second, expanding teaching. Combining with the learning situation and interactive teaching performance in the pre-teaching process, students have a strong interest in the content of literature retrieval course and hope to acquire more relevant knowledge. Therefore, teachers can expand teaching to meet students' thirst for knowledge and provide more relevant video resources for them. During the learning period, teachers and students can communicate with each other. Interaction and sharing to maximize knowledge. In addition, regular thematic discussions are held on the relevant contents of courses with strong interest of students, such as thesis writing and information analysis. Teachers watch thematic teaching videos first, then hand over the classroom to students, turn over the classroom on the spot, and students interact with teachers on the contents of their own interest, so as to further expand the content and developing students' innovative thinking [7].

Third, teaching evaluation. Teaching evaluation is an important part of flipped classroom teaching mode. The evaluation is mainly about learning evaluation, including teacher evaluation and student self-evaluation. In the process of re-internalization of after-school knowledge, teachers need to give timely evaluation of the results of various forms of student learning. Mutual evaluation mainly refers to students' mutual evaluation and discovery of each other's strengths and weaknesses. Students' self-evaluation refers to students' self-evaluation according to their mastery of classroom knowledge. The content of evaluation includes students' task scope, course schedule, knowledge acquisition, knowledge integration ability, knowledge usefulness and satisfaction. The evaluation methods can adopt many ways, such as online evaluation, written test, oral test, activity report, classroom observation, after-class interview, in-class and out-of-class work, personal practical operation ability, team project cooperation and so on. Diversified evaluation can help to improve the quality of follow-up teaching.

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