Analysis of the role of flipped classroom in college pharmacology teaching

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Abstract: In the context of the current rapid development of the Internet, various types of education models emerge in endlessly. At this time, the flipped classroom teaching model arises at the historic moment. Flipped classroom can organically combine online and offline teaching, and the advantages of the two can be fully demonstrated, which can mobilize the enthusiasm of students to participate in the learning of curriculum knowledge, and then lay a solid foundation for improving the quality of teaching. In this regard, this paper first expounds the application value advantages of flipped classroom in college pharmacology teaching, then puts forward the specific implementation process of flipped classroom teaching mode, and finally puts forward the corresponding application suggestions for reference.

Key words: flipped classroom; College pharmacology; Application strategy

With the proposal of "Internet +" education concept, flipped classroom teaching mode is widely favored by teachers and students. The application of this teaching mode in pharmacology course can not only make the course teaching more flexible and interactive, but also broaden the teaching space. At the same time, students can use fragmented time to carry out learning activities, thus promoting the teaching quality to be significantly improved. Therefore, when university pharmacology teachers carry out practical teaching work, they should consciously apply the flipped classroom teaching mode, so as to stimulate students' interest in exploring the basic knowledge of pharmacology, and then effectively improve their comprehensive ability.

1. Application process of flipped classroom in college pharmacology teaching

1.1 Pre preparation

1. making teaching video

Pre preparation is an important link in the flipped teaching of pharmacology course, and the production of teaching video is particularly critical, so the quality of teaching video will have a direct impact on the teaching effect of the course. Moreover, by watching the teaching video, students can have a preliminary understanding of the course content, lay a solid foundation for the orderly follow-up offline teaching, and effectively improve the teaching efficiency of the course.

2. build a network teaching platform

Based on the Internet, flipped classroom should rely on the network teaching platform. In this regard, teachers need to actively build the network teaching platform according to the existing online learning software, choose the one that meets the actual needs of students, and upload the teaching video to the platform before the pharmacology course teaching. At the same time, teachers need to update the online teaching materials in time. In this way, teachers can have a more intuitive perception of students' learning situation through the network teaching platform, and with the help of this platform, teachers and students also have a more in-depth teaching interaction, which is convenient for teachers to deal with students' problems in time, and then give full play to the application advantages of flipped classroom in the teaching of pharmacology.

1.2 Classroom teaching

This session needs to be conducted offline. In the specific implementation process, the teacher should randomly select 1-2 groups to report in the form of role deduction. Other groups can ask questions and make comments to them. The teacher can summarize the problem according to the students' reports and feedback, and teach the students the basic knowledge of pharmacology involved in the problem. After the teaching, Teachers should guide students to explore independently and promote them to enter deep learning. Finally, teachers should solve the doubts that students are difficult to solve or understand, and pay attention to summarizing the easily ignored and important and difficult knowledge. In addition, in the whole teaching process, teachers should carefully observe and summarize students' learning performance, and use these to provide data support for the subsequent course teaching evaluation.

1.3 After class test feedback

In the test link, teachers need to design different after-school test questions according to the teaching content and teaching objectives of pharmacology course. The details are as follows: (1) objective questions, which should cover the key and difficult points and basic knowledge points explained, so as to encourage students to complete independently after class. The design requirements are as follows: the number of questions and the degree of difficulty should be moderate, so as to ensure that the test questions can stimulate students' interest and ensure that they can persist in completing; (2) Mutual evaluation questions and test questions: the former includes short answer questions and case analysis questions. In addition to the application of knowledge, it is also used to cultivate students' clinical thinking, independent thinking ability and the ability to discover, analyze and solve problems. The teacher formulates a detailed scoring standard, and 2-3 team members score the answers of the same student. The average score is the student's score; The latter is an objective question, but it has a large number of questions, and the mutual evaluation questions with the team members are completed after class.

1.4 After class evaluation

When the flipped classroom teaching is over, teachers can ask students to show their contents and learning achievements in the course teaching in the form of groups, and teachers will evaluate according to the contents they show. Through the evaluation results, students can have a more intuitive understanding of their own advantages and disadvantages. In this regard, teachers can evaluate students' performance in flipped classroom by means of independent evaluation, mutual evaluation and teaching evaluation. The details are as follows: first, independent evaluation. Students need to evaluate their own performance and organize the evaluation results into table form. Second, evaluate each other. After the group presentation, students can be invited to discuss and select the group that feels excellent, and explain the shortcomings and advantages of the group. Finally, teacher evaluation. Teachers should not only evaluate students' professional performance, but also evaluate their learning performance in course teaching, such as questioning, answering, attendance and so on. Through this evaluation method, we can effectively improve the objectivity of teaching evaluation of pharmacology course, and provide targeted suggestions for the follow-up teaching process adjustment, so as to effectively enhance the application effect of flipped classroom.

2. Suggestions on the application of flipped classroom in college pharmacology teaching

2.1 Pre class micro class preparation and knowledge base construction

Pre class preview plays an important role in the construction of flipped classroom teaching mode. Teachers should give full play to the preview guidance role of micro class and put the learning process of curriculum knowledge in the preview link. Specifically, teachers need to complete three basic tasks in pre class preparation.

First, we should analyze the course content and make micro lecture video. Taking the course of "agonists and blockers" as an example, in the preparation process of micro lecture, teachers should first comprehensively understand and analyze the relevant knowledge of the course, determine the teaching objectives and key and difficult contents of the course, and then create corresponding situational videos for students based on the medical background, adverse reaction reports, drug instructions and other materials of the course, For example, anatomic illustrations of the peripheral nervous system and rescue cases of patients after poisoning can be used to build micro lessons through video, text, PPT and other resources to meet the learning needs of students.

Second, preview exercises should be designed according to the content of the micro lecture. Micro class preview should not only guide students to establish basic cognition of course knowledge, but also arouse students' deeper thinking and questioning. Therefore, teachers need to design hierarchical problems in combination with teaching objectives, so as to test students' preview results and guide students to establish the basis of interest in the content of class learning. Still taking this lesson as an example, teachers can set "what kind of neural regulation will human sweat glands be subjected to? What is the process and method of regulation? What are the symptoms of night sweats? Why should skeletal muscle relaxants be used for patients before clinical surgery? What are the commonly used drugs and what are their characteristics?" So as to guide students to think more broadly from the theme of this lesson.

Third, the video of micro lecture should be made according to the design of micro lecture, and students should be guided to complete the viewing and learning tasks. After the production of the micro lecture, teachers need to use the micro lecture platform to publish. On the one hand, students are required to complete knowledge learning and exercise thinking according to the video of the micro lecture, upload the exercise answers, and discuss the problems encountered in their preview with students in the discussion area. On the other hand, teachers should collect the performance data of students' Preview link, including the duration of preview, repeated micro lecture clips, preview exercise answer results, hot issues discussed by students, and optimize the design of classroom teaching activities according to the actual learning situation of students.

2.2 Practice in class activities and implement student centered

In the flipped classroom mode, classroom teaching should focus on activities, which should not only highlight the subjectivity of students, so that students can grow up in the learning environment of "autonomy, cooperation and exploration", but also teachers should give necessary help and inspiration, so as to promote students to complete their learning tasks according to the learning schedule. In this link, teachers can generally set up three activities.

First of all, teachers should organize students to carry out teacher-student interaction and discussion, take the key problems shown by students in pre class preview as the focus of discussion, and guide students to analyze from different angles. For example, most students' understanding of "night sweats" is insufficient, resulting in more common problems and doubts. Therefore, teachers can design discussion activities and require students to independently query and share relevant knowledge in combination with course content, teaching resources or network channels, so as to form more complete knowledge summary results. For example, some students put forward that "night sweats refer to sweating symptoms and sweating phenomenon during sleep, but the sweat will stop after waking up". Some students put forward that "tuberculosis, hyperthyroidism and other diseases may cause night sweats, and the disease is mainly related to sympathetic nerve". Through such discussion, students can solve the problems discussed before class by themselves, and teachers can analyze them with real cases on this basis to further deepen students' pharmacological knowledge.

Secondly, teachers should create group inquiry activities for students according to the teaching focus of this lesson. Still taking this lesson as an example, teachers can carry out activity design based on the "night sweats" that students are interested in, and require students to further explore the specific treatment and medication methods of night sweats through group cooperation. In the process of the activity, teachers need to reasonably set the number of team members according to the content and requirements of the activity, generally 3-5 people. Team members can independently select the team leader, who will guide and manage the team tasks. For example, some groups adopted

the activity plan of “separate exploration - Discussion and summary”, and some group members summarized the corresponding therapeutic drugs by consulting the data. Some members listed therapeutic drugs according to different causes, such as rifampicin and isoniazid for night sweats caused by pulmonary tuberculosis, and methimazole for night sweats caused by hyperthyroidism. Through such mutual improvement and supplement, students can also achieve their learning goals.

Finally, teachers can also provide students with space for sharing achievements and deepening exchanges. Teachers can invite the representatives of each group to share the results of the group inquiry, ask students to explain the ideas and methods in the process of group inquiry, and discuss with other group members. On the other hand, teachers need to summarize on the basis of students’ inquiry results, sublimate specific curriculum activities, and return students’ learning content to the macro level of the course, so as to achieve the learning effect from concrete to abstract.

2.3 Consolidate and improve after class and summarize student feedback

In the flipped classroom mode, the after-school link also shows important educational value. Teachers should further promote students’ self-improvement and independent growth through the consolidation and improvement of after-school links and feedback evaluation. First of all, teachers can assign micro class assignments for students and summarize the key contents of the course through mind mapping, so as to promote students to establish a complete knowledge construction. At the same time, the effectiveness and results of students’ classroom learning are tested through the content of exercises. Secondly, teachers should build a perfect student evaluation system according to students’ learning performance in all aspects. On the one hand, we should expand the evaluation content, establish a process and link evaluation mode, and conduct a comprehensive evaluation according to students’ Preview performance, classroom learning performance and after-school homework practice results, so as to show students’ attitude, thinking and ability in the learning process. On the other hand, it is necessary to expand the evaluation subject. By establishing the student evaluation module, students can evaluate and feedback themselves, peers and teachers, which can not only improve students’ self-awareness, but also enable teachers to find their own shortcomings in teaching, so as to achieve the effect of teaching improvement.

3. Conclusion

In a word, in the context of the Internet, the application of flipped classroom teaching mode in pharmacology teaching can not only conform to the general trend of the development of the times, but also continuously enrich the content and form of teaching, so as to improve the quality of pharmacology teaching. Therefore, teachers need to effectively apply the flipped classroom teaching mode from the aspects of pre class, in class and after class, so as to effectively improve the quality of pharmacology teaching, and then promote the comprehensive level of students to be significantly improved.

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