



# **The Reform and Practice of the Interactive Teaching Mode in Pharmacology Teaching**

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**Abstract:** With the deepening reform of quality-oriented education in colleges and universities in our country, the traditional exam-oriented education can no longer meet the society's demand for talents, so the interactive teaching mode emerges at the right moment and is widely used in various fields of teaching. This paper mainly discusses the application of the interactive teaching mode in pharmacology teaching in order to improve the quality of pharmacology teaching of medical majors in colleges and universities.

**Keywords:** Interactive Teaching; Pharmacology; Teaching Practice

## **Introduction**

The interactive education mode emphasizes that students should be the main body and teachers should take the lead in the teaching process to achieve the purpose of mutual exchange and learning. By means of teaching interaction, the relationship between "teaching" and "learning" between teachers and students is changed, so as to form a harmonious teacher-student interaction, student-student interaction, and the interaction between individual students and teaching. The influence of people and environment on learning is strengthened, so as to produce resonance in teaching and achieve the purpose of improving teaching effect.

## **1. Teaching reform objectives of pharmacology in colleges and universities**

Pharmacology is a discipline that studies the law of interaction between drugs and mechanisms and the mechanism of drug action, mainly including pharmacodynamics and pharmacokinetics. It is a main course for students majoring in medicine and the leading discipline of basic medicine, clinical medicine and pharmacy. The theoretical knowledge of pharmacology is complex and boring. Traditional indoctrination teaching makes the course more monotonous and the teaching effect is not good. Students also lose interest in teaching and treat the subject negatively. The traditional teaching mode is based on the theory. Most of the students cannot penetrate into and understand the knowledge. Rote memorization has no meaning for the students. Students will not be able to apply it to practice after entering into work place. Therefore, the teaching mode of pharmacology needs to be changed to enhance students' innovative learning ability, which enables students to master more comprehensive and solid theoretical knowledge and timely learn relevant theories and technologies in the frontier of medicine. Students' ability to analyze and solve problems, ability to practice and to operate, and ability of thinking and management will be improved, making themselves become professional and compound talents.

## **2. Practice methods of the interactive teaching mode in pharmacology teaching**

### **2.1 Questions put forward by teachers**

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One week before the beginning of the course, the teacher should give feedback to the students about the research case. For example, "A 60-year-old female patient, who has a history of hypertension, took captopril for a long time to control her blood pressure well, but recently she often felt oppressed and uncomfortable in the front area of the heart after fatigue, and improved after rest. One day, excessive fatigue caused her pain in the front area of the heart and spread, sweating more, still unable to relieve the pain after rest, so she came to see a doctor. On physical examination, the patient's electrocardiogram showed myocardial ischemia and right ventricular enlargement, and she was diagnosed as hypertensive coronary atherosclerotic heart disease with angina attacks." The teacher introduced the case and then put forward corresponding questions: (1) What drugs are used to treat the patient's angina? Please briefly explain the reasons. (2) According to the patient's condition, what drug should be adopted to maintain the treatment after discharge? What do you think is the most reasonable and effective combined drugs? Please briefly explain the reasons.

## **2.2 Discussion carried out by students in groups**

After students get case problems, they form discussion groups by themselves. Generally, a group of three or five people is more suitable. After grouping, the group members will work together to solve the problem in a form of centralized discussion. Students can use pharmacology textbooks, references, medical network materials, etc. Then, they summarize and brainstorm the relevant knowledge to determine the answer. In the process of group discussions, teachers can allow students to give full play to their learning initiative to find answers through questions, and guide or inspire students to communicate with each other.

## **2.3 Focus on classroom discussion**

Through group study, students can bring the answer to the question to discuss in the class. Teachers can arrange for each group to select a student as a group representative to speak. Other students can also put forward their own opinions and supply the content of the speech based on the students' speeches. Teachers can exchange students' positions to allow students to discuss knowledge with classmates, and timely analyze the problems of students' reports.

## **2.4 The summary of teachers**

After the report of each group representative in the class is completed, the teacher will summarize and analyze it according to the results of the discussion, explain the key and difficult problems in the case, and finally explain the correct treatment plan and medication method, and give the theoretical knowledge basis, add some relevant knowledge points in the frontier of medicine, so as to broaden students' thinking and vision, and stimulate students' deep interest in learning and curiosity. Teachers can directly affirm and encourage students who excel in interactive teaching, and supervise and guide students who need to improve.

# **3. The effect of the interactive teaching mode on pharmacology teaching**

Through the interactive teaching mode, it can be found that this teaching mode has a standardized process, clear ideas and strong purpose. It pays more attention to the comprehensive development of students and the teacher's guiding function, which makes the teaching more humanized. Therefore, the application of the interactive teaching mode in pharmacology teaching is an effective way to transform traditional teaching and improve teaching quality and results.

## **3.1 Promote harmonious relationship between teachers and students**

The interactive teaching mode allows students to change their roles and become masters in exploring the truth of the problem. They no longer passively follow the classroom and are completely controlled by the class, which is conducive to promoting students to actively communicate with teachers, increase the frequency of communication between teachers and students, and reach the purpose of joint learning and inspiration of teachers and students. It is a new mode of teacher-student relationship, which allows teachers and students no longer to be as strange and alienated as before. They are both good teachers and good friends.

## **3.2 Improve students' ability to study independently**

In the teaching process of the interactive teaching mode, the roles of teachers and students are exchanged, students' problems of being passive to ask questions and unwilling to ask questions are changed, and a good learning atmosphere

and habits of being active in learning, being good at thinking and being active in questioning are formed, thereby improving students' ability of autonomous learning, stimulating students' curiosity and helping them improve the quality and efficiency of learning.

### **3.3 Cultivate students' innovative consciousness and thinking**

The interactive teaching mode is particularly important in the group discussion stage of the students. The students use the learning resources to find the relevant materials and documents through the questions by themselves, and then summarize the knowledge points. In the process, the students will be involved in data collection, discussion and analysis, writing achievement and other links, making them constantly explore and practice to look for better learning methods and skills, so that students can think more logically and have a stronger sense of innovation.

### **3.4 Improve students' confidence and expression**

The interactive teaching mode provides students with a relatively relaxed teaching atmosphere and environment, so that students no longer feel the suppression of teaching, which can fully stimulate the enthusiasm of students to participate, improve their self-confidence and expressive ability. Therefore, students are no longer shy about asking questions and dare to put forward opinions and speak freely, which also helps to improve students' language organization and expression ability.

### **3.5 Cultivate students' ability of solving problems**

Through the interactive teaching mode, teacher-student interaction and student-student interaction are performed in the whole process. Students as the main body of problem solving, repeatedly analyze and demonstrate problems, solve problems, and learn to dig out the key points and difficulties of knowledge, which helps to cultivate students' ability to solve problems.

## **4. Conclusion**

With the development of science and the advancement of medicine, the hospital requires more professionalism and higher abilities for staff in pharmacy positions. Therefore, the interactive teaching mode should be respected and widely applied in pharmacology, which can create a good and harmonious teaching environment, provide students with a platform for self-expression, mobilize their active learning, active thinking, and hard work, allow students to grow and learn in a more relaxed mode, and help students quickly master knowledge and improve their practice ability. It also makes teachers fully display the leading role in teaching, gives full play to teachers' professional abilities and teaching abilities, achieving the common progress and development of teachers and students, and promoting the effective improvement of pharmacology teaching quality in colleges and universities.

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