

# Research on the practice of online and offline mixed teaching mode in medicinal botany

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**Abstract:** Medicinal botany is a discipline which mainly studies the species, resources, distribution and utilization of medicinal plants. It plays an important role in students' learning of professional knowledge. In order to improve the teaching quality of medicinal botany and students' learning efficiency, teachers should make full use of the advantages of the Internet, combine online teaching with offline teaching, and promote the reform and development of teaching. Starting from the online and offline mixed teaching mode, this paper analyzes the current teaching situation of medicinal botany, and puts forward the practical strategies of online and offline mixed teaching mode in medicinal botany, so as to provide reference for improving students' learning efficiency and teachers' teaching quality.

**Keywords:** mixed teaching mode; medicinal botany; practice

## 1. Introduction

Online and offline mixed teaching mode is a new teaching mode, is based on the traditional classroom teaching, the use of information means and traditional teaching combined teaching method. At present, with the continuous development of network technology, online and offline mixed teaching mode has been widely used in higher education. Online and offline mixed teaching mode mainly refers to the combination of traditional classroom teaching and online network teaching, improve the teaching level of teachers through the use of Internet resources, use of Internet technology to provide students with more abundant learning resources, and realize the combination of online and offline curriculum system. The online and offline mixed teaching mode is an innovation of traditional classroom teaching methods, which can give full play to students' initiative and enthusiasm in learning and effectively improve students' learning efficiency.

## 2. Overview of Online and offline hybrid teaching method

Online and offline hybrid teaching method refers to the use of the development of Internet, mobile communication and other technologies, the organic combination of online learning resources and offline classroom teaching, giving full play to the respective advantages of online and offline education resources, to achieve complementary advantages and complement each other. The blended teaching method is conducive to improving teachers' teaching ability and students' learning ability. In the course of teaching, teachers will combine online live broadcasting with offline class to give full play to their respective advantages and improve the teaching effect. At the same time, the classroom teaching and online learning organic combination, make full use of network resources, improve students' interest in learning and learning efficiency[ 1].

The online-offline hybrid teaching method emphasizes the autonomy, collaboration and individuality of learning. In the learning process, the teacher acts as the "guide" and the student acts as the "learn". Teachers can give full play to their professional advantages, guide students to learn independently before, during and after class, and use the online teaching platform for course learning and evaluation. Students can make full use of the online teaching platform, give full play to their own autonomy and collaboration, and realize personalized learning.

The blended teaching method breaks through the limitation of time and space in traditional classroom teaching, and enriches learning resources. Students can learn anytime and anywhere. This avoids the problem of poor learning effect caused by the limitation of teaching time and space in the

traditional classroom. At the same time, the combination of online and offline teaching method can also improve the participation of students, so that students can change from passive acceptance of knowledge to active learning.

In traditional classrooms, teachers cannot pay attention to each student. In hybrid teaching, teachers can pay attention to each student's learning at any time. Through the online interaction, test, discussion and other means of online courses, students can effectively find the problems encountered, mastered and existing problems. Through teachers' answers and guidance to students' questions, students' ability and level of independent learning can be improved. This is conducive to improving students' comprehensive ability[2] of solving practical problems and linking theory with practice.

### **3. Teaching status of medicinal botany course**

#### ***3.1 The content of the course is not updated in time and is disconnected from the actual production***

Medicinal botany is a highly practical subject, which requires the combination of theory and practice, which requires teachers to constantly learn new knowledge, timely update the teaching content, and pay attention to the update and development of knowledge. However, in the actual teaching process, it is found that teachers often do not pay enough attention to the teaching content of the course, teachers usually just collect some plant pictures as courseware materials, but ignore the use of the collected pictures. In the process of learning, students can only understand the external morphological characteristics and internal structure of plants through limited pictures, and it is difficult to understand the theoretical knowledge of medicinal botany. In addition, medicinal botany involves classification, identification, collection, processing and other contents of plants, which are mostly from natural specimens or plants collected in the field. If teachers only pay attention to the explanation of these contents in the teaching process, students will feel that the course knowledge is boring.

#### ***3.2 Single teaching method, students lack of enthusiasm for learning***

The course of medicinal botany is characterized by strong practicality and close relation with production practice. However, in the traditional teaching process, teachers are more standing on the platform, explaining the morphological characteristics of medicinal plants, identification characteristics, lack of interaction with students. Students passively accept the teacher's explanation and lack interest in the course content. At the same time, medicinal botany is mainly memorized, while the traditional teaching method is mainly taught in class, which is difficult to mobilize students' enthusiasm and initiative. Therefore, it is necessary to reform[3] the teaching method. Heuristic teaching is adopted in teaching, combining with multimedia courseware to explain the form, main effect and identification characteristics of medicinal plants. In addition, increase the group discussion and practical links, increase students' sense of participation and interaction, cultivate students' ability to find problems and solve problems; Pay attention to combining theory with practice, for example, organize students to visit botanical gardens, traditional Chinese medicine bases and other practical teaching activities. Through these ways, students can mobilize their enthusiasm and initiative in learning; At the same time, it can make students better understand the theoretical knowledge and lay a foundation for further study.

#### ***3.3 The assessment method is not reasonable, which is not conducive to the all-round development of students***

Medicinal botany is a very practical discipline, the assessment is not reasonable, is not conducive to the overall development of students. At present, most schools adopt the end-of-term closed-book examination method, which does not take into account the usual learning situation. Due to the difficult learning situation in daily life, some students only pay attention to the final exam and ignore the daily learning and accumulation, which affects their study of medicinal botany course. At the same time, because they only pay attention to the final examination results, some students do not have a solid grasp of the theoretical knowledge of medicinal botany, some students even think that as long as they master the knowledge in the books, everything will be fine. This will make them pay more attention to theory than practice and result rather than process in their later study. In addition, as the exam questions are usually rote, some students think it is a burden and lose interest in study. Therefore, it is suggested to increase the proportion of regular grades (including attendance, class questions, lab reports, group discussions, etc.), combine the assessment grades with regular grades, and comprehensively evaluate students' final grades and regular grades. At the same time, strengthen the cultivation of students' practical operation ability.

#### **4. The practice strategy of online and offline mixed teaching mode in medicinal botany**

##### ***4.1 Construction of online and offline teaching resources***

Teaching resources are the basis for carrying out the mixed teaching mode of online and offline. Teachers should reasonably construct online and offline teaching resources on the basis of fully understanding students' learning needs and teachers' own teaching ability. Online resources can include teaching PPT, videos, pictures and so on, while offline resources include experimental sites, laboratory instruments and equipment, student experiment reports, literature and so on. Teachers should select appropriate online and offline teaching resources based on the course content, so as to provide more learning content[4] for students. For example, when explaining the classification of medicinal botany, the classification system of medicinal botany can be found through the Internet, so as to better construct online and offline teaching resources. In addition, teachers can also improve students' learning interest and classroom efficiency through online resources. For example, when explaining the identification of medicinal botany, teachers can look up pictures and videos of medicinal plants through the Internet and present these knowledge to students through PPT and videos, which can stimulate students' interest in learning and improve class efficiency. Teachers can also share teaching resources through the Internet platform, so as to realize the implementation of the mixed teaching mode of online and offline.

##### ***4.2 Give full play to the advantages of online platforms***

In the traditional teaching mode, teachers mainly use class time to explain and teach knowledge, and students listen and take notes in class. However, in the process of online teaching, teachers can carry out online teaching according to the actual situation. Through the advantages of the Internet, students can learn independently, review after class and do homework. Before class, teachers can use a variety of online teaching resources such as micro class and MOOCs to provide students with rich learning resources. At the same time, teachers can also use a variety of teaching platforms and software to carry out online teaching, such as the use of Super Star Learning APP, to carry out flipped classroom, online experimental class, flipped classroom and other forms of online teaching activities. In addition, teachers can also use wechat, QQ and other social platforms to strengthen the interaction with students and learn about students' learning situation and progress in time. After class, teachers can arrange and correct homework through wechat group, QQ group and so on.

##### ***4.3 Application of flipped classroom teaching method***

Flipped classroom teaching method is a student-centered and student-learning-oriented teaching method. Flipped classroom teaching method can enable students to conduct independent learning before class, help students solve the problems encountered in learning, enable students to actively think and explore, so as to improve the learning efficiency and quality of students. In the classroom teaching of medicinal botany, teachers should make full use of the advantages of the Internet to make micro videos of the key contents of medicinal botany and release them to students through the network platform, so that students can learn independently by watching the micro videos. For example, the teacher can make the course content into micro-class video first, and let the students watch the video before preview, so as to further consolidate the knowledge points. Through the mixed online and offline teaching mode, students can better understand the content and key points of the course, so as to improve the learning efficiency and quality[5] of students.

##### ***4.4 Effectively carry out group discussion activities***

Group discussion is an important part of the online-offline mixed teaching model. Teachers can organize group discussion activities according to the course content and students' learning conditions. Group discussion activities can help students master relevant knowledge and improve their learning ability. Teachers can guide students to have a group discussion by setting questions or assigning tasks. When carrying out group discussion activities, teachers can divide students into groups, each group decides a topic, and then ask students to search for information on the Internet or go on field trips to collect information. In the process of collecting information, we should pay attention to the selection of methods and the setting of questions to improve students' interest in learning. After determining the topic, the teacher should clarify the purpose and task of the group discussion activity, so that the students can make clear the task requirements and specific objectives. By effectively carrying out group discussion activities, students can not only master more knowledge, but also exercise students' expression ability, thinking ability and problem-solving ability. Teachers can choose appropriate group discussion activities according to the characteristics of different classes and different majors.

#### 4.5 Carry out scientific practice activities

In order to better cultivate students' professional skills and practical ability, the teaching of medicinal botany course should pay attention to the development of students' scientific practice activities. In the mixed teaching mode of online, online and offline, teachers should make full use of the advantages of the Internet to guide students in scientific practice activities. By carrying out scientific practice activities, students can better improve their professional skills and practical ability. For example, when the teacher talks about the content of "plant resources survey", the teacher can assign relevant survey tasks to the students, so that the students can use their spare time to carry out scientific practice activities. For example, collect the local geographical features, plant resources and other information, and collate and analyze the information. In class, teachers can ask students: "How much do you know about local plant resources? Where do you think plant resources are abundant?" Directing students to investigate and collect through questions can not only increase students' interest in learning, but also improve their professional skills. Carrying out scientific practice activities through mixed online and offline teaching mode can effectively improve students' comprehensive quality and practical ability.

#### 4.6 Using online teaching platform for assessment

With the rapid development of modern information technology, the application of network teaching platform is becoming more and more extensive. It can not only provide teachers with more abundant teaching resources, but also realize the scientific and standardized course assessment. In the course assessment of medicinal botany, using the network teaching platform for assessment can promote teachers to make full use of the advantages of the Internet, improve the quality of classroom teaching and students' learning efficiency. Teachers can use the network teaching platform to set certain classroom questions and homework questions, requiring students to review and consolidate the course knowledge after class, so as to better grasp the knowledge. Through online and offline mixed teaching mode of medicinal botany assessment, can effectively improve students' learning enthusiasm and class participation, but also can promote teachers to constantly optimize the course content and teaching methods, improve the quality of course teaching.

### 5. Conclusion

In summary, due to the complex knowledge points and abstract learning content of medicinal botany courses, it is difficult for traditional teaching methods to impart knowledge points in a comprehensive and systematic way. However, the mixed teaching mode of online and offline can make up for the shortcomings of traditional teaching and plays an important role in improving students' learning efficiency and teachers' teaching quality. In the practice of medicinal botany, teachers should make full use of teaching technologies such as network platform and virtual simulation, combine online and offline mixed teaching mode to reform medicinal botany, so as to promote the construction and improvement of the medicinal botany curriculum system. At the same time, it is necessary to explore and practice the mixed teaching mode of online and offline to improve the teaching quality of medicinal botany.

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