

A Brief Discussion on the Construction of Practical Teaching System for the Traditional Chinese Medicine Resources and Development Major

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Abstract: China's traditional medicine, science, and technology industry has great development potential. However, there is a problem of insufficient practitioners in the current industrial development. At the same time, the capabilities of existing practitioners do not match the demand standards. Therefore, it is necessary to actively promote the education of resources and development in Central Asia. As an institution for cultivating talents, colleges and universities must establish a practical teaching system for cultivating talents. Based on the requirements put forward by China in education, this article studies the development status of the traditional Chinese medicine resources and development major, determines the talent training goals, starts from the practical teaching aspect, and locates the industry's requirements for the capabilities of personnel in the field of traditional Chinese medicine. It also puts forward the overall idea of the construction of the practical teaching system, summarizes the reform content of the practical teaching system, and lastly provides the specific path of the reform.

Keywords: Traditional Chinese medicine resources and development; Practical teaching; Teaching resources

Online publication: February 25, 2024

1. Introduction

In the direction of traditional Chinese medicine resources in China, traditional Chinese medicine resources and development are emerging disciplines with great potential. Enterprises are a pillar industry and play a leading role in medical development. The development and utilization of traditional Chinese medicine resources are related to the sustainable development of traditional Chinese medicine. They are also an extremely important way for people to treat diseases effectively. The competition between traditional Chinese medicine resources and talents is a relatively prominent content in developing traditional Chinese medicine industrialization and modernization construction in China. To adapt to the current development status of the traditional Chinese medicine industry, China has established the major of traditional Chinese medicine resources in the 20th century, and many research directions have emerged in the major.

The major of traditional Chinese medicine resources and development focuses on intellectual, physical, artistic, and labor aspects in student training, collaboratively promoting the improvement of students'

comprehensive quality and aiming to cultivate traditional Chinese medicine thinking and strong professional practical skills in professional students. Virtual simulation technology will also be used in professional construction. With modern technology, the course content will become more concrete and vivid so that students can become interested in the professional course knowledge of Chinese medicine resources and development and actively participate in course activities to effectively develop students' practical skills.

2. The overall idea of establishing a practical teaching system

Traditional Chinese medicine resources and development are emerging disciplines with intensive development potential. Various courses in this major should be reasonably organized based on the training objectives of professional talents, and a systematic and improved teaching system should be established to focus on cultivating students' creativity, practical skills, and innovative consciousness, complete the task of cultivating practical talents, and significantly improve the quality of teaching ^[1]. In constructing the teaching system based on experimental teaching, a new model of "core group + unit + practical training" is established to guide students and develop students' abilities to the greatest extent. Students are given professional guidance through practical training, internships, and other methods. Through open experiments and social practice, students are given new guidance and effectively exercise their practical skills. Under the new practical teaching system, various theoretical knowledge and practices of traditional Chinese medicine resources and development majors are closely integrated ^[2]. While studying professional knowledge, students can practice and master the application of knowledge in specific scenarios and form a strong sense of innovation, which is conducive to improving students' practical skills.

3. Reform of the content of practical teaching system

3.1. Curriculum system

The construction of the curriculum system cannot be separated from important resources and the development of subject characteristics. It is necessary to establish a complete practical teaching system and a sound practical curriculum system, and to expand practical teaching methods. In expanding the current professional course teaching system, innovative practices should be carried out to expand the practical teaching structure system ^[3]. In the course system design process, this major must arrange for students to conduct internships in traditional Chinese medicine resources, medicinal botany, and identification. By organizing such course internships, students can better understand related subject knowledge ^[4]. At present, the internship system provided by the school is being enhanced, the contents of traditional Chinese medicine identification, medicinal botany, and traditional Chinese medicine processing are being improved, and arrangements for internship activities in related disciplines are being provided. In the internship in medicinal botany and traditional Chinese medicine processing, specific requirements must be given so that students can master the specific work processes of different disciplines and better grasp the work. Taking the medicinal botany internship as an example, through the design of internship activities, students can understand the methods of pressing and collecting plant specimens, determine the characteristics of plants, and realize the identification of the family characteristics of 180 kinds of medicinal plants. In the internship of traditional Chinese medicine resources, through the organization of key links such as cultivation of traditional Chinese medicine, resource investigation technology, traditional Chinese medicine resource investigation technology, initial processing of traditional Chinese medicine resource products, and traditional Chinese medicine resource evaluation, it is convenient for students to conduct in-depth study of the corresponding content and master the subject theory knowledge and skills such as traditional Chinese medicine resource evaluation, cultivation, and traditional Chinese medicine resource investigation techniques ^[5]. After the launch of activities such as traditional

Chinese medicine processing internship and medicinal material processing internship, students can have a deeper understanding of Chinese herbal medicine and medicinal material processing skills, establish a corresponding skills system, determine the departments to be set up on-site, become familiar with the working environment of the prepared piece factory, determine the conditions that a piece factory should have, and master the workflow of preparation and processing of Chinese herbal medicines. During this period, a plan for inter-class practice will be given based on students' mastery of subject knowledge. Technical means will also be used when setting up subject internship activities. For example, virtual reality technology creates a real environment to allow students to participate in internship activities, master the activity processes of specific work scenarios in various disciplines, and increase their familiarity with technology ^[6].

3.2. Teaching conditions

During the construction of the major of traditional Chinese medicine resources and development, attention should be paid to teaching-related conditions such as the laboratory, teaching team, internship base, etc., and the infrastructure should be improved to ensure that all conditions required for teaching are complete, thereby realizing the optimization of teaching resources. Effective organization ensures that teaching activities can be carried out according to needs. Through course study, students understand the content of various professional courses and achieve in-depth learning of course knowledge. During the development of teaching research and teaching education, we are aware of the fact that the two have the same origin, learn the application of research results in subject teaching, and improve the teaching conditions so that they can be used to the greatest extent in various courses in the major of traditional Chinese medicine resources and development. The application can help students' innovation awareness and improve their professional quality ^[7].

3.3. Teaching supervision and management system

Constructing a practical teaching system requires supervision to guarantee strong support for the effective implementation of teaching work. Schools should provide a rigorous and complete teaching management system to supervise teaching activities. During teaching supervision and management activities, they should realize dynamic evaluation of teaching activities and effectively implement the new era education evaluation system ^[8]. In the context of implementing the 14th Five-Year Plan, schools should determine the school system requirements and promote the construction of double first-class schools. During this period, the school will seize new development opportunities for teaching supervision and management, implement new development concepts into all aspects of school teaching supervision, and increase supervision and management. In response to the implementation needs of supervision activities, the school discovered the structural deficiencies in the school supervision system. It significantly improved the school's capabilities in teaching supervision and governance.

4. Construction path of practical teaching system

4.1. Creating a distinctive teaching model

When constructing the practical teaching system for most traditional Chinese medicine resources and development majors, it is necessary to make reasonable arrangements for each discipline and create a reasonable model to transmit subject knowledge effectively. The traditional teaching model is not designed according to the rules of students' learning knowledge and is too focused on theory. The teaching format can also easily cause students to be disgusted with course knowledge. Therefore, teachers need to innovate the teaching model, highlight the characteristics of traditional Chinese medicine resources, develop professional courses, and organize course teaching activities reasonably to allow students to acquire knowledge through channels

other than textbooks. For example, students can observe the microenvironment of plants through a microscope and learn about plant structure. They can also conduct on-site observations in the herb garden to improve their familiarity with plants. In course organization, it is necessary to choose a method that combines practice and theory, create a characteristic teaching model, and provide effective guidance to students. In constructing students' traditional Chinese medicine thinking, the school provides teaching plans, sets up an herbal study laboratory around medicinal botany, holds herbal research meetings, and allows students to know medicinal botany through various learning organizations and learning venue settings, with great interest in learning and willingness to participate in learning activities.

4.2. Enriching student learning resources

To acquire knowledge of various courses in the traditional Chinese medicine resources and development major, students can obtain corresponding information through the library or online platform. As the school promotes the construction of the practical teaching reform system, providing students with more resources is necessary. For example, resources in the school library can be scientifically arranged, and books related to traditional Chinese medicine resources and development majors can be provided to students on a specific floor, including precious classical Chinese medicine books and other materials. In the school electronic library, electronic books related to professional courses continue to be added. When students learn professional course knowledge, they learn through the resources provided by the school. They can also use online platforms to log in to databases such as VIP and CNKI to query subject-related literature and meet their learning needs through the use of a large number of resources.

4.3. Setting up an open laboratory

In constructing the resources and development major, it is necessary to provide reasonable designs based on the practical requirements of students' abilities, such as building open laboratories and encouraging students to participate actively in scientific research projects. Teachers create a positive learning atmosphere and allow students to collaborate in groups, enhancing students' learning awareness and improving students' communication skills through mutual collaboration, allowing them to form a good collaborative spirit. The organization of laboratory activities can benefit students' future employment development and also improve students' scientific research capabilities. In applying scientific research project results, students' horizons are broadened and they have higher cognition.

The traditional Chinese medicine resources and development major courses should set up practical training activities based on students' needs for course learning and student skills development needs. Student skills can be developed through course-related experimental activities. Different types of medicinal plants should be planted in the school, and a medicinal botanical garden should be created to provide conditions for students to observe medicinal plants. In constructing the botanical garden, carrying out laboratory material collection activities is convenient. In practice, the school guides students in participating in the activities using the new base. It guides the process to improve the effect of the practice base in developing students' practical skills.

5. Conclusion

In the construction of the practical teaching system of the traditional Chinese medicine resources and development major, it is necessary to be designed according to the requirements for professional talent training, with students as the focus of the construction of the practical teaching system, affirming students' dominant position in course learning and providing students sufficient freedom to learn. Students can independently explore professional course knowledge, have a greater interest in scientific research, and strengthen their hands-on innovation abilities.

The school integrates the characteristics of modern science and technology of traditional Chinese medicine into the professional education of traditional Chinese medicine resources and development. It also needs in-depth exploration and reform to train scientific research talents and transform results. With the active participation of scientific research institutions and enterprises in the construction of the school's professional practical teaching system, they will make maximum use of the conditions provided by relevant institutions to promote the integration of professional education and innovation and entrepreneurship education, emphasize the importance of teaching practice, and obtain outstanding results in cultivating talents' practical skills.

Funding

Jiangsu Province Higher Education Teaching Reform Research Key Project "Research and reform of industry-needed pharmacy engineering talents incubation mode from the perspective of industry-teaching integration and innovation drive " (No. 2023JSJG077)

Disclosure statement

The author declares no conflict of interest.

References

- [1] Qin L, 2023, Research on the "1+1+1" Talent Training Model for Rehabilitation Therapy Technology Major. *Employment and Security*, 2023(3): 181–183.
- [2] Jia X, Yue X, Zhang Y, et al., 2023, Discussion on the Practical Teaching of Traditional Chinese Medicine Resources and Development Based on the Cultivation of Applied Talents. *Journal of Inner Mongolia Medical University*, 45(S01): 176–178.
- [3] Zhao R, Gao M, Yu Y, et al., 2023, A Brief Discussion on the Construction of Practical Teaching System for Traditional Chinese Medicine Resources and Development Major. *Health Vocational Education*, 41(10): 28–30.
- [4] Wang G, Li C, Lu C, et al., 2023, Evaluation and Analysis of the Effectiveness of General Courses in Traditional Chinese Medicine Majors in Local Undergraduate Colleges in Cultivating Students' Sense of Professional Belonging. *Ningxia Agriculture and Forestry Science and Technology*, 64(1): 65–67.
- [5] Liu J, Zhan R, He H, et al., 2023, Medicinal Plant Cultivation Curriculum Construction Practice - Taking the Traditional Chinese Medicine Resources and Development Major of Guangzhou University of Traditional Chinese Medicine as an Example. *Western Quality Education*, 9(13): 26–29.
- [6] Yao Y, Li Z, Chen Z, et al., 2023, Knowledge Graph Visualization Analysis of Traditional Chinese Medicine Resource Utilization Research. *Chinese Drug Evaluation*, 40(4): 326–331.
- [7] Li M, Wang H, Sun J, et al., 2023, Overview of Training Chinese Medicine Resource Talent Teams During the Fourth National Survey of Traditional Chinese Medicine Resources. *Chinese Modern Chinese Medicine*, 25(3): 455–461.
- [8] Li Y, 2023, Gathering Wisdom and Efforts to Promote the Low-Carbon and Green Development of the Entire Industry Chain of Traditional Chinese Medicine Resources - the Innovation and Development Conference on Traditional Chinese Medicine Resource Chemistry and Traditional Chinese Medicine Resource Recycling Was Held in Nanjing. *China Modern Traditional Chinese Medicine*, 25(8): F0004.

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