

# Exploration and Practice of Teaching Methods of Comprehensive Knowledge and Skills of Traditional Chinese Medicine with Traditional Chinese Medicine Traditional Skills Inheritance as the Core



Xinying Zhang<sup>1</sup> & Lei Li<sup>\*,1</sup>

<sup>1</sup>*Shaanxi Energy Institute, China*

**Abstract:** Traditional Chinese Medicine (TCM) is a core component of Chinese traditional medicine, and its unique therapeutic concepts and techniques have received high attention worldwide. In the current medical education system, there are still many challenges in teaching Chinese medicine, especially the insufficient transfer of practical skills. This study aims to explore an integrated teaching model that combines theoretical teaching and practical operation with traditional skills of Chinese medicine as the core. Through literature review and case studies, this paper analyzes the deficiencies of Traditional Chinese Medicine teaching and then designs a new teaching model that highlights the integration of theory and practice, the enhancement of teacher-student interaction, and the application of diverse teaching methods. The implementation results show that this teaching model effectively improves students' practical skills in Chinese medicine, enhances their understanding and application of Chinese medicine knowledge, and significantly stimulates their interest in learning Chinese medicine. The successful practice of this teaching model not only provides valuable experience for the innovation of TCM education but also provides strong educational support to promote the continuous development of TCM. The results of this study emphasize the importance and practical value of teaching integrated skills centered on traditional skills in TCM education.

**Keywords:** Chinese medicine; comprehensive knowledge; skills teaching

Chinese medicine is not only an important part of traditional Chinese culture, but also a core resource for the development of national pharmaceutical education and industry. In the education of pharmacy and pharmaceutical production technology, the basic course of Chinese medicine plays a crucial role. This course is designed for students of higher vocational colleges and universities, taking into full consideration of their learning characteristics and closely aligned with the national talent training program as well as the actual job requirements of the pharmaceutical industry. The teaching content is based on the production cycle of

Traditional Chinese Medicine, focusing on the specific tasks of actual jobs. It aims to build an online course through the use of information teaching technology and loose-leaf teaching materials and to create a comprehensive skills training course that covers the whole production cycle of Traditional Chinese Medicine. Such a curriculum design not only responds to the requirements of the education sector for practicality and career alignment in higher education, but also deeply integrates the key aspects of harvesting, processing, concocting, appraisal, storage, and maintenance, as well as dispensing and pharmacy services of Traditional Chinese Medicine to ensure that students can systematically master the

**Corresponding Author:** Lei Li

Shaanxi Energy Institute, China

Email: [95327873@qq.com](mailto:95327873@qq.com)

©The Author(s) 2024. Published by BONI FUTURE DIGITAL PUBLISHING CO., LIMITED. This is an open access article under the CC BY License (<https://creativecommons.org/licenses/by/4.0/>).

full range of skills in Traditional Chinese Medicine, and to lay a solid foundation for their future careers. Through the implementation of this teaching mode, it is expected that students can not only learn the traditional knowledge of Traditional Chinese Medicine but also be proficient in the modern application of Traditional Chinese Medicine in practice, to effectively promote the development and innovation of Chinese medicine education.

### **1. Focusing on the Combination of Theory and Practice, Guiding Students to in-depth Practice Through Theoretical Teaching**

In the current Chinese medicine education, the effective integration of theory and practice is the key to cultivating students' comprehensive skills. Due to the complexity and wide application of Traditional Chinese Medicine, the education model must go beyond the traditional teaching methods to meet the diversified needs of the modern pharmaceutical industry. Through in-depth analysis of the various stages of production, testing, and application of Traditional Chinese Medicine, this teaching strategy adopts a modularized design, which not only allows students to gradually build up a complete knowledge system of Traditional Chinese Medicine but also improves their vocational skills through practical operation.

The redesign of the course content needs to be centered on the actual job skill requirements. To make the theoretical teaching closer to the actual practice, the course is divided into six modules, namely, Chinese Medicine Harvesting and Processing, Chinese Medicine Storage and maintenance, Chinese Medicine Preparation, Chinese Medicine Appraisal, Chinese Medicine Preparation, as well as the foundation of Chinese medicine and diagnosis and treatment. This modularized teaching layout is not only conducive to students' systematic learning of various aspects of Chinese medicine but also enables them to better apply this knowledge in practical work. Each module sets specific learning tasks for particular practical skills so that students can deepen their understanding and application of theoretical knowledge in actual practice (Li et al., 2024).

To further strengthen the integration of theory and practice, the core skill points of each module are transformed into specific operational tasks, which directly correspond to typical work scenarios in the TCM industry, such as the collection of Chinese medicines, suitable storage conditions for herbs, and traditional concoctions of drugs. In the process of accomplishing these specific tasks, students are not only able to learn from theory but also able to deepen their mastery and understanding of skills by simulating the real working environment. For example, in the module on Chinese medicine harvesting and processing, students need to learn how to recognize and collect the correct herbs and ensure that the time and method of collection are in line with traditional knowledge, all of which require rich theoretical knowledge and precise practical skills.

In addition, the combination of the traditional way of passing on knowledge from master to apprentice and modern educational technology is also a major feature of this course. Using modern informatization teaching tools and online course platforms, students can access teaching resources, such as video tutorials on the preparation process of Traditional Chinese Medicine and operational demonstrations in virtual laboratories, at any time and any place, regardless of time and space constraints. This teaching method greatly improves the flexibility and interactivity of learning, as well as enhances students' learning initiative and motivation. Through the online discussion forum, students can also communicate and discuss with other students and teachers in real-time, which not only helps students to solve the problems encountered in their learning but also stimulates their interest and enthusiasm in Chinese medicine.

To enhance the interest and cultural depth of learning, rich Chinese medicine stories and historical and cultural backgrounds have been incorporated into each learning module. Through these stories and cases, students can not only better understand the scientific basis of Chinese medicine, but also deeply feel the unique charm and historical value of Chinese medicine culture. For example, when learning the module on Chinese medicine identification, the teacher will introduce the classic stories of the

identification of herbs and how famous medical experts in history identified the authenticity through observation, smell taste, etc. These contents not only increase the educative and interesting nature of the course but also stimulate the students' respect and love for the traditional knowledge of Chinese medicine (Lin et al., 2024).

## **2. Emphasize Teacher-student Interaction and Explore Practical Skills of Chinese Medicine Through Teacher-student Cooperation**

In the field of TCM education, the enhancement of teacher-student interaction is regarded as a key strategy to improve the quality of teaching and optimize students' learning outcomes. Aiming at the boredom of boring theoretical learning and the strong hands-on ability of higher vocational students in general, our course design adopts a practical training-centered teaching method, which stimulates students' interest in learning through a clear task-driven approach, and at the same time ensures a close integration of theoretical teaching and practical operation.

Different from the traditional teamwork approach, this course emphasizes individualized practical training tasks. The advantage of this approach is that it can more accurately assess each student's operational skills and technical mastery. Through this personalized hands-on activity, students can reach their maximum potential in self-challenge, while the instructor can provide individualized guidance and feedback based on each student's performance. Upon completion of the practical training, teachers will assess and record the results one by one to motivate students to make progress on the merits of the results, and the outstanding ones will share their methods and experiences adopted in the practical training process, which not only recognizes their abilities but also motivates other students to learn.

This experience-sharing mechanism plays a dual role in teaching. On the one hand, it is a platform for students to show their insights and solutions; on the other hand, it is also a place for peer-to-peer communication and learning. Such interactive learning greatly enriches the content of classroom teaching, which is more vivid and effective than

one-way teacher instruction. In the process of students' discussion and summarization, teachers are not only information providers, but also guides and critics, who bridge theory and practice in their summaries, such as explaining the key steps and technical requirements of Traditional Chinese Medicine authentication through examples, so that students can understand and master the relevant knowledge more profoundly. Further, this teaching mode encourages active learning and critical thinking by increasing teacher-student interaction. In the process of problem discussion and solution exploration, students think independently and offer insights, which not only enhances their problem-solving ability, but also cultivates the habit of independent thinking, effectively enhances the depth and breadth of learning, and helps students to establish a deep understanding and long-term perspective of knowledge (Geo et al., 2024).

By adopting the task-driven interactive teaching mode, students' practical skills can be improved, students' enthusiasm and interest in learning can be stimulated, and the efficiency and quality of teaching can be enhanced so that students can deepen their understanding of theoretical knowledge in practical activities and realize the effective integration of theory and practice. In the process of participating in specific tasks and repeated practice, students not only deepen their mastery of professional knowledge but also improve their ability to quickly adapt and demonstrate their professional skills in a real work environment. The practice-centered teaching methodology ensures that students can transform the theoretical knowledge learned in the classroom into the practical ability to solve real problems, laying a solid foundation for their career and future professional development.

## **3. Combining Information Technology Teaching Techniques, Refining Assessment Scores, and Improving Students' Practical Skills in Traditional Chinese Medicine Through Multiple Teaching Methods**

In the field of Traditional Chinese Medicine education, combining the inheritance of Traditional Chinese Medicine skills with the use of modern teaching technology is an effective strategy to

improve students' practical skills and learning efficiency. This comprehensive teaching method not only enables students to acquire deeper theoretical knowledge but also greatly improves their mastery of various skills in Traditional Chinese Medicine.

The introduction of informational teaching technology has greatly changed the traditional mode of Traditional Chinese Medicine education. Using multimedia teaching tools such as video, animation, and interactive simulation software, teachers can show students more vividly and intuitively the complex process of harvesting, processing, and concocting Chinese medicine. For example, virtual reality (VR) technology can simulate the processing process of Traditional Chinese Medicine, allowing students to operate in an almost real working environment, this immersive learning experience significantly enhances the learning motivation and practical ability of students.

Information-based teaching not only enhances the intuitiveness of teaching but also optimizes the management and feedback process of teaching through teaching support software such as Learning Channel Questionnaire Star and other platforms. Teachers release course materials, assign homework, and conduct quizzes through the platforms, and at the same time facilitate the collection and analysis of students' learning data, thus realizing real-time monitoring and continuous assessment of the learning process. The immediate feedback mechanism is of great value for teaching adjustments and guidance of students' learning directions (Zhu et al., 2024).

Refined assessment and grading are another core link in this teaching mode. By recording in detail every step of students' operations in practical training, including process grades and experimental results, teachers can accurately grasp the skill level and learning progress of each student. This detailed record not only helps teachers provide personalized instruction but also provides students with clear learning goals and directions for improvement. Regular evaluations, such as feedback after each class, weekly and monthly, further enhance students' learning motivation and promote continuous progress.

By introducing real cases of Traditional Chinese Medicine preparation, such as studying the extraction process of a specific herb or analyzing a complex drug proportioning problem, students can directly observe and participate in the application of theoretical knowledge in actual operation, so that they can deepen their understanding of the process and skills of Traditional Chinese Medicine in the process of solving specific problems, and they can see the results of the operation in real-time, so that they can better grasp the quality control and efficacy assessment criteria of Traditional Chinese Medicine. In addition, modern information technology can be combined, such as the use of online simulation software and virtual laboratories, where teaching becomes more interactive and vivid, enhances students' learning experience, provides students with a risk-free experimental environment, enables students to repeat experiments and test different hypotheses and methods, enhances critical thinking and problem-solving skills, and students can explore the problem from multiple perspectives, and different solutions can be evaluated and optimized, thus gaining deeper understanding and broader application of knowledge.

The implementation of the above teaching strategies can improve the quality of teaching and students' learning efficiency, laying a solid foundation for students' careers. Students can learn Chinese medicine while developing comprehensive abilities to adapt to the needs of the modern pharmaceutical industry, including technical proficiency, innovative thinking, and a sense of professional responsibility, which has a far-reaching impact on students' personal development and is conducive to the promotion of modernization and development of the entire Traditional Chinese Medicine industry (Zhang, 2024).

#### **4. Combine the Culture of Chinese medicine and moral Education and Cultivate Pharmacy Technical Talents Who Love Their Jobs and are Dedicated to Their Work**

In the field of Traditional Chinese Medicine education, integrating the culture of Traditional Chinese Medicine and the concept of moral education into the curriculum is an important way to

cultivate students with a sense of professional honor and the spirit of love and dedication. By meticulously introducing the historical figures, entrepreneurial spirit, and cultural background of Chinese medicine and herbs, the educational process becomes a deeper inculcation of professional ethics and cultural values in addition to the impartation of professional skills and knowledge (Zhang et al., 2024).

Incorporating Sun Simiao's concept of "Great Medical Sincerity" into the teaching of Chinese medicine can deepen students' understanding of and respect for the profession of Chinese medicine, and strengthen students' professional ethics and technical refinement. Sun Simiao, honored as the "Sage of Medicine," is a significant figure in the Chinese medicine community. His practical and theoretical contributions to medicine are remarkable, and he demanded high standards of integrity and skill from his practitioners. Through an in-depth introduction to Sun Simiao's life story, his profound medical thinking, and his immense respect for life, students can gain a more comprehensive understanding of the spiritual core and ethical requirements of Chinese medicine. For example, by studying Sun Simiao's selfless treatment of patients during the plague and his medical writings such as *Thousand Golden Essentials* and *Thousand Golden Wings*, students can learn a wealth of medical knowledge, but also subconsciously absorb a sense of professional responsibility as a medical doctor and a deep sense of compassion for the patients, and cultivate the students' ethical outlook and professionalism (Li et al., 2023).

By introducing Tongrentang's corporate spirit of "do not dare to save labor even though it is complicated", TCM education can effectively show students that TCM enterprises have the ultimate pursuit of product quality and the importance of professional ethics. Tongrentang, as a Chinese medicine brand with hundreds of years of history, embodies the spirit of professionalism in the pharmaceutical industry with its strict control of details and high standards in the process of drug production. This spirit not only motivates students to recognize the importance of paying attention to every detail in drug production and Chinese medicine practice but also emphasizes the necessity of strictly

following the standards, thus fostering a responsible and professional work attitude. In addition, by explaining the origin of the names and application history of famous herbs such as Astragalus, Ginseng, and Angelica, students not only master the basic knowledge and usage of these herbs but also gain a deeper understanding of the importance of these herbs in Chinese culture and history and the rich human stories behind them. This teaching method, which combines the stories of traditional medicinal herbs with the spirit of modern enterprise, greatly enhances students' interest in and love for the culture of Chinese medicine, and at the same time promotes their pride and sense of belonging to the Chinese medicine industry, so that they can more deeply realize the value and significance of Chinese medicine as an important part of traditional Chinese culture (Liu et al., 2023).

Combining the culture of Chinese medicine with the strategy of moral education is not only a transfer of knowledge but also a practice of moral education. By emphasizing the historical significance, cultural values, and professional ethics of TCM, students can develop dedication to the profession and a strong sense of moral responsibility. This type of education provides a solid foundation for students to become excellent pharmacy technicians and even industry leaders in the future, and at the same time injects new vitality and direction into the inheritance and development of Chinese medicine.

## Conclusion

To sum up, this paper is an in-depth discussion of the traditional skills inheritance of Traditional Chinese Medicine as the core of the comprehensive knowledge and skills teaching methods of Chinese medicine, focusing on the analysis of the importance of the combination of theory and practice, the reinforcement of teacher-student interaction and the application of information technology teaching techniques. In addition, this paper describes how to cultivate students' sense of professional honor and dedication through the integration of Chinese medicine culture and the educational concept of moral education. Chinese medicine education is not only about the transmission of knowledge and skills but also the inheritance of culture and spirit. Through



the innovative teaching mode and strengthening the combination of theory and practice, the traditional skills of Chinese medicine can be inherited more effectively, while enhancing students' practical ability and innovative thinking. Interaction between teachers and students promotes a deeper understanding of knowledge, while the use of information technology provides a broader platform and tools for teaching, enabling students to learn in a richer and more interactive environment. Combining the culture of TCM with vocational education by teaching the history, culture, and professional ethics of TCM not only enhances students' cultural pride and sense of professional belonging but also stimulates their enthusiasm and dedication to their work. This educational model lays a solid foundation for the cultivation of Chinese medicine technicians with a high sense of professional responsibility and excellent technical skills. Therefore, the teaching method of comprehensive knowledge and skills of Traditional Chinese Medicine, which is centered on the inheritance of Traditional Chinese Medicine skills, is not only a modern inheritance of Traditional Chinese Medicine knowledge and skills but also a comprehensive enhancement of students' comprehensive quality. The continuous promotion and practice of this teaching mode, can further promote the innovation and development of Chinese medicine education and train more excellent practitioners and researchers for the future of Chinese medicine.

### Acknowledgement

This research was funded by:

Reform and Exploration on the Course of Comprehensive Knowledge and Skills of Traditional Chinese Medicine with Inheriting Traditional Chinese Medicine Skills as the Core (21XJZ02)

### Conflict of Interest

The authors declare that they have no conflicts of interest to this work.

### References

Li, Q., Wei, Y., & Kang, L. (2024). Exploration of practical teaching reform of medicinal botany.

*Intelligent Agriculture Guide*, 04(07), 155–158.

Lin, H., Li, D., & Li, M. (2024). Construction of a blended teaching mode for pharmacology research methodology of Chinese medicine. *Modern Distance Education of Chinese Traditional Medicine*, 22(09), 10–12.

Geo, Z., Ling, X., & Wang, B. (2024). Exploration of practical teaching reform based on the cultivation of applied talents required for the development of Traditional Chinese Medicine industry cluster. *Innovation and Entrepreneurship Theory Research and Practice*, 07(04), 34–37, 41.

Zhu, Y., Bu, L., & Li, Y. (2024). Reform of experimental teaching of basic chemistry of medicinal herbs in higher vocational Chinese medicine under new situation. *Industry and Technology Forum*, 23(03), 181–183.

Zhang, Y. (2024). Learning experience of Chinese medicine characteristic technology inheritance talent training program. *Bright Chinese Medicine*, 39(02), 388–390.

Zhang, J., Wei, H., & Cui, C. (2024). Application and discussion of integrated teaching mode based on the teaching characteristics of Traditional Chinese Medicine pharmacology. *Primary Chinese Medicine*, 03(01), 78–83.

Li, Q., Zhang, D., & Chen, Y. (2023). Reflections on the construction path of a "dual-teacher and dual-capable" teacher team under the background of transformation and upgrading of the Traditional Chinese Medicine industry. *Journal of Chengdu University of Traditional Chinese Medicine (Education Science Edition)*, 25(04), 93–96.

Liu, X., Tang, S., & Hu, D. (2023). Exploration of "specialized and creative integration" talent cultivation mode in Chinese pharmacy. *Chinese Journal of Multimedia and Network Teaching (Late Edition)*, 2023(12), 217–220.

**How to Cite:** Zhang, X. & Li, L. (2024). Exploration and Practice of Teaching Methods of Comprehensive Knowledge and Skills of Traditional Chinese Medicine with Traditional Chinese Medicine Traditional Skills Inheritance as the Core. *Contemporary Education and Teaching Research*, 05(05), 193-198.  
<https://doi.org/10.61360/BoniCETR242016300506>