

# Application of online integrated teaching of "vocational education cloud + nail live broadcast" in the course of "pharmacology and application of traditional Chinese medicine" in Higher Vocational Colleges

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**Abstract:** to realize the deep integration of modern information technology and teaching practice, and carry out online teaching and hybrid teaching has become the mainstream trend of future teaching development. The research group applied the integrated online teaching mode of "vocational education cloud + nail" to the course of "traditional Chinese medicine pharmacology and application" in higher vocational colleges, and explored the teaching mode from three aspects of curriculum design, curriculum implementation and curriculum evaluation, so as to provide reference for promoting the informatization teaching reform of "traditional Chinese medicine pharmacology and application" course.

**Key words:** "vocational education cloud + nail live broadcast"; Online teaching; Higher Vocational College; Pharmacology and application of traditional Chinese Medicine

The reform of teaching mode in Colleges and Universities under the background of "Internet + education" is the organic combination of modern teaching technology and information network. Online teaching organically integrated with modern information technology will become a normal teaching mode.

Pharmacology and application of traditional Chinese medicine is a professional basic course for the specialty of traditional Chinese medicine at the level of higher vocational colleges. It is a discipline that studies the interaction and mechanism of traditional Chinese medicine and the body under the guidance of the basic theory of traditional Chinese medicine and the use of modern scientific methods. The course content of pharmacology and application of traditional Chinese medicine covers a wide range, lacks coherence, and is mostly the accumulation of literature and textbooks, which is not practical. It is very difficult for higher vocational college students with poor professional foundation and weak learning initiative to learn. Therefore, how to improve the interest, practicality and interactivity of the course is the key issue of the teaching of this course. The traditional teaching mode can not solve these problems, but the "Internet +" teaching mode with rich content and flexible methods can solve them.

"Vocational education cloud" (full name: smart vocational education cloud) is an online platform integrating vocational education mathematics resource sharing and online teaching services. Based on this platform, teachers can create their own online open courses, can directly use the high-quality resources of the resource library, and can also add their own personalized content to achieve the enrichment and interest of the course content and improve the practicability of the course. The platform provides diversified interactive modes such as discussion, brainstorming and group PK, which greatly improves students' participation. Pre school tasks, exercise tests, and after-school assignments effectively help students prepare, consolidate and review, and cultivate students' good learning habits. "Nail live broadcast" combined with the "vocational education cloud" platform can effectively organize online teaching activities. While realizing the visualization of online teaching, it can carry out real-time online communication, and has the function of playback after class. This paper aims to explore the online teaching mode of "vocational education cloud + nail live broadcast" to carry out "pharmacology and application of traditional Chinese medicine".

# 1. Curriculum design of online teaching of "vocational education cloud + nail live"

According to the syllabus of pharmacology and application of traditional Chinese medicine, teachers create the course of pharmacology and application of traditional Chinese medicine on the "vocational education cloud" platform. "Vocational education cloud" is based on the smart vocational education resource library, with a large number of high-quality resources related to this course, including micro lecture, video, animation, as well as supporting teaching ppt and application question bank. Based on the characteristics of Higher Vocational College Students' learning situation, through the integration of high-quality resources from the smart vocational education resource library, combined with personal accumulated own resources, around the curriculum positioning, the knowledge tree is established to create personalized online courses that meet the learning characteristics of higher vocational college students.

# 2. Curriculum implementation of online teaching of "vocational education cloud + nail live"

After establishing courses on the "vocational education cloud" platform, online teaching classes are created, and students can be imported into the platform at one time. Students can log in directly to enter their online classes and browse the online course content directly. Students can participate in various online teaching activities through the "vocational education cloud" app on mobile phones or tablets. At the same time, a class group is established on the "nailing" platform. Students join the class group through the QR code or group number pushed, and watch the online teaching live broadcast of the course. On the "nailing" platform, teachers and students can interact in real time,

and teachers can manage the classroom online.

### 1.1 Teaching mode

"Vocational education cloud + nail live" can realize the flipped teaching of online courses. See Table 1 for specific teaching mode Table 1 flipped classroom teaching mode of online course "pharmacology and application of traditional Chinese medicine"

teaching process	Teacher activities	Student activities
Before class	Teachers push learning resources and issue questions, discussions and questionnaires. Get a preliminary understanding of the students' learning foundation, learning expectations and the degree of mastery	Students independently complete online learning and complete the learning tasks issued by the teacher.
	of the course after preview, and then adjust the content of the course according to the students' feedback.	
In class	Teachers focus on solving the problems revealed in students' preview process, carry out case teaching method and problem teaching method, and effectively organize students' sharing and interaction by using "vocational education cloud" or "nail". Release the learning tasks of this class and complete the task comments.	Students cooperate with teachers to complete online sharing and interaction. Finally, use brainstorming to complete the task presentation.
after class	Teachers push after-school tests and after-school evaluations, timely understand students' learning dynamics and satisfaction with the course, and timely adjust the course arrangement according to the feedback.	Students finish their homework and evaluate the course.  After class communication can be conducted with teachers through "vocational education cloud" and "nailing", so as to find out and fill vacancies in time.  Students can also use the "nailing" return visit function to further consolidate the classroom content.

### 1.2 Teaching process

Antipyretic medicine is a key unit in the course of pharmacology and application of traditional Chinese medicine. Taking the antipyretic unit as an example, the introduction of current events before class can trigger students' interest in learning and preliminarily understand students' learning situation. Pre school tasks released on "vocational education cloud": 1Collect and consult TCM prescriptions related to influenza, and analyze the composition of prescriptions to find out the antipyretic drugs. 2. according to the treatment indications, combined with the efficacy, analyze the pharmacological effects of these traditional Chinese medicines. 3. preview the antipyretic unit and complete the basic inspection. Step by step in the course, and interpret the key and difficult points of the course. "Nailing" platform live teaching, to achieve the synchronization of online teaching, real-time grasp of students' watching live. Introduce the case of internal heat syndrome and organize students to review the traditional efficacy of heat clearing drugs. Starting from the antipyretic drugs in the good prescriptions collected by the students, organize to discuss the pharmacological effects of antipyretic drugs, and clarify the relationship between the pharmacological effects and efficacy of antipyretic drugs. According to the feedback of pre class test results, students still have questions about antipyretic drugs, antiviral microorganisms, anti-inflammatory and other aspects. By comparing antipyretic drugs, glucocorticoids and antibiotics, students will be gradually guided to master the characteristics of antipyretic drugs and antiviral microorganisms through questioning and discussion.

During the implementation of the whole course, teachers' course establishment, course design, teaching design, after-school analysis and other processes are carried out on the computer, which can be modified and adjusted at any time. It is easy to operate. Students' mobile client view of "vocational education cloud" is clear, and the function area is set reasonably. The "vocational education cloud" platform breaks through the time and space constraints of traditional teaching, and students can browse learning resources at any time. Moreover, the "vocational education cloud" platform has a more systematic design for the implementation of the whole teaching process, which is convenient for teachers to carry out information-based teaching and helps to improve teachers' teaching ability. Its rich and systematic high-quality resources, fragmented and refined knowledge point setting, and diversified interactive mode are suitable for the learning characteristics of higher vocational college students. The interactive function on the platform makes the process of teaching and learning more intuitive. With the "nail live broadcast", the teaching of the "vocational education cloud" platform can be realized online in real time.

# 1.3 Assessment and evaluation

Optimize the proportion setting of the assessment and evaluation system, highlight the process assessment, set the process assessment as 80%, and the final written examination as 20%. All process assessments are implemented online, including the assessment of training courses. All materials are submitted in electronic files or pictures. For the live class, students with active platform interaction and high speech quality will be given extra points according to their usual performance. The assessment and evaluation of theory courses include self-study of learning resources, classroom participation, in class tests, and online assignments; The assessment and evaluation of the training course includes pre class preview, group discussion, group achievement display and electronic test report.

# 3. Curriculum evaluation of online teaching of "vocational education cloud + nail live"

Through questionnaire survey, behavior observation and other methods, the research group made a comparative evaluation of the teaching effect of the course of traditional Chinese medicine pharmacology and application under the traditional mode and the online



teaching mode of "vocational education cloud + nail live broadcast", mainly including student evaluation (course satisfaction, professional self-confidence, Chinese Medicine culture self-confidence, self-study and cooperation ability self-evaluation) Teacher evaluation (normative use of traditional Chinese medicine, students' sense of responsibility in traditional Chinese medicine service, average score of subject). Compared with the traditional teaching mode in the past, the new teaching mode of "vocational education cloud + nail live" integration is more popular with students. The new teaching mode not only improves students' learning interest, but also improves students' professional ability, professional confidence and cultural confidence, and strengthens students' scientific and rigorous learning quality, It has developed students' ability of independent inquiry and cooperative learning, and effectively promoted students' all-round development.

# 4. Conclusion

This study is based on the "vocational education cloud + nail live broadcast" platform to explore the online teaching mode of the course of traditional Chinese medicine pharmacology and application. The biggest advantage of the online teaching mode of "vocational education cloud + nail live" is to realize the sharing of high-quality resources, expand the time and space of "teaching and learning", and make the teaching management more systematic, autonomous and objective. Of course, this teaching mode also has some limitations. For example, online teaching has high requirements for students' learning consciousness, and it is difficult to carry out practical courses online. Therefore, the teaching design of practical courses needs to be further explored. Under the current situation, online education, as a product of the combination of modern information technology and school education, is becoming more and more mature. As colleges and universities, they should welcome and promote the transformation of the new form of higher education, change the teaching philosophy of colleges and universities, strengthen the informatization construction of colleges and universities, promote the sharing of higher education resources, and actively explore the new mechanism of higher education governance in which the government, colleges, markets, society and other multiple subjects participate. Compared with the traditional classroom teaching mode, the online education mode not only breaks the time and space constraints, It also changes the original hierarchical structure of teaching management. While supporting and encouraging teachers to carry out online teaching, colleges and universities also need to effectively monitor the quality of teaching; As teachers, they should constantly improve the level and ability of information-based teaching methods, learn the new functions and applications of network teaching platform, and the relationship between the quality of online teaching and online teaching resources is complementary. Therefore, a mature, systematic and complete teaching resource library is the premise to ensure the high quality of Online teaching. Therefore, teachers should base on the excellent network resource platform and combine the actual situation of the school, pay attention to teaching design, give full play to the advantages of online teaching, so as to ensure the teaching quality and improve the teaching level.

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