

Application research of “double subject practice experiential teaching method” in the History of Chinese and Foreign Medicine

Yanan Huang¹, Zhenhui Lai², ZhaoYang Li³

¹Gynecology Department, The Affiliated Traditional Chinese Medicine Hospital, Guangzhou Medical University, Guangzhou, Guangdong, 510130

²Affiliated Traditional Chinese Medicine Hospital, Guangzhou Medical University, Guangzhou, Guangdong, 510130

³Affiliated Traditional Chinese Medicine Hospital, Guangzhou Medical University, Guangzhou, Guangdong, 510130

CITATION

Yanan H, Zhenhui L. et al. Application research of “double subject practice experiential teaching method” in the History of Chinese and Foreign Medicine. *Psycho-Oncologie*.

ARTICLE INFO

Received:

Accepted:

Available online:

COPYRIGHT



Copyright © 2025 by author(s).

Psycho-Oncologie is published by PisecoMed Publishing Pte. Ltd. This work is licensed under the Creative Commons Attribution (CC BY) license.

<https://creativecommons.org/licenses/by/4.0/>

Abstract: Objective: To evaluate the effectiveness of the “Dual-Subject Practice-Based Experiential Teaching Method” in the course “History of Chinese and Foreign Medicine”. Methods: A longitudinal observational study was conducted, observing and analyzing students from the Integrated Traditional Chinese and Western Medicine program during the autumn semesters of 2022 and 2023, along with course assessment results and student evaluations. Results: A total of 197 undergraduate students participated in the course. Final exam scores ranged from 78.58 ± 9.69 , with 102 students (51.78%) achieving scores above 80. Student evaluations averaged 92.35 ± 7.86 , with over 95% of students reporting that the innovative teaching model and diverse activities enhanced their critical thinking. More than 99% of students indicated the course boosted their national pride. Conclusion: The “Dual-Subject Practice-Based Experiential Teaching Method” leverages multiple teaching resources through scenario simulations, teacher-student interactions, and collaborative learning to flexibly deliver course content. This approach significantly stimulates students’ initiative, sparks creative thinking, and improves their practical problem-solving abilities.

Keywords: dual subject; Chinese and foreign medical history; teaching method

Medical history education serves as a bridge connecting medicine and social sciences. As the saying goes, “A bronze mirror helps one adjust their attire; history mirrors the rise and fall of civilizations.” President Xi Jinping aptly stated: “History is the best teacher—it faithfully documents every nation’s journey and provides guidance for its future development ^[1].” In medical education, historical review goes beyond merely tracing developmental processes; it focuses on uncovering evolutionary patterns. Therefore, medical history research should be established as an interdisciplinary field that integrates closely with medical education while maintaining academic independence, with its core value lying in infusing historical thinking into medical education ^[2]. The discipline of Chinese and Foreign Medical History centers on exploring the origins, formation, evolution, and inherent laws of medicine. Its scope extends beyond recounting historical events to systematically investigate the developmental patterns of Eastern and Western medical traditions and their interconnections. Specifically, it delves into how medical practices evolved through historical changes and dynastic transi-

tions, aiming to deepen students' historical understanding of medicine. Studying medical history helps students clarify the development trajectory of medical systems, accurately perceive overall trends in medical progress, recognize interdisciplinary connections, adopt objective perspectives toward traditional and modern medicine, enhance medical ethics, cultivate national confidence, strengthen ethnic pride, and reinforce their commitment to pursuing careers in traditional Chinese medicine.

The “Dual-Subject Practice-Experiential Teaching Method” represents an innovative pedagogical model that centers on student development. In this approach, teachers act as instructional organizers, facilitators, and motivators, utilizing diverse resources through scenario simulations, teacher-student interactions, and collaborative learning to dynamically deliver content. This methodology ultimately enables students to effectively construct knowledge frameworks^[3]. As a novel teaching paradigm, its theoretical foundation prioritizes cognitive construction, clearly defining three roles for educators: instructional organizers, learning assistants, and cognitive catalysts. By integrating multidimensional resources and implementing strategies like scenario-based simulations, interactive dialogues, and collaborative inquiry, the method facilitates deep knowledge construction. From a practical perspective, this teaching approach demonstrates core advantages across multiple critical dimensions. First, in stimulating learning initiative, students maintain the dominant position in cognitive activities. By proactively initiating inquiry-based exploration and independently completing problem-solving pathways, they achieve progressive accumulation of knowledge reserves and dynamic optimization of learning experience systems, fully demonstrating the proactive value of learners. Second, regarding pedagogical innovation, this teaching method breaks free from traditional one-way indoctrination. Teachers transition from passive transmitters of textbook knowledge to initiators of instructional activities, process coordinators, organizers, and supervisors of student learning tasks, promoting flexible restructuring of classroom teaching environments. Additionally, in knowledge application transformation, constructing highly realistic problem scenarios guides students to engage in practical implementation. This effectively enhances their ability to identify problems and solve practical issues. Through this process, students deepen their understanding of essential attributes and internal connections of phenomena, enabling individual knowledge structures to be activated and deeply internalized under external stimuli. This significantly narrows the gap between theoretical cognition and practical application, laying a solid foundation for knowledge transfer into practical capabilities.

1. Data and methods

“History of Chinese and Foreign Medicine” is a freshman course launched by the School of Chinese and Western Medicine Clinical Medicine at our uni-

versity in 2021, designed for first-year students. The course consists of 32 total class hours, including 24 theoretical hours and 8 laboratory hours. The author has successfully implemented the “Dual-Subject Practice-Based Teaching Method” in medical history instruction through practical exploration, achieving excellent teaching outcomes.

1.1 Design and construction of “Dual subject practice experiential teaching method”

1.1.1 Organizing research

At the start of the new semester, we implemented a problem-based learning approach (posing questions → gathering data → drawing conclusions). Students were organized into groups to conduct research titled “Current Status and Prospects of Traditional Chinese Medicine (TCM)”. The investigation covered TCM’s role in general hospitals and specialized TCM institutions, its trends in technological innovation, talent development, and interdisciplinary integration, as well as public awareness, acceptance, and usage of TCM. Participants included TCM students, hospital doctors, patients with TCM treatment experiences, and general citizens. Methods employed included questionnaires, interviews, and field observations. Collaborative group work resulted in research reports that counted toward regular course assessments.

1.1.2 Panel discussions

Instructors organize group discussions based on key concepts from the lecture chapters. For example: How does Wu Youxing’s “Li Qi Theory” impact modern infectious disease studies? Students should share insights relevant to their personal experiences to lay the groundwork for future TCM innovations. The lecture explores historical TCM schools like the “Gongxia School” and “Butu School”, explaining when to apply these therapeutic approaches and their corresponding herbal formulas. Students are guided to study medical texts by physicians from these distinct schools.

1.1.3 Experience orthopedic techniques

Students were organized to try TCM methods of bone injury reduction, small splint fixation of limbs, external treatment of Chinese medicine, etc., according to the study and combined with reference materials, summarize the characteristics and advantages of TCM orthopedics, and cultivate TCM thinking.

1.1.4 Visit the acupuncture training base

Our hospital is the largest acupuncture hospital in south China. We organize students to visit our acupuncture training base, understand the development history of acupuncture, and experience the rapid efficacy of acupuncture, so as to enhance national pride and love for Chinese medicine.

1.1.5 Visit Guangdong Provincial Museum of Traditional Chinese Medicine

Guangdong Provincial Museum of Traditional Chinese Medicine is located in the University Town campus of Guangzhou University of Chinese Medicine. It has a strong atmosphere of traditional Chinese medicine, exhibits fine collections and various themes. It strengthens communication and cooperation between universities, so that students can have a better understanding of traditional medicine and love traditional medicine.

1.1.6 Watch The Sacred Classics of the Millennium

Through video materials documenting the life stories of ancient medical pioneers like Hua Tuo and Li Shizhen, this program systematically traces the lineage of medical knowledge inheritance. It explores the pivotal factors shaping the careers of renowned traditional Chinese medicine masters, with particular focus on how professional motivations and academic approaches influence career development trajectories. Building on these insights, the course guides medical students to absorb the core professional ethos and intellectual essence from historical practitioners, while developing personalized career plans and growth roadmaps. Following video analysis sessions, structured Q&A sessions are conducted where students present their reflections and professional insights derived from the materials, achieving deep integration of theoretical understanding and practical reflection.

1.1.7 Recording video

Teachers may assign thematic assignments before class, such as: academic innovations and debates among Jin-Yuan medical scholars, the immortal achievements and noble medical ethics of senior practitioners, reenactments of historical medical anecdotes, or dialogues between ancient and modern physicians. Students work in groups to create videos on these themes, with formats including performances (speeches, stage plays, skits, crosstalk, situational dramas), public service announcements, and health education content. During demonstration classes, all group videos are screened, followed by a class-wide vote. The top three teams receive bonus points in their regular grades and gifts based on their performance.

1.2 Assessment method design

Regarding the assessment method for “History of Chinese and Foreign Medicine”, we employ a “formative evaluation” that comprehensively reflects students’ mastery and application of knowledge. This approach focuses on the learning process, assessing learning attitudes, performance during the process, and periodic achievements through continuous observation, documentation, and reflection to achieve dynamic developmental evaluation. The goal is to stimulate students’ intrinsic motivation, optimize their learning processes, enhance

self-confidence, foster teamwork spirit, and support professional development ^[4].

1.2.1 Daily attendance assessment: Teachers set up classroom check-in to record the number of students' attendance. Attendance rate can reflect students' continuous learning status. It accounts for 10% of the total score.

1.2.2 Research Report Assessment: At the start of the new semester, students will conduct group research projects titled "Current Status and Future Prospects of Traditional Chinese Medicine (TCM)". The investigation may focus on public trust in TCM, its adoption rate in Western hospitals, and related aspects. Methods include interviews and questionnaires. This component accounts for 30% of the final grade.

1.2.3 Video Assessment: Before class, specific themes will be provided such as "Academic Innovation and Controversies in the Golden Yuan Medical Family", "The Immortal Achievements and Noble Medical Ethics of Senior Practitioners", reenactments of historical medical anecdotes, and dialogues between ancient and modern medical experts. Students will work in groups to create videos on these themes, with categories including performance-based works (speeches, stage plays, skits, crosstalk, situational dramas), public service advertisements, and health education content. During the demonstration class, all group videos will be screened, followed by a class-wide vote. The creators of the top three works will receive 10 points, 8 points, and 5 points added to their regular grades respectively.

1.2.4 Final written assessment: The written assessment focuses on the mastery of basic knowledge, and also increases the proportion of open questions. Open questions can be carefully designed according to the contents of special discussions in class, so as to reflect students' learning ability and the ability to solve practical problems as much as possible ^[5]. It accounts for 60% of the total score.

1.3 Satisfaction rating questionnaire design

Students evaluated the "Dual-Subject Practice-Experience Teaching Method" through a questionnaire survey (Note: The survey was conducted via Wenjuanxing platform, collecting 197 valid responses from students majoring in Traditional Chinese and Western Medicine Clinical Medicine at our university, covering 6 classes from the 2022 and 2023 cohorts). A percentage-based scoring system was adopted, with scores above 90 indicating "very satisfied", 80-89 "somewhat satisfied", 70-79 "moderately satisfied", and below 70 "not very satisfied".

1.4 Statistical methods

The statistical data were analyzed using SPSS 22.0 software. The students' grade, assessment scores, and their attitudes towards the course were

Descriptive statistics were used for the overall evaluation. The mean $\pm$ standard deviation ($\bar{x} \pm s$) was used to express the normal distribution of measured

data.

2. Results

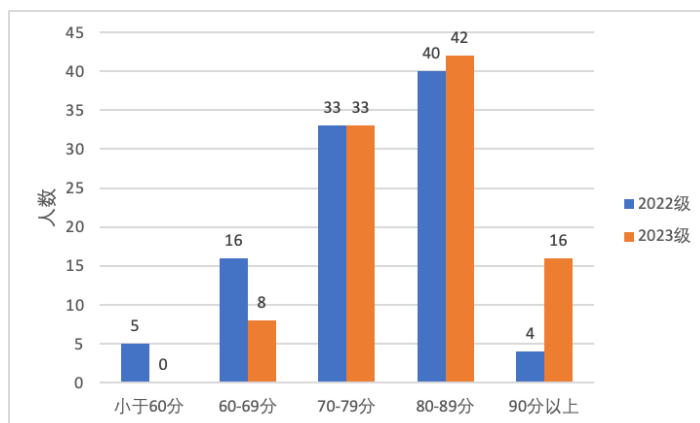
In the fall semester of 2021, Guangzhou Medical University launched a general education course titled “History of Chinese and Foreign Medicine” for undergraduate students majoring in Integrated Chinese and Western Medicine. The syllabus, finalized before the course began, comprised both theoretical instruction and clinical practice components, outlining three key knowledge modules: mastery, familiarity, and understanding ^[6]. The program allocated 32 total class hours, including 24 hours for theoretical sessions and 8 hours for laboratory work. A total of 197 students participated in the course. The cohort included 98 students from the 2022 academic year and 99 students from the 2023 academic year, accounting for 49.7% and 50.3% of the student population respectively.

2.1 Students’ final exam results

The final exam scores ranged from 78.58 to ± 9.69 , with 5 students (2.54%) scoring below 60 points, mainly due to exam content deviating from the syllabus. Among the 102 students (51.78%) who achieved scores above 80, 20 individuals (10.15%) earned over 90 points for their comprehensive research reports with clear organization, as well as well-produced and insightful video presentations. See Figure 1.

Figure 1 Final assessment score distribution

Figure 1: Distribution of Final Assessment Scores



2.2 Students’ evaluation of the dual subject (teacher and student) teaching mode

In this course evaluation, students showed strong approval of the dual-subject (teacher-student) teaching model, with 76.14% considering it excellent and 21.32% considering it good, while only a small minority expressed other opinions. Teachers’ classroom organization and feedback skills proved crucial, as 72.08% rated their classroom management and evaluation abilities as excellent,

with 25.38% considering them good. Group assignments served as a vital tool for developing teamwork skills, with 76.14% of students satisfied with the preparation process (18.78%) and 74.62% satisfied with team collaboration (19.80%). Classroom discussions, a key indicator of dynamic learning environments, received positive feedback from 66.50% of students (28.43% satisfied) regarding theoretical and practical sessions, while 69.54% (25.89% satisfied) appreciated the openness of these sessions. Practical sessions proved essential for integrating theory with practice, with 70.56% (24.87%) and 25.89% (25.89%) of students expressing satisfaction with their content design respectively. See **Table 1**.

Table 1 Students' evaluation of the dual subject (teacher and student) teaching mode

Table 1: Students' evaluations of the dual-subject (teacher, student) teaching model

Questionnaire title	Number per name	proportion /%
Your evaluation of the dual subject (teacher, student) teaching model		
fine	150	76.14
preferably	42	21.32
same as	4	2.03
mal	1	0.51
You evaluate teachers' classroom organization and comment ability		
fine	142	72.08
preferably	50	25.38
same as	4	2.03
mal	1	0.51
You evaluate the process of students preparing for group assignments		
fine	150	76.14
preferably	37	18.78
same as	9	4.57
mal	1	0.51
You rate your satisfaction with the cooperation between team members		
fine	147	74.62
preferably	39	19.80
same as	10	5.08
mal	1	0.51
Your satisfaction with the discussion atmosphere in class (theory + practice)		
to feel quite pleased	131	66.50
satisfied	56	28.43
same as	9	4.57
discontent	1	0.51
How satisfied you are with the openness of the class (theory + practice)		
to feel quite pleased	137	69.54
satisfied	51	25.89
same as	8	4.06
discontent	1	0.51
Your satisfaction with the content of the internship		
to feel quite pleased	139	70.56
satisfied	49	24.87
same as	8	4.06
discontent	1	0.51

2.3 Students' evaluation of their own learning gains after this course

In group assignments, students demonstrated distinct skill orientations: 63.45% focused on data collection and organization, 17.77% on report drafting, 6.9% on video concept development, and 12.69% on production. Course evaluations highlighted significant achievements in knowledge transfer and critical thinking. Key takeaways included: 46.19% identified understanding of medical pioneers and milestones, 12.18% grasped historical contexts, 26.40% explored regional and ethnic variations in medical evolution, and 15.23% developed historical analysis skills. The program notably enhanced comprehensive competencies: 89.34% reported improved extracurricular knowledge, 86.80% demonstrated enhanced problem-solving abilities, and 86.80% showed improved self-directed learning capabilities. See **Table 2**.

Table 2 Students' evaluation of their own learning gains after this course

Table 2: Students' self-assessment of their learning gains post-course

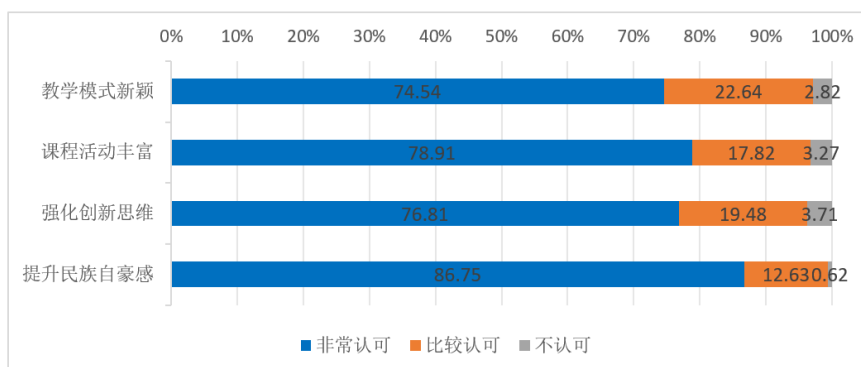
Questionnaire title	Number per name	proportion /%
Which job do you prefer in group preparation?		
Collect and organize information	125	63.45
Collect data and write survey reports	35	17.77
Propose video ideas	12	6.09
Complete video production	25	12.69
What is the most important thing you learned in this course?		
Understand the important figures, events and achievements in the development of medicine	91	46.19
Understand the background, characteristics and overview of medical development in different periods	24	12.18
To explore the similarities and differences in the development of medicine in different periods, regions and ethnic groups, as well as its historical factors and laws	52	26.40
Learn to analyze the development of medicine from a historical and dynamic perspective	30	15.23
Have you improved your ability to expand your knowledge outside the classroom after this course?		
A big improvement	99	50.25
There has been a significant improvement	77	39.09
One thing to improve	21	10.66
No promotion	0	0
Have you improved your ability to investigate and analyze problems after this course?		
A big improvement	97	49.24
There has been a significant improvement	74	37.56
One thing to improve	25	12.69
No promotion	1	0.51
Have you improved your ability to study independently after this course?		
A big improvement	105	53.30
There has been a big improvement	66	33.50
One thing to improve	24	12.18
No promotion	2	1.02

2.4 Open evaluation of students on this course

In the open evaluation of this course, over 95% of students reported that the innovative teaching methods and diverse activities enhanced their critical thinking skills, while more than 99% indicated the course boosted their national pride (Figure 2). The overall student ratings averaged 92.35 ± 7.86 , with 165 students (83.76%) scoring above 95. Some students suggested incorporating clinical case studies with historical medical anecdotes to make theoretical classes more engaging.

Figure 2 shows the distribution of students' open evaluation results for this course

Figure 2: Distribution of students' open evaluations for this course



3. Discussion

3.1 This teaching method gives full play to students' subjective initiative

The “Dual-Subject Experiential Teaching Method” employs contextualized topics as its core pedagogical framework. By creating inquiry-driven learning scenarios, it stimulates students' cognitive curiosity and intellectual drive. Guided through problem-based approaches, the method systematically organizes in-depth discussions to transform passive knowledge absorption into active knowledge construction. Distinct from traditional teacher-centered instruction, this approach fundamentally breaks through the limitations of one-way knowledge transmission. Through restructuring interactive teaching structures, it establishes dual-dimensional frameworks—teacher-student and student-student interactions—forming collaborative inquiry communities. In this environment, students transition from passive recipients to active participants in knowledge exploration. Their engagement and cognitive investment significantly increase, transforming them into true architects of knowledge construction and learning processes. This paradigm shift achieves a paradigmatic transition from “passive learning” to “active learning.”

3.2 This teaching method cultivates students' innovative thinking and enhances national pride

In classroom teaching scenarios, educators systematically design thought-provoking questions to rapidly focus students' cognitive attention, stimulate their learning interest, and evoke emotional resonance. Through the cognitive process of problem exploration and resolution, students' thinking dimensions are fully expanded. They progressively engage in deep deconstruction of knowledge essence, logical inquiry into scientific laws, systematic organization of historical evolution, and rational contemplation of life values, ultimately actively expressing personalized perspectives and achieving profound cognitive outcomes. Upon completing course studies, students can reflect on history from a higher vantage point, drawing wisdom from the past to apply ancient insights to modern contexts. This teaching methodology not only cultivates innovative thinking, encouraging students to break conventions and innovate boldly, but also reinforces their cultural identity and value recognition through deep exploration of historical culture. It nurtures national pride while ultimately internalizing and passing down national spirit within students' cognitive systems and value frameworks.

3.3 This teaching method promotes the improvement of teachers' teaching level

The "Dual-Subject Experiential Teaching Method" imposes comprehensive and high-standard requirements on instructors' comprehensive qualities and professional capabilities. From the perspective of knowledge reserve construction, teachers need to deeply deconstruct and reconstruct course materials, precisely define the core points and cognitive difficulties of each chapter's teaching content. They must not only thoroughly integrate textbook knowledge but also extensively explore related fields to continuously enrich their knowledge reserves^[7]. Taking medical history course teaching practice as an example, the key challenge lies in selecting teaching topics that align closely with core course objectives while possessing cognitive exploration value and learning appeal. This process requires teachers to possess efficient information screening and knowledge integration capabilities, enabling them to extract teaching materials from massive medical history literature, historical cases, and research findings that conform to pedagogical logic while maintaining academic rigor and interest, thereby laying a content foundation for "dual-subject" interaction. In classroom implementation, teachers should assume the role of "guides" rather than traditional "instructors." Their teaching behaviors must demonstrate strong inspirational qualities and classroom control. Teachers need to flexibly employ diversified teaching strategies such as case analysis, group collaborative inquiry, and situational role-playing based on teaching content and students' cognitive characteristics. Through precise and engaging language expression, they should create open and interactive classroom discussion spaces, effectively activating students' learning initiative. This approach promotes deep participation from all students in the

teaching process, facilitating their transition from passive knowledge recipients to active knowledge constructors. From the perspective of teacher professional development, the sustained application of the “dual-subject experiential teaching methodology” has established a closed-loop feedback mechanism for educators’ professional growth. Through repeated teaching practices, teachers continuously enhance their instructional design capabilities, classroom interaction skills, and pedagogical research abilities by optimizing teaching strategies, addressing instructional challenges, and reflecting on teaching outcomes. This ultimately achieves the educational goal of “mutual growth between teaching and learning,” realizing synergistic improvements in both teachers’ professional development and students’ learning effectiveness.

4. Vision and development

As a vital component of medical education, the history of medicine plays an irreplaceable role in cultivating students’ humanistic qualities, with its value permeating the entire process of professional knowledge construction and humanistic spirit nurturing. Systematically reviewing medical history from both Chinese and Western perspectives not only enables medical students to grasp the comprehensive development and landmark achievements of traditional Chinese and Western medicine, building a macroscopic understanding of the discipline, but also enhances cultural identity and national confidence through comparing theoretical frameworks, diagnostic approaches, and clinical practices between traditional medicine and modern Western medicine. This cognitive alignment strengthens medical students’ professional identity with Traditional Chinese Medicine (TCM), clarifies the significance of TCM’s inheritance and innovation, reinforces their professional direction and mission commitment, and lays a foundation of humanistic thinking for subsequent studies and practice. In future teaching initiatives, the department will optimize teaching team structures, further develop a knowledge framework integrating Chinese and Western medical histories, design multiple discussion-based themes, and flexibly employ flipped classrooms, scenario-based simulations, and debate competitions^[8]. These approaches will bring classroom instruction to life, solidifying the foundation for cultivating new-era clinical talents in TCM and Western medicine who possess ideological depth, technical expertise, intellectual rigor, and spiritual integrity.

Reference documentation

- Zhu Hui and Chen Hong. Engraving the Original Aspiration and Mission with Cultural Confidence [N]. Hunan Daily, 2019-10-07(10).
- Zhai Haishou, Wu Haijiang, and Sun Yifei. On the Academic Significance of Medical History [J]. *Medicine and Philosophy*, 2020,41(05):78-81.
- Liang Runying, Liu Wenli, Tian Yanxia et al. Design of the Practical Experiential Teaching Method Training Project for the Course of Medical History in China [J]. *China Journal of Modern Distance Education in Traditional Chinese*

Medicine, 2018,16(16):20-22.

Tian Yanxia. Discussion and Practice on the Formative Assessment Method in Medical History of China [J]. China Traditional Chinese Medicine Modern Distance Education, 2018,16(17):45-47.

Pan Ruiling and Ji Yuntao. Application of the “Dual-Subject Problem-Based Instructional Method” in Medical History Education [J]. Inner Mongolia Education, 2020,03:105-106.

Xiang Yifan, Liang Lingyi, Zhou Yi et al. Effectiveness Evaluation of the General Course on Medical Artificial Intelligence [J]. Journal of Ophthalmology, 2022,37(03):165-170.

Zhen Xueyan. “Investigation and Reflection on the ‘Dual-Subject Problem-Based’ Teaching Method in Medical History Education” [J]. Traditional Chinese Medicine Education ECM, 2019,38(03):26-28.

Song Yinan, Xu Mei, Wang Jian et al. “Exploration of the Teaching Model for the ‘Yiguan Jian’ Course in Chinese and Foreign Medical History” [J]. China Traditional Chinese Medicine Modern Distance Education, 2024,22(14):30-33.

Application Research of “Dual Subject Practice Experience Teaching Method” in “History of Chinese and Foreign Medicine”

Huang Yanan¹, Lai Zhenhui¹, Li Zhaoyang¹, Liu Shuguo¹, Pan Junxi¹, Qin Qining¹, Li An¹, Huang Qiongdiao¹
(1. The Affiliated Hospital of Guangzhou Medical University, Guangzhou Guangdong 510130)