Journal of Education and Educational Research
ISSN: 2957-9465 | Vol. 12, No. 1, 2025

The Role of "Internet +" Blended Teaching Model in Improving the Teaching Quality and Teaching Evaluation of Traditional Chinese Medicine

Zuoqian Sun, Lei Wang, Li Xu, Tao Liu

School of Medicine and Health Sciences, Zaozhuang Vocational College of Science and Technology, Tengzhou, Shandong 277500, China

Abstract: Objective: To analyze the role of "Internet +" blended teaching model in improving the teaching quality and teaching evaluation of Traditional Chinese Medicine (TCM). Methods: A total of 172 students majoring in traditional Chinese medicine in the School of Medicine and Health from September 2021 to September 2022 were selected as the observation objects, and they were divided into the control group (n=86, conventional teaching mode) and the observation group (n=86, "Internet +" mixed teaching mode) by random number table method. The teaching quality and teaching effect of the two groups were compared. Results: The scores of written examination and skill operation in the observation group were higher than those in the control group, and the difference between the two groups was statistically significant (P <0.05). The learning interest, learning experience, learning habits, understanding of traditional Chinese medicine and the total score of the observation group were higher than those of the control group, and the differences between the two groups were statistically significant (P <0.05). The teaching satisfaction of the observation group was 94.19%, which was higher than 80.23% of the control group, the difference between the two groups was statistically significant (P <0.05). Conclusion: The "Internet +" blended teaching mode is helpful to improve the teaching quality of traditional Chinese medicine, improve students' teaching evaluation of the college, and improve teaching satisfaction.

Keywords: Blended Teaching; Traditional Chinese Medicine; Teaching Quality; "Internet +".

1. Introduction

In recent years, with the rapid development of "Internet +" technology and the continuous popularization of information technology, teaching informatization has gradually become the main development direction of education at all levels in our country. The mixed teaching mode of offline and online is a new attempt [1-2] based on the high integration of education and information technology. Traditional Chinese medicine teaching is still based on the offline teaching of words and actions, which is conducive to students to summarize their learning experience, and at the same time, students have a relatively single way to obtain extracurricular knowledge. The "Internet +" teaching mode refers to the premise that students can use the network platform to provide them with teaching videos, pictures, teaching links and other learning ways through teaching teachers. To complete more abundant offline independent learning [3]. How to ensure the teaching quality of students is not affected under the interference of the existing environment, and to attract students to further study the theory of traditional Chinese medicine (TCM) independently is the main direction of the current TCM education, and it is also the reason [4] why TCM colleges and universities need to further optimize their courses. Through the implementation of "Internet +" blended teaching model, this study explored the intervention effect on students majoring in traditional Chinese medicine in the College of Medicine and Health, which is reported as follows.

2. Materials and Methods

2.1. General Information

A total of 172 students majoring in traditional Chinese medicine in the School of Medicine and Health from September 2021 to September 2022 were selected as the observation objects. They were divided into the control group (n=86, conventional teaching mode) and the observation group (n=86, "Internet +" blended teaching mode) by random number table method. The average age was (23.50±1.12) years old (22-25 years old). There were 41 males and 45 females in the observation group, aged from 22 to 26 years, with an average age of (24.02±1.12) years. There was no statistically significant difference in age and gender between the two groups (P >0.05).

Inclusion criteria: 1) Students with good learning and communication skills; 2) Clear and fluent language expression; 3) All participants voluntarily participated in this study and signed the consent form. Exclusion criteria: 1) There were students who failed or missed a lot of classes; 2) combined with psychological or psychiatric diseases; 3) communication disorder.

2.2. Methods

Control group: conventional teaching model. The teachers made teaching plans according to the syllabus of traditional Chinese medicine, and carried out routine TCM skills operation courses.

Observation group: "Internet +" blended teaching mode. The offline teaching mode was consistent with the control group, and the online teaching mode was as follows: (1) with the help of network platform: the teachers of traditional Chinese medicine could use the "Cloud classroom", "Xuexitong" and other platforms to carry out online teaching, formulate online check-in, answer and exchange and interaction. (2) Establishment of online classes: Teaching teachers can establish learning classes in Dingding, Chaoxing Xuexitong and other platforms according to the teaching process, and then release the download steps and use methods

of Chaoxing Xuexitong software in the WeChat group of the class. After that, they will pull students into the teaching platform, issue a notice to remind students to change the nickname of the platform to the unified format of "student number + name", and designate a class representative in the class. Help teachers to complete the announcement, teaching data statistics and quality supervision and other work. (3) Improve the teaching resources of the network platform: according to the functions of the network platform, the teaching teachers can upload the electronic textbooks, teaching courseware, plans, assignments, tests and after-class exercises to the Chaoxing Xuexitong platform or Dingding platform; According to the needs of teaching, relevant lectures and interpretations can also be downloaded from the Big Country Traditional Chinese Medicine website, China Traditional Chinese Medicine website and other platforms, and forwarded to the WeChat group in the form of compressed package or website link, so that students can conduct online independent learning in their spare time. (4) Online teaching live broadcast: the teaching teacher can arrange online teaching live broadcast according to the class schedule and announce the steps of participating in the live course in the WeChat group. Students need to log in to the platform first. After signing in and punching the card, the teaching teacher will open the "screen sharing" and play relevant videos and courseware according to the teaching needs during the lecture. (5) Online interaction: the teaching teacher needs to refer to the teaching key points, and design the key classroom discussion content around the key and difficult points, post the topic in the WeChat group before the class, and discuss it in the class as a group unit, and comment on the students' conclusions. (6) Test with the help of the network platform: The teaching teacher can upload the test content to Dingding or Chaoxing Xuexitong in the form of an electronic test paper, remind the students of the start and end of the test by means of an announcement in the WeChat group, and upload the steps to participate in the test. After the students have completed the test, the teaching teacher can evaluate the students' test scores on the platform, and mark the location of the problems. Teachers can also use video to explain to students one-to-one.

The two groups of students have a teaching experience for one academic year.

2.3. Observation Indicators

(1) Comparison of the examination results of the two groups of students. The self-made assessment score table was used to record the assessment results of the two groups of students after teaching, including the content of written examination and skill operation. The written examination was conducted in the form of single choice, and the skill operation examination was conducted in the form of question and answer. The full score of each item was 100.

(2) The learning attitude of the two groups of students was compared. The self-designed questionnaire was used to evaluate the learning attitudes of the two groups of students after teaching, including learning interest, learning experience, learning habits and understanding of traditional Chinese medicine. The full score of each item was 5, and the total score was 20. The higher the score, the better the learning attitude of students. After pre-experiment, the Cronbachα coefficient of the questionnaire was 0.84, the dimensions were from 0.62 to 0.83, the test-retest reliability was 0.83, and the content validity was 0.91.

(3) The satisfaction of the two groups of students with the teaching model was evaluated. The self-designed questionnaire was used to evaluate the satisfaction of students in the two groups after teaching. The questionnaire score was 100 points, very satisfied was ≥90 points, satisfied was 60 points ≤ score < 90 points, unsatisfied was < 60 points, satisfaction = (very satisfied + satisfied)/total number ×100.00%. After the pre-experiment, the Cronbachα coefficient of the questionnaire was 0.82, the dimensions were from 0.61 to 0.84, the test-retest reliability was 0.83, and the content validity was 0.92.

2.4. Statistical Methods

SPSS 22.0 software was used to analyze the data. The count data were expressed as [n (%)], the measurement data were expressed as (mean ± standard deviation), and the difference was statistically significant by t test ($P<0.05$).

3. Results

3.1. Comparison of Examination Scores Between the Two Groups of Students

The scores of written examination and skill operation of the observation group were higher than those of the control group, and the difference between the two groups was significant ($P < 0.05$), as shown in Table 1.

Table 1. Comparison of the examination scores of the two groups of students ($\bar{x}$±s, score)

Groups	Number of cases	Written test scores	Skill operation score
Observation group	86	90.12±3.12	91.68±2.84
Control group	86	84.66±2.84	85.66±2.44
t		12.001	14.910
P		0.000	0.000

3.2. Comparison of Learning Attitudes Between the Two Groups of Students

Table 2. Comparison of learning attitude between the two groups ($\bar{x}$±s, score)

Groups	Number of cases	Interest in learning	Learning experiences	Study habits	Awareness of the specialty of TCM	Total average score
Observation group	86	3.66±0.44	3.84±0.22	3.48±0.54	3.66±0.28	3.69±0.22
Control group	86	3.12±0.36	3.45±0.15	3.03±0.34	3.41±0.41	3.12±0.31
t		8.809	13.583	6.540	4.670	13.906
P		0.000	0.000	0.000	0.000	0.000

The learning interest, learning experience, learning habits, understanding of traditional Chinese medicine and the total score of the students in the observation group were higher than those in the control group, and the differences between the two groups were statistically significant (P <0.05), as shown in Table 2.

3.3. Satisfaction of the Two Groups of Students with the Teaching Model

The teaching satisfaction of the observation group was 94.19%, which was higher than 80.23% of the control group, the difference between the two groups was significant (P <0.05), see Table 3.

Table 3. Students' satisfaction with teaching model in two groups [n(%)]

Groups	Number of cases	Very satisfied	Satisfied	Not satisfied	Satisfaction
Observation group	86	50 (58.14)	31 (36.05)	5 (5.81)	81 (94.19)
Control group	86	42 (48.84)	27 (31.40)	17 (19.77)	69 (80.23)
x^2					7.505
P					0.006

4. Discussion

The study found [5] that the relationship between "Internet +" and education is no longer just a mechanical feeling between the two, relying on "Internet +" derived a new form of online education method, people from the Internet to the mobile Internet and again to the "Internet +", aroused the diversification of students' demand for knowledge. The changes in the location, time, content and other elements of teaching have gradually become humanized and personalized. Blended teaching mode integrates a variety of flexible teaching methods and means, and effectively combines[6] traditional classroom teaching with advanced information teaching methods such as network video teaching. Teachers build a network teaching platform with the help of Internet, mobile terminals, data resources, cloud technology and other information technologies. Students use the rich teaching resources in the network teaching platform for independent learning and interactive communication[7]. In the online classroom teaching, teachers can change teaching activities or adjust teaching objectives in time according to students' online learning situation and problem discussion, so as to further solve students' learning puzzles, help students better grasp the key points and difficulties in teaching, and achieve the purpose[8] of efficient achievement of teaching objectives. Blended teaching does not only use the network platform to implement teaching, but also needs to clarify the teaching objectives, enrich the teaching content of traditional Chinese medicine, and test and summarize[9] the teaching results at different stages.

In this study, the scores of written examination and skill operation of students in the observation group were higher than those in the control group, and the difference between the two groups was statistically significant (P <0.05), suggesting that the "Internet +" mixed teaching model can improve students' academic performance. This is because, in the mixed teaching model, teachers urge students to form learning habits by designing learning objectives and learning content in advance, and by means of online sign-in. The "Internet +" teaching mode can provide students with more professional core resources, and propose individualized learning resources for students, so that they can expand the depth and breadth of learning. Teachers use the network platform to enable students to learn online traditional Chinese medicine operation, and repeatedly watch the operation steps, strengthen the key and difficult points, so as to improve the assessment results.

In this study, the students' learning interest, learning experience, learning habits, understanding of traditional Chinese medicine and the total score of the observation group were higher than those of the control group, and the differences between the two groups were statistically significant (P <0.05), suggesting that the mixed teaching model has a positive effect on improving students' learning attitude. The "Internet +" mixed teaching model can create an online learning environment, enrich learning materials with the help of the network platform, enrich students' access to new knowledge, so that they can also conduct independent learning in their spare time, improve students' learning enthusiasm, and create a good learning atmosphere. Clinical studies have found[10] that the teaching of traditional Chinese medicine needs the cooperation of medicine and education. On the one hand, the advantages of online teaching lie in that it can break the time and space restrictions, and students can observe the actual operation and diagnosis and treatment steps of teachers by means of video and connection. On the other hand, online education also realizes resource sharing. Teachers provide links to authoritative websites for students, so that they can access the experience or case explanation of authoritative doctors in more professional fields, and stimulate students' learning initiative and positive degree.

In the study, the teaching satisfaction of students in the observation group was 94.19%, which was higher than 80.23% in the control group, and the difference between the two groups was statistically significant (P <0.05). It was confirmed that the "Internet +" mixed teaching model could improve students' satisfaction with teachers' teaching. The "Internet +" mixed teaching model broadens the traditional teaching methods, enriches teaching channels and guides students to conduct independent learning, which plays an important role in improving the quality of students' learning, deeps students' views on traditional Chinese medicine, and improves teaching satisfaction.

In conclusion, the "Internet +" blended teaching model is helpful to improve the teaching quality of traditional Chinese medicine, improve students' teaching evaluation of the college, and improve the effect of teaching satisfaction.

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