Investigation on the Current Status and Effects of Online Course Learning for Nursing Students

Wei LIU, Yuan ZHAO, Ye WANG, Dan HOU, Lirong JIA, Weiguang YUE

Chengde Nursing Vocational College, Chengde 067000, China

Abstract [Objectives] To explore the current situation and effects of online learning from the perspective of students, as well as the learning dynamics, and to explore the online teaching methods. It is possible to put forward relevant suggestions for the problems presented by online teaching, find effective teaching methods, and explore appropriate online teaching methods. [Methods] The nursing students of the 2020, 2021, and 2022 grades of Chengde Nursing Vocational College were selected as the research subjects. A self-made questionnaire survey method was adopted. The questionnaire had 5 items and 44 questions: 3 questions on personal information, 9 questions on the teacher level, 12 questions on the student level, 7 questions on the technical level, and 13 questions on online learning satisfaction. [Results] In the process of online teaching, the cooperation between family and school can be carried out to give full play to the important role of family supervision in online learning and other education, which is conducive to maintaining the discipline of online courses on the Internet, increasing the online learning effect of students, and avoiding the temptation of the Internet to the greatest extent. In the process, we should increase students' self-control in online learning, help students shape realistic goals, and thus improve the effect of online learning. Technical level; increase information-based teaching, enrich teaching content, and introduce virtual simulation software to simulate clinical operations, so as to increase students' interest and enthusiasm in learning. [Conclusions] This study is expected to provide a certain reference for the smooth and efficient development of online teaching and online learning skills.

Key words Online teaching, Learning status, Satisfaction

1 Introduction

Since 2020, in response to the COVID-19, the Ministry of Education of China issued instructions of "postponement but not delay in teaching, suspension of classes but not suspension of learning", colleges and universities across the whole country have actively launched online teaching courses. This is a new challenge for nursing students who require higher operational skills. The learning situation, results and satisfaction of college students have received close attention from the society. The sudden public health situation has made us realize that it is very necessary and important to carry out online teaching. Various network platforms, colleges and universities, and teachers are constantly overcoming software and hardware difficulties and continuously working on enhancing the effectiveness of online teaching, especially the introduction of the concept of "student-centered". It is increasingly important to grasp the learning status and effects of nursing students. In addition, the exploration and innovation of online teaching courses for public courses in the nursing major has become an important issue that needs to be paid attention to in the education and teaching reform of the nursing major. This article mainly focuses on the theme of "the learning status and effects of online courses for nursing students". It can better serve the online teaching of nursing students in special periods, and in the future learning and teaching methods of nursing and other majors, the healthy development and smooth progress of online course education and teaching, so as to be able to have the corresponding preparation and ability to deal with possible crisis events in the future, and to provide a certain reference for the smooth and efficient development of online teaching and learning skills.

2 Materials and methods

- **2.1 Research subjects** In this study, students from the nursing department of Chengde Nursing Vocational College who participated in online professional courses in 2020, 2021, and 2022 were selected as research subjects.
- **2.2 Inclusion and exclusion criteria** Inclusion criteria; nursing students who participated in online courses; after explaining and understanding the purpose of the study, students voluntarily participated in filling out the questionnaire.

Exclusion criteria: students who took a leave of absence (within one year); students who participated in online courses for less than 3 months.

2.3 Survey method A questionnaire was developed through WJX, and a self-made questionnaire survey method was used. The questionnaire has 5 items and 44 questions; 3 questions about personal information, 9 questions about teachers, 12 questions about students, 7 questions about technology, and 13 questions about online learning satisfaction. The options are expressed using a five-point method; 1 point means strongly disagree; 2 points means disagree; 3 points means average; 4 points means agree; 5 points means strongly agree. 1 500 questionnaire copies were distributed through WJX, and 1 465 questionnaires were collected, with a response rate of 97.7%.

3 Survey results and analysis

3.1 Validity and reliability of the questionnaire $\$ The reliability coefficient Cronbach α value is 0.967, indicating that the

Received: June 23, 2024 Accepted: September 29, 2024
Supported by General Project "Research on the Current Status, Effects and Satisfaction of Online Learning of Nursing Related Courses Based on Students' Perspectives under the Epidemic Situation" (Y202214).

^{*} Corresponding author. E-mail: ywg_1981@ sina. com

questionnaire has high reliability, strong feasibility, and the analysis results are highly representative. Therefore, the practice and theory of this study are consistent, and the research significance is positive.

- **3.2 General situation** Through the questionnaire analysis, the research subjects are: 54 students in the 2020 grade (3.69%), 527 students in the 2021 grade (35.97%), 884 students in the 2022 grade (60.34%), 325 males (22.18%), 1 140 females (77.82%), 252 students with urban household registration (17.2%), and 1213 students in rural areas (82.8%).
- 3.3 Teacher level Survey on the teaching situation of teachers in the teaching process from the perspective of students: 94.41% of students believe that teachers sincerely care about students during online teaching, 0. 21% of students deny this view, and 5.39% of students have a general experience; 95.36% of students believe that teachers love teaching very much, but 4.44% and 0.21% of students believe that the degree of teachers' love for teaching is relatively poor; in the process of online teaching, 90. 31% of students like the teacher's class division, but 9.69% of students think that the teacher's teaching style is not attractive; in the process of using the teaching platform, 94.54% of students believe that teachers can skillfully use online learning software, 5.46% of students believe that teachers are not proficient in the use of teaching platforms, and 92.29% of students believe that teachers can mobilize students' enthusiasm for using the learning software, and 7.71% believe that the enthusiasm is not fully mobilized; in the course of teaching, 96.11% of students received encouragement from teachers to participate in classroom interaction and be asked questions, and 96.45% of students believed that teachers can actively answer questions raised by students in online teaching.
- 3.4 Student level Based on the current situation of classroom learning from the perspective of students: 84.03% of students are willing to answer challenging questions and believe that they can learn new knowledge from them, 89.15% of students can answer and complete relevant questions and homework, 86.08% of students are very eager to show their abilities in online courses, and 89.35% of students hope to be recognized by teachers and classmates, and can concentrate on listening, participate in classroom interactions, and express their own views in class; however, 15.3% of students feel that they may not be able to concentrate during online learning, thus affecting the teaching effect, and the effect of participating in group discussions during online learning is relatively poor. 22.87% of students believe that they can analyze and participate in discussions based on existing materials, but 77.13% can read materials but are not very motivated to participate in discussions. During the duration of online teaching, 86.42% of students believe that their online learning situation is very good, but 13.58% of students believe that the learning situation is not optimistic.
- $\begin{array}{ll} \textbf{3.5} & \textbf{Technical level} & \textbf{There are many online learning platforms.} \\ \textbf{The application rate of DingTalk reaches 96.04\%, Tencent Con-} \\ \end{array}$

ference and Xuexi Tong are 87.03% and 84.03%, respectively, Tencent Classroom and Cloud Classroom are 53.08% 54.54% respectively, and the application of WeChat group, QQ group and other platforms as online platforms is 40.34% and 11.33% respectively. Generally, they are used for problem feedback and off-class communication. In addition, 26.69% of students in Chinese universities use MOOC as an online learning platform for extracurricular knowledge consolidation and preview. 87.98% of students believe that online course learning software is simple to operate and easy to use, and they can quickly master the application skills of each platform. 86.14% of students believe that these platforms have the function of promoting students and can promote them to quickly master online learning skills. 81.77% of students believe that online learning can improve their learning ability and learning efficiency, but 3.62% of students do not think it has such an effect.

- **3.6 Online learning satisfaction** Based on the survey results of online learning satisfaction from the perspective of students, more than 86% of students are satisfied with online learning content and teacher interaction, and 1.63% are relatively dissatisfied with online learning; 77. 27% of students believe that online teaching is a very wise choice in special periods, and are willing to use online learning methods to learn, 95.56% of students believe that teachers are well prepared before class, and in terms of interactive methods, students believe that voice, barrage, and text are effective interactive methods, 44.3%, 46.69%, and 9.01% respectively, and the effectiveness of text is relatively poor; 70.72% of students believe that online learning has more resources, playback can better review, and free time, and better results, but 20.27% of students believe that online learning time is too long and lacks substance Supervision can easily lead to problems such as fatigue and poor concentration. In online courses, 69. 69% of students can actively communicate with teachers through WeChat, QQ and other chatting methods, but 52.7% of students prefer to communicate with teachers on the display. In the overall teaching process, 59.59% of students can pay attention to the teaching plan, and can respond and put forward their own opinions when the teacher asks for opinions on the relevant teaching process. 40.89% of students can consult with teachers about exam-related content. At the same time, 6.83% of students have basically no communication with teachers. When checking the effect of online learning, the checking methods that students support more are the frequency of clocking in, answering questions, checking notes, classroom tests and homework. In addition, the checking methods of pre-class review and group discussion are relatively weak in the checking effect of online learning.
- 3.7 Word cloud diagram of opinions on improving students' online learning effects Among the opinions that can be improved and improved, students put forward the following opinions: in online learning, the management method of maintaining online class record rules can be maintained, more questions can be asked, and active interactions can be made to improve students'

classroom participation, and the forms of homework and after-class exercises can be enriched. The way teachers speak and teach can be particularly humorous to increase students' interest and appropriately increase the entertainment effect; in addition, students also suggested that in online courses, the speed of professional course teachers' explanations can be appropriately slowed down to improve the effect of online learning (Fig. 1). Many students still prefer offline teaching because the software of the online platform is restricted by the network situation and the delay of the online platform will affect the communication effect.

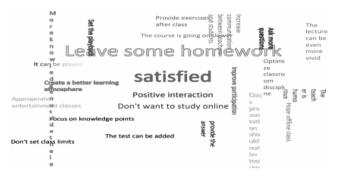


Fig. 1 Word cloud diagram of opinions on improving students' online learning effects

4 Thinking and discussion

- 4.1 Teacher level Through the questionnaire survey, we learned that in the process of online teaching from the perspective of students, the role of teachers still occupies a dominant position in course learning. Enriching the content of online teaching and changing the teaching methods, increasing the fun of course content in the process of narration, and presenting the teaching content more vividly and specifically can attract students' attention and convey knowledge to students in a subtle way. Students can actively interact in class, actively analyze problems, and actively solve questions raised by students. Relevant homework can be set after class, and effective supervision and inspection can be carried out, which can promote students' enthusiasm for learning. In addition, we believed that in the process of online teaching, due to the relatively poor effect of remote monitoring, the way of mutual cooperation between families and schools can be carried out to give full play to the important role of family supervision in online learning and other education, which is conducive to maintaining the discipline of online courses on the Internet, increasing students' online learning effects, and avoiding network temptations to the greatest extent.
- **4.2 Student level** The questionnaire results show that most students who participate in online learning can actively participate in the learning discussion and interactive process in class. The practical skills of nursing students are very important in their career process. From the performance of students in the skill operation process, students show great interest in being able to perform on-site skill operations and are very good at mastering the opera-

tion of skills. Therefore, in the online course, in the process of explaining and demonstrating the operation skills, the classroom should give full play to the subjectivity of students, and use the demonstration role of autonomous learning ability and operation demonstration and other learning behaviors to motivate students to actively learn, think and participate in classroom learning. Set up learning discussion groups, cultivate the ability of self-management, supervision and improvement within the group, and improve the comprehensive ability of mutual evaluation, nursing questions and summarization between groups. In this process, increase students' self-control in online learning, help students shape realistic goals, and thus improve the effect of online learning.

4.3 Technical level Increase information-based teaching, enrich teaching content, make knowledge presentation more specific, teach students in accordance with their aptitude for different student groups and different learning contents, and promote the improvement of teaching concepts. Nursing is a very practical profession. It is very important for students to master clinical skills. In the online teaching process, virtual simulation software should be introduced more specifically so that students can simulate clinical operations in online learning and be immersed in the situation, thereby increasing students' interest and enthusiasm in learning. In addition, with the improvement of technology, the stability of online learning platforms still has a lot of room for improvement.

In summary, through the results of this questionnaire survey, the nursing students of Chengde Nursing Vocational College currently have a positive attitude towards online courses, and have positive feedback on the teaching methods, content, and application of teaching platforms of teachers. However, at the same time, from the perspective of nursing students, the problems that still exist in online teaching are found, which will help promote the improvement of online teaching content and methods in the future, and provide a focus for teachers to conduct online teaching and establish a resource library for online learning materials in the future. It is of great significance to do a good job in online teaching of nursing majors and improve the preparation of teaching materials in the future.

References

- [1] WU DG, LI W. The phase characteristics of large-scale online teaching in Chinese universities: An empirical study based on a questionnaire survey of students, teachers and teaching staff[J]. Journal of East China Normal University (Educational Science Edition), 2020, 38(7): 1 - 30. (in Chinese).
- [2] ZHANG YP, ZHAO BB, TANG CJ, et al. The influence of collaborative education mechanism based on network platform on the academic emotions of higher vocational nursing students [J]. Health Vocational Education, 2020, 38(23): 89-91. (in Chinese).
- [3] GUAN J, CHEN YQ, WANG ZL, *et al.* Analysis of the effect of nursing teaching through network platform[J]. Journal of North Sichuan Medical College, 2008(1): 106 107. (in Chinese).
- [4] ZHOU LJ, ZHAO CY, ZHANG CP. Application of network platform teaching in nursing teaching [J]. Chinese Journal of Minkang Medicine, 2014, 26(10): 94-95. (in Chinese).