

# Application of Simulation Flipped Classroom in Nursing Practice Teaching for Vocational Nursing Students

Jiawei Weng

Guangzhou Huanan Business College, Guangzhou 510550, China

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**Abstract:** With the rapid development of medical technology and the increasing diversity of patient needs, vocational nursing education is facing an urgent task of cultivating nursing students with solid theoretical foundations and excellent practical skills. The traditional teaching model often focuses on imparting knowledge, while neglecting the cultivation of students' practical abilities and clinical thinking. As an innovative teaching method, the simulation flipped classroom aims to improve students' participation and practical skills by flipping learning activities inside and outside the classroom, meanwhile cultivating their critical thinking.

**Keywords:** Simulation Teaching; Flipped Classroom; Vocational Nursing Students; Nursing Practice Teaching

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## Introduction

In the context of the rapid development of higher vocational education today, nursing as a highly practical discipline, the innovation of its teaching mode is particularly important. As an emerging teaching model, simulation flipped classroom provides students with a more vivid and intuitive learning experience by simulating real nursing scenarios and combining the self-learning concept of flipped classroom.

## 1. The importance of vocational nursing education

Vocational nursing education plays a crucial role in the modern medical and health service system. With the intensification of population aging, the increase in the number of chronic disease patients, and the diversification of medical service needs, the demand for professional nursing talents in society is becoming increasingly urgent. As an important way to cultivate nursing professionals, vocational nursing education emphasizes the cultivation of practical skills, enabling students to quickly adapt to clinical work and provide high-quality nursing services after graduation. Through systematic theoretical learning and clinical practice, nursing students can master necessary nursing knowledge and skills to provide safe and effective nursing for patients. Vocational nursing education emphasizes the shaping of professional qualities, cultivating students' sense of responsibility, empathy, and teamwork spirit.<sup>[1]</sup> These soft skills are crucial for building a harmonious doctor-patient relationship and improving the quality of medical services. Vocational nursing education closely follows the development of medical technology, constantly updating teaching content and methods, enabling students to master the latest medical nursing knowledge and technology, and adapt to the constantly changing medical environment.

## 2. The current situation and challenges of nursing practice teaching

Lack of practical teaching resources is a common problem. Due to the shortage of medical resources and limited internship opportunities, nursing students often find it difficult to obtain sufficient practical operation opportunities, which affects their proficiency in practical skills and the accumulation of clinical experience. The traditional nursing practice teaching model overly relies on the direct guidance of teachers, lacks innovation and interactivity, and is difficult to stimulate students' learning interest and initiative, and is also not conducive to cultivating students' self-learning and problem-solving abilities. With the rapid development of medical technology, the content of nursing practice teaching needs to be constantly updated to adapt to new medical and nursing needs. However, the updating speed of teaching content often cannot keep up with the development pace of medical technology, resulting in a gap between the knowledge learned by nursing students and the actual work needs.<sup>[2]</sup> Insufficient cultivation of critical thinking and innovative abilities in nursing practice teaching limits the ability of nursing students to cope with complex and changing clinical situations. The evaluation system of nursing practice teaching often focuses on the assessment of skill operations, while neglecting the evaluation of students' comprehensive quality and professional attitude, which is not conducive to comprehensively improving the professional literacy of nursing students.

### **3. Implementation of scenario simulation flipped classroom**

#### **3.1 Design of teaching content**

In the design of teaching content for simulation flipped classroom, the key is to organically combine theoretical knowledge with practical skills, creating a teaching situation that is both close to clinical practice and can stimulate students' learning interest. The teaching content should revolve around the core skills of nursing practice, such as basic nursing operations, first aid skills, patient assessment and monitoring, to ensure that students can master the necessary clinical operational skills. Design representative simulation cases that cover common clinical problems and unexpected situations, allowing students to experience real work scenarios in a simulated environment and improve their ability to cope with complex situations.<sup>[3]</sup> The teaching content should also include the cultivation of soft skills such as nursing ethics, communication skills, and teamwork, in order to comprehensively enhance students' professional literacy. In the design process, full consideration should be given to the learning needs and cognitive characteristics of students, and diverse teaching resources should be used, such as video tutorials, interactive learning software, etc., to enhance the interactivity and fun of learning, promote active learning and deep thinking of students. Through carefully designed teaching content, the simulation flipped classroom can effectively enhance the practical ability and comprehensive quality of nursing students, laying a solid foundation for their future clinical work.

#### **3.2 Arrangement of teaching process**

In the teaching process arrangement of simulation flipped classroom, teaching activities are carefully designed to promote active learning and deep participation of students. In the pre-class stage, teachers release preview materials through online platforms, including explanatory videos on theoretical knowledge points, relevant literature reading, and case analysis, to guide students to engage in self-directed learning. This section aims to provide students with sufficient theoretical preparation for the upcoming practical activities, while cultivating their ability to learn independently. In the classroom stage, the focus of teaching shifts towards practical operations and interactive discussions. Under the guidance of the teacher, students first engage in simulation exercises. By simulating real clinical situations, they are able to apply theoretical knowledge to practice and exercise practical operational skills. Subsequently, the teacher organized group discussions among the students, sharing their simulation experiences, analyzing the problems and shortcomings in the operation, and proposing improvement suggestions. This interactive learning not only deepens students' understanding of knowledge, but also promotes the cultivation of critical thinking and teamwork skills. In the after-school stage, teachers use online platforms to post reflective questions and expand reading materials, encouraging students to engage in self-evaluation and deep thinking.<sup>[4]</sup>

#### **3.3 Preparation of teaching resources**

In the preparation of teaching resources for simulation flipped classroom, teachers need to carefully select and produce a series of resources to support students' autonomous learning and classroom interaction. Theoretical knowledge video: Create or select a video tutorial that covers core nursing theories for students to preview before class. Case study materials: Prepare a series of clinical cases, including patients basic information, nursing issues, treatment plans, etc., for simulation and discussion. Operation guide document: Write detailed nursing operation steps and precautions as a reference for students to practice. Interactive learning software: Using simulation software or online platforms, provide a virtual nursing operation environment to enhance students' practical experience.<sup>[5]</sup> Discussion guidance questions: Design a series of guidance questions for classroom discussions to promote deep thinking and communication among students. Feedback and evaluation tools: Prepare questionnaires or evaluation forms for collecting student feedback and conducting self-evaluation. Expand reading materials: Provide relevant academic papers, professional book chapters, etc. for interested students to delve deeper into their studies.( seen as Table 1)

Table 1 Various Teaching Materials

| Resource types                 | Content descriptions                  | Application                             |
|--------------------------------|---------------------------------------|---|
| Theoretical knowledge video    | Explanation of core nursing theory    | Pre-class preview                       |
| Case study materials           | Clinical case materials               | Simulation and discussion               |
| Operation guide document       | Nursing operation steps               | Practical operation reference           |
| Interactive learning software  | Virtual nursing operating environment | Practical experience enhancement        |
| Discussion and guidance issues | Guiding questions                     | Classroom discussion                    |
| Feedback and evaluation tools  | Questionnaire or evaluation form      | Feedback and self-evaluation collection |
| Expand reading materials       | Academic papers, book chapters        | Deep learning                           |

### 3.4 Construction of teaching evaluation system

In the construction of the teaching evaluation system for simulation flipped classroom, the evaluation should be diversified and comprehensive, aiming to evaluate students' knowledge mastery, skill application, thinking ability, and professional competence. Formative evaluation should run through the entire teaching process, providing real-time feedback through classroom participation, group discussion contributions, simulated operational performance, etc., to help students adjust their learning strategies in a timely manner. The summative evaluation should include both theoretical and practical assessments to ensure that students have a solid theoretical foundation and are proficient in applying nursing skills. Self-evaluation and peer evaluation should also be included in the evaluation system, encouraging students to engage in self reflection and mutual learning, and cultivating their self-management and teamwork abilities. Teachers' evaluation should be based on observing the overall performance of students, including professional knowledge, communication skills, problem-solving, and professional attitudes, in order to comprehensively measure the comprehensive quality of students. By constructing such a multi-dimensional and dynamic teaching evaluation system, it can effectively promote the comprehensive development of students and lay a solid foundation for their future nursing career.

## 4. Conclusion

In the process of nursing education, the simulation flipped classroom is like a spring breeze, blowing the hearts of vocational nursing students seeking knowledge. It not only overturns the traditional teaching mode, but also sows the seeds of active exploration and courageous practice in the hearts of students. With the in-depth application of this teaching method, it's believed that nursing talents in the future will become more confident and professional. They will guard every moment of everyone's lives with full enthusiasm and exquisite skills.

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