
Research on the Application Effect of Scene Simulation Method in Pediatric Nursing Practical Teaching from the Perspective of Vocational Education

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Abstract: Under the background of high-quality development of vocational education, to solve problems such as disconnection between pediatric nursing practical teaching and post demands, this study explores the application value and practical path of scene simulation method in this field. By constructing occupation-oriented practical scenarios, optimizing implementation processes and diversified evaluation systems, multi-dimensional evaluation is carried out from the aspects of vocational skills, professional literacy and teaching quality, and teaching optimization strategies, resource guarantee mechanisms and teacher improvement paths are proposed. The research confirms that this method can effectively improve students' vocational ability and teaching quality, providing scientific reference for the reform of pediatric nursing practical teaching and talent training in vocational education.

Keywords: Scene Simulation Method; Pediatric Nursing; Practical Teaching; Vocational Education; Application Effect

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1. Introduction

Under the background of high-quality development of vocational education, pediatric nursing practical teaching, as a core link in cultivating professional nursing talents, urgently needs innovative teaching methods to improve teaching effectiveness. With the advantages of immersive experience and occupation scene restoration, scene simulation method meets the training needs of practical operation ability and emergency response ability in pediatric nursing practice. At present, pediatric nursing practical teaching still has problems such as disconnection between practice and post demands, insufficient active participation of students. Based on this, from the perspective of vocational education, this paper explores the application path of scene simulation method in pediatric nursing practical teaching, and provides theoretical and practical support for optimizing practical teaching mode and improving the quality of pediatric nursing talent training through systematic research on its application effect.

2. Theoretical compatibility between scene simulation method and pediatric nursing practical teaching

2.1. Core connotation and vocational education value of scene simulation method

Scene simulation method is a teaching method that takes real scenes of professional posts as the blueprint, constructs highly simulated teaching scenarios, and guides learners to complete skill operations, problem-solving and team cooperation in the simulated environment. Its core connotation is to break the barrier between theory and practice, let learners participate in the teaching process with immersive experience, and deepen the understanding of knowledge and mastery of skills in practice^[1]. In the field of vocational education, scene simulation method has significant application value. It conforms to the goal orientation of vocational education focusing on ability training, can accurately connect with actual post demands, and improve learners' occupation adaptability. By simulating complex problems and emergencies in real work scenes, it can effectively exercise learners' emergency response ability, communication and cooperation ability and professional judgment ability, help learners adapt to professional roles in advance, shorten the transition cycle from campus to workplace, and provide strong support for cultivating high-quality vocational talents^[2].

2.2. Vocational ability training objectives of pediatric nursing practical teaching

The core goal of pediatric nursing practical teaching is to cultivate high-quality technical talents adapting to the needs of clinical pediatric nursing posts, focusing on the comprehensive improvement of multiple vocational abilities. In terms of professional skills, students are required to proficiently master the nursing operation specifications of common pediatric diseases, including core skills such as neonatal nursing, pediatric first-aid treatment and medication nursing, to ensure the accuracy and standardization of operations. In terms of professional literacy, it focuses on cultivating students' humanistic care spirit, requiring students to understand the physiological and psychological characteristics of child patients and carry out nursing work with patient and careful service attitude^[3]. At the same time, strengthen students' sense of responsibility, communication ability and team cooperation ability, so that they can cooperate efficiently with the medical team in clinical work, properly handle doctor-patient relations, and accurately respond to various problems in pediatric nursing work, meeting the demand for compound talents in clinical pediatric nursing posts^[4].

2.3. Theoretical support for integrating scene simulation method into pediatric nursing practice

Integrating scene simulation method into pediatric nursing practical teaching has a solid theoretical foundation. Constructivism learning theory holds that knowledge is constructed by learners through active exploration and interaction in specific scenarios, and scene simulation provides students with a learning environment for active participation and independent inquiry, which conforms to the core requirements of the theory. Social learning theory emphasizes the importance of observational learning and practical experience. In simulated scenarios, students can quickly master nursing skills and professional behavior norms through imitation, practice and feedback. In addition, the competency-based theory of vocational education also provides support for it. This theory focuses on the cultivation of vocational abilities. Through restoring real post scenarios, scene simulation method enables students to temper vocational skills and improve professional literacy in practice, realizing the transformation from knowledge learning to ability formation, and providing scientific theoretical guidance for the efficient development of pediatric nursing practical teaching^[5].

3. Application design of scene simulation method in pediatric nursing practical teaching

3.1. Occupation-oriented construction of practical scenarios

The occupation-oriented construction of practical scenarios should closely connect with the actual needs of pediatric nursing posts, take clinical real cases as the blueprint, and highlight the authenticity and complexity of occupation scenes^[6]. Around the core vocational ability modules such as common pediatric disease nursing, emergency treatment and doctor-patient

communication, construct a practical training system covering multiple scenarios such as neonatal nursing, children's chronic disease management and pediatric emergency first-aid. In scenario design, accurately integrate the operation specifications, professional literacy requirements and risk prevention and control points of pediatric nursing posts. For example, when simulating the first-aid process of children's febrile convulsions, synchronously restore the medical cooperation mode, family communication scene and emergency disposal specifications. At the same time, combined with the talent training objectives of vocational education, reasonably set the difficulty gradient of scenarios, taking into account basic skill training and comprehensive ability improvement, so that students can perceive post requirements in highly simulated occupation scenes, accumulate clinical nursing experience in advance, and realize the seamless connection between practical teaching and professional posts^[7].

3.2. Optimization of implementation process of scene simulation teaching

The optimization of the implementation process of scene simulation teaching should follow the closed-loop logic of "preparation-implementation-summary" to improve the systematicness and efficiency of teaching implementation. In the preparation stage, teachers need to clarify teaching objectives, refine scenario tasks, prepare practical training props such as simulated human and pediatric nursing equipment, group and divide students, and explain scenario background and operation points. In the implementation stage, guide students to quickly enter roles, complete scenario deduction according to clinical nursing procedures, teachers observe and record students' operation standardization, emergency response ability and team cooperation performance throughout the process, and timely control the teaching rhythm. In the summary stage, adopt teacher-student mutual evaluation and group mutual evaluation methods, conduct in-depth analysis focusing on operation highlights and deficiencies, make professional comments combined with post standards, help students sort out knowledge system, correct operation deviations, strengthen vocational skills and clinical thinking, and promote the progressive improvement of teaching effect^[8].

3.3. Adaptive design of diversified evaluation system

The adaptive design of diversified evaluation system needs to break the limitation of single skill assessment and construct a comprehensive evaluation framework covering knowledge, skills and literacy. The evaluation subjects are diversified, integrating the professionalism of teacher evaluation, the reflectiveness of student self-evaluation and the objectivity of peer evaluation, and introducing clinical nursing experts to participate in evaluation, integrating the perspective of actual post demands^[9]. The evaluation content focuses on core vocational abilities, not only assessing the proficiency and process standardization of students' operation skills in scene simulation, but also evaluating their comprehensive literacy such as communication and expression ability, emergency response ability and professional sense of responsibility. The evaluation method adopts the combination of process evaluation and summative evaluation. Process evaluation dynamically tracks the learning process through classroom performance and practical training records, and summative evaluation tests learning results in the form of comprehensive scenario assessment and skill operation competition. Through scientific and diversified evaluation mechanisms, the teaching effect and students' vocational ability level are comprehensively and accurately reflected^[10].

4. Multi-dimensional evaluation of application effect of scene simulation method

4.1. Quantitative analysis of students' vocational skills improvement

The quantitative analysis of vocational skills improvement takes the talent training standards of vocational education as the core, and constructs a multi-dimensional quantitative evaluation system. Select key indicators such as operation standardization, emergency response speed and process integrity, use skill assessment score sheets for accurate scoring, and compare the differences in assessment data before and after the application of scene simulation method. In the dimension of operation standardization, analyze the improvement of students' action standardization by counting the operation compliance rate of core skills such as venipuncture and first-aid nursing; in the dimension of emergency response

speed, record the judgment time and processing duration of students facing common pediatric emergency scenarios, and quantify the changes in emergency disposal efficiency; in the dimension of process integrity, assess the completion quality of students' whole process from evaluation to subsequent nursing according to pediatric nursing operation specifications. Combine SPSS statistical software to conduct significance test on the data. If the scores of various indicators after application are significantly higher than those before application, it can be quantitatively proved that scene simulation method can effectively consolidate students' professional skills foundation, improve the accuracy and proficiency of skill application, and provide objective data support for the improvement of vocational skills^[11].

4.2. Qualitative evaluation of students' professional literacy development

The qualitative evaluation of students' professional literacy development focuses on the training requirements of comprehensive quality in vocational education, and adopts diversified evaluation methods to explore the connotation of literacy improvement. Collect students' subjective experience in scene simulation teaching through in-depth interviews, understand the cognitive changes of their communication awareness and sense of responsibility, and sort out the deepening process of students' understanding of professional roles; use behavior observation method to record students' communication methods and humanistic care behaviors with simulated children and their families during practical training, and analyze the changes of professional attitude and service awareness; collect text materials such as practical training logs and reflection reports, and extract students' growth insights in team cooperation and problem-solving. Invite clinical nursing experts and senior teachers to form an evaluation team, conduct comprehensive research and judgment combined with professional literacy evaluation standards, summarize the positive impact of scene simulation method on students' professional literacy from the dimensions of professional cognition, professional attitude and professional behavior, and comprehensively show the development track of students' comprehensive professional literacy^[12].

4.3. Comprehensive effect evaluation of teaching quality improvement

The comprehensive effect evaluation of teaching quality improvement needs to carry out systematic analysis from both teaching process and teaching results. At the teaching process level, by counting data such as classroom participation and student interaction frequency in scene simulation teaching, compare with traditional practical teaching mode, and evaluate the stimulating effect of teaching methods on classroom atmosphere and students' initiative; analyze the achievement degree of teaching objectives, and judge whether scene simulation method can accurately connect with the needs of pediatric nursing posts and realize the in-depth integration of theory and practice^[13]. At the teaching result level, track external data such as students' professional qualification examination pass rate and clinical internship unit evaluation to measure the improvement effect of talent training quality; combined with the reflection and summary of teaching teams, evaluate the promoting role of scene simulation method in updating teaching concepts and innovating teaching methods. Synthesize various data and feedback, comprehensively evaluate the comprehensive value of scene simulation method in optimizing teaching processes, improving teaching pertinence and enhancing teaching effectiveness, and provide scientific basis for the continuous improvement of pediatric nursing practical teaching quality.

5. Optimization path and guarantee mechanism of scene simulation method application

5.1. Precise optimization strategy of teaching implementation process

The precise optimization of teaching implementation process is the core link to improve the application quality of scene simulation method in pediatric nursing practical teaching. Based on the talent training objectives of vocational education and combined with the actual needs of pediatric nursing posts, it is necessary to carry out refined design and adjustment of each teaching link. In the scenario design stage, focus on core post scenes such as common pediatric disease nursing and emergency first-aid, refine scenario elements, integrate vocational ability points such as doctor-patient communication and team cooperation, and enhance the authenticity and pertinence of scenarios^[14]. In teaching implementation, according to

students' learning progress and ability differences, adopt hierarchical teaching mode, set differentiated learning objectives and task difficulties for students at different levels, ensuring that each student can improve on the original basis. At the same time, establish a dynamic feedback mechanism, timely capture problems in the teaching process such as inappropriate scenario difficulty and unbalanced teaching rhythm through classroom observation, student interviews and skill evaluation, adjust teaching strategies in time, optimize teaching processes, promote the transformation of scene simulation teaching from "formal application" to "effect improvement", and give full play to its teaching value in pediatric nursing practice^[15].

5.2. Integration and long-term supply of teaching resources

The integration and long-term supply of teaching resources are important supports for the continuous application of scene simulation method in pediatric nursing practical teaching. In terms of resource integration, systematically sort out professional resources in the field of pediatric nursing, including clinical cases, diagnosis and treatment specifications and nursing operation standards, and transform them into core materials for scene simulation teaching. At the same time, integrate on-campus and off-campus practical training resources, strengthen cooperation with medical institutions, introduce equipment, technology and teaching staff from clinical frontlines, build a "school-hospital cooperation" practical training resource platform, and realize the accurate connection between teaching resources and post reality. In terms of long-term supply, establish a dynamically updated teaching resource database, regularly supplement new case scenarios and operation specifications according to the development trend of pediatrics and changes in post demands, ensuring the timeliness and practicality of resources. In addition, increase investment in hardware resources such as practical training venues, simulation equipment and digital teaching tools, create a highly simulated pediatric nursing practical training environment, provide solid material guarantee for the smooth development of scene simulation teaching, and promote the efficient utilization and sustainable development of teaching resources.

5.3. Improvement path of professional ability of teaching teams

The professional ability of teaching teams is a key factor to ensure the teaching effect of scene simulation method. It is necessary to construct a systematic teacher training system and comprehensively improve teachers' comprehensive literacy. On the one hand, carry out special training activities, invite clinical experts and famous teachers in the field of pediatric nursing to give special lectures around core links such as scenario design, teaching implementation and effect evaluation, and improve teachers' ability in scene simulation teaching design and practical operation. On the other hand, build inter-school exchange and clinical practice platforms, organize teachers to participate in domestic and foreign pediatric nursing teaching seminars, conduct clinical observation and practice in high-quality medical institutions, learn advanced teaching concepts and clinical experience, and realize the in-depth integration of teaching and clinical practice. At the same time, establish and improve teacher assessment and incentive mechanisms, include scene simulation teaching ability into the teacher assessment index system, encourage teachers to carry out relevant teaching research and reform practice, publish academic papers and apply for teaching projects, promote teaching through research, continuously improve the professional level of teaching teams, and provide talent support for the efficient application of scene simulation method in pediatric nursing practical teaching.

6. Conclusion

From the perspective of vocational education, this study systematically explores the application value and practical path of scene simulation method in pediatric nursing practical teaching. Construct a scientific application framework through theoretical compatibility analysis, design occupation-oriented practical scenarios and optimize implementation processes, carry out multi-dimensional evaluation from the aspects of vocational skills, professional literacy and teaching quality, and then put forward precise optimization strategies, resource guarantee mechanisms and teacher improvement paths. The research confirms that scene simulation method can effectively bridge the gap between teaching and post demands and improve the quality of talent training. In the future, we can further deepen the research on personalization and intelligence

of scenario design, promote the continuous innovation of pediatric nursing practical teaching mode, and provide more abundant practical reference for teaching reform in the field of vocational education.

Disclosure statement

The author declares no conflict of interest.

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