

Exploration and Practice of Intelligent Teaching Mode of “Integration of Class and Competition” under OBE Concept

Yun Yu Fanghua Liu Shuanghua Yang Jie Han Han Shao*

Qingdao Binhai University, Qingdao, Shandong, 266555, China

ARTICLE INFO

Article history

Received: 29 July 2024

Accepted: 6 August 2024

Published Online: 30 September 2024

Keywords:

Wisdom

Ideological and Political Education

Integration of classes and competitions

Two-property and One-degree

ABSTRACT

In view of the requirements of “China Education Modernization 2035” undergraduate education and teaching reform, such as adhering to moral education, focusing on students’ business and getting practical results, and the popularization of intelligent technology, the curriculum teaching reform in colleges and universities presents the characteristics of digitalization, networking and intelligence with students as the center. Internal medicine nursing tries to construct a student-centered intelligent teaching model framework of “integration of class and competition” This class adopts BOPPPS teaching mode, take OBE as teaching concept, uses intelligent teaching platform, embeds competition and ideological and political elements into teaching content, innovates teaching methods, organically integrates knowledge, skills and humanities to enhance the “Two-property and One-degree” of the course, and cultivates students’ comprehensive ability. Through the design, implementation and application effect analysis of innovative classroom, this paper finds that this classroom teaching mode can make the classroom more active, students’ learning effect better and teaching satisfaction higher.

1. Introduction

The course teaching of nursing specialty not only carries the goal of cultivating students’ basic nursing skills, but also carries the goal of cultivating students’ nursing professionalism and the goal of clinical comprehensive thinking ability^[1]. With the integration and infiltration of Internet technology in the field of education, the era of intelligent teaching has come^[2]. The ideological and political construction of curriculum is the key link to implement the fundamental task of cultivating people by virtue of curriculum^[3]. In recent years, the national and provincial nursing skill competitions guided by the National Nursing Teaching Committee have paid more attention to students’ post competence, such as teamwork and compre-

hensive clinical thinking ability^[4-5]. Curriculum construction is an important part of specialty construction, and the focus of curriculum construction is to optimize curriculum mode and teaching mode. Therefore, aiming at the teaching concept of “OBE”, the internal medicine nursing has constructed a student-centered intelligent teaching model framework of “integration of lessons and competitions”.

2. The “integration of classes and competitions” intelligent teaching mode and innovative classroom design

Use the means of wisdom teaching to integrate the course ideological and political and skill competition into classroom teaching, and design the classroom around “one gender”. See Table 1 for the design path.

*Corresponding Author:

Han Shao,

Email: 1978961221@qq.com

Table 1. Classroom Teaching Design

design standards	Principles of classroom design	Classroom implementation path
Higher order	The teaching goal is the integration of ability, knowledge and quality.	Deep integration of intelligent autonomous learning, ideological and political education and project-based teaching content of competition
	The teaching content reflects the integration of disciplines.	Online and offline mixed teaching and project-based teaching
novelty	Teaching content reflects the clinical frontier.	Follow closely the assessment mode of skill competition and design project-based practical teaching cases.
	Innovation of teaching concept	OBE teaching concept
Challenge degree	Innovation of teaching methods and means	Using learning to integrate wisdom teaching platform and project-based teaching
	The teaching content is comprehensive, speculative and teamwork.	Wisdom teaching, the combination of ideological and political education and skill competition, and the integration of theory and practice
	Organic integration of process assessment and result assessment	Smart teaching platform combined with OSCE assessment

2.1 to enhance the classroom order

2.1.1 Based on “OBE teaching philosophy”, set high-order teaching objectives

According to the basic idea of “OBE teaching philosophy”, the goal of classroom teaching is to take students as the center and focus on cultivating students’ comprehensive ability, especially the ability to find and solve clinical problems. Therefore, the goal of classroom teaching guides students to apply what they have learned, think and speculate on the basis of learning knowledge, and cultivate students’ comprehensive clinical thinking ability.

2.1.2 Promoting the higher order of teaching content by interdisciplinary integration and intersection

Information technology is a powerful tool to realize the integration and intersection of disciplines. Using intelligent teaching platform to carry out mixed teaching, realize resource sharing and interactive learning. By skillfully designing project-based cases, integrating multi-disciplinary knowledge and cooperative learning, we can improve the high-order of teaching content and cultivate students’ comprehensive literacy and innovation ability.

2.2 highlight the classroom innovation

2.2.1 The teaching content reflects the frontier and the times

The teaching content reflects the latest medical research achievements, the development trends of medical technology, innovative cases of clinical practice, interdisciplinary integration and other contents, so that students can feel the update of knowledge and the impact of clinical technology innovation.

2.2.2 Adopt OBE teaching philosophy

Classroom teaching embodies student-centered, learning achievement-oriented^[5], student-oriented and teach-

er-assisted. Combined with BOPPPS teaching mode, we pay attention to students’ learning process and learning effect and design the teaching content in reverse in time to ensure that the teaching content is highly consistent with the learning objectives.

2.2.3 Adopt the project-based teaching mode of class-competition integration

The core of the project-based teaching mode of class-competition integration lies in the close combination of teaching content and competition activities. Integrating competition cases and OSCE assessment into course teaching will help students master competition skills in the learning process, stimulate their interest and motivation, and improve the teaching effect.

2.3 increase the challenge of the classroom

2.3.1 Moderately improve the difficulty and depth of the course

Based on the intelligent teaching method, the course and competition are integrated with project-based teaching, challenging teaching objectives are set, and more profound and extensive knowledge points are introduced to ensure that the course content is closely related to clinical needs. Through students’ autonomous learning and cooperative learning, students’ autonomous learning ability and teamwork ability are cultivated.

2.3.2 Reform the course assessment methods

Course assessment includes two forms: process assessment and result assessment, in which the process assessment accounts for 60%, including learning records, classroom performance, homework and practical achievements of smart teaching platform, and the result assessment accounts for 40%, and the theoretical closed-book assessment is adopted. The effective combination of the two course assessment methods improves the course challenge.

3. The concrete implementation of the intelligent teaching mode of “integration of class and competition”

The orientation of the training program for nursing professionals in our school is to cultivate high-quality applied talents with post competence. Internal medicine nursing is the core course of nursing specialty, and the teaching object is the third-year undergraduate students. Through the study

of the previous courses, the students can gradually connect the basic medical knowledge with the knowledge of clinical diseases, but the ability to find clinical problems and solve clinical problems by using nursing procedures needs to be strengthened, and the comprehensive clinical thinking ability has not yet been formed. This paper chooses “heart failure” in the third section of the third chapter of the course to show the concrete implementation of the intelligent teaching mode of “class-competition integration”.

3.1 Teaching content

Table 2. Teaching Contents of Heart Failure

Content classification	Specific content	Difficult point
theory	Chronic heart failure, acute heart failure	Judgment and nursing of heart failure
practice	Heart failure nursing (general nursing, special nursing)	Give correct and timely nursing measures according to the case scenario.
Ideological and political education	Scientific exploration spirit, feelings of home and country, social responsibility, humanistic quality and scientific thinking.	
Extended extension	The difficult problem in the stage of home treatment-the importance of disease self-management	Limitation of heart failure treatment and nursing-integrated care

3.2 Teaching objectives and ways to achieve them (see table 3)

Table 3. “Heart Failure” Teaching Goal and Realization Way

general objective for	concrete objectives	Ways and methods of realization
knowledge	To master the etiology and inducement, treatment, clinical manifestations, nursing problems and nursing measures of heart failure.	Online self-study materials push, discussion, pre-class test and classroom explanation in Rain Classroom.
	Learning and research ability	Online autonomous learning, project-based case group cooperation, classroom discussion
competence	Ability to apply what you have learned	Project-based case handling training
	Clinical comprehensive thinking ability	Problem-oriented heuristic teaching, situational progressive project case analysis and problem solving.
quality	Understand the importance of scientific and technological innovation, humanistic care and disease prevention.	Course Ideological and Political Education (using medical insurance negotiation examples, visual video teaching of heart failure patients’ mental journey, pathophysiology exploration of heart failure diseases)

3.3 Teaching management and evaluation (see Table 4)

Table 4. Detailed Rules for Teaching Evaluation of Internal Medicine Nursing Course

Assessment method	Assessment content	Scoring basis
Process assessment (60%)	Smart platform learning (10%)	Learning duration and discussion topic participation of smart platform
	Classroom performance (10%)	Comprehensive performance such as attendance, classroom interaction data of smart platform and classroom discussion.
	Unit test (10%)	Smart platform test scores
	Experimental results (10%)	Practice class performance (60%)+OSCE assessment (40%)
	Reading notes (10%)	Literature reading and reflection notes
Results assessment (40%)	Homework after class (10%)	Homework performance
	Closed book theory assessment (40%)	Test paper score

3.4 Teaching summary and reflection

The class line is divided into 2 class hours, the preview time is about 4 hours, the review and homework time is about 2 hours, and the total study time is about 8 hours. Students need to pay more time and energy to complete the above tasks, which is challenging to some extent. Based on the “OBE concept” and “one gender at a time”, through the design and implementation of “class-competition integration” intelligent teaching classroom, the course has realized the teaching objectives of improving students’ ability by using intelligent teaching methods and integrating theory with practice, and at the same time, embedding skills competition and ideological and political education to promote students’ literacy. The aspects that need to be improved include enriching the online teaching resources

of courses, strengthening the follow-up of the difficulties encountered by students in completing project-based case tasks in the process of autonomous learning, and the scientific design of training cases.

4. the application effect and discussion

The intelligent teaching class of “class-competition integration” was first implemented in the course of internal medicine nursing for the nursing specialty of grade 2020 in our school. Taking the nursing specialty of grade 2019 as the control grade, the teaching reform effect was verified by comparing the teaching effect (see Table 6) and teaching satisfaction (see Table 7). The teachers of grade two students are the same, and there is no significant difference in learning foundation and learning ability.

Table 5. Comparison of students’ usual grades

group	N	minimal value	max.	average value	standard deviation
Research group	51	45	96	76.28	16.06
control group	55	60	99	89.03	9.12

Table 6. Comparison of teaching satisfaction (n(%))

group	N	Very satisfied	be satisfied	Dissatisfied	Total satisfaction rate
Research group	51	28(54.9)	20(39.2)	3(5.8)	48(94.2)
control group	55	21(38.2)	26(47.3)	8(14.5)	47(85.5)
<i>χ² value</i>					4.253
<i>P value</i>					0.041

The results show that the average score of students in grade 2020 is lower than that of students in grade 2019, but the standard deviation is significantly higher than that of students in grade 2019, which shows that the average score of students in grade 2020 is more differentiated after teaching reform. The grade 2020 students’ final theoretical assessment score was (87.55±3.35), and the grade 2019 students’ final theoretical assessment score was (83.26±4.32), with statistical significance (P < 0.05). It shows that compared with the traditional teaching mode, the application of “class-competition integration” intelligent teaching classroom in the teaching of internal medicine nursing can improve students’ comprehensive ability and teaching quality. The reason is that the intelligent teaching classroom of “integration of class and competition” takes students as the main body of learning, and it can attract students’ attention by designing the teaching content of participatory and project-based case tasks. Accurately evaluate the problems existing in students’ autonomous learning through the information platform before class, and explain them accurately in class to improve teachers’ teaching efficiency; The classroom fully

mobilizes students’ learning enthusiasm and participation by means of information technology and ideological and political content, and helps students to further consolidate their mastery of relevant knowledge and improve their comprehensive ability through hierarchical homework after class^[6]. The study also showed that the teaching satisfaction of the research group was higher than that of the control group, with statistical significance (P < 0.05). This also shows that the intelligent teaching classroom of “integration of class and competition” has close communication between teachers and students and fair evaluation, which is more conducive to building a harmonious relationship between teachers and students and improving teaching satisfaction.

To sum up, the intelligent teaching classroom of “integration of class and competition” can make the classroom more active, the teaching management more efficient, the evaluation more scientific and the students’ learning effect better.

Fund Project

Research project of teaching reform in Qingdao Binhai

University: Exploration of Trinity Practice Teaching Mode of “Wisdom+Ideological and Political Education+Integration of Classes and Competitions” in Internal Medicine Nursing (2023JY14). Practical research on narrative education empowering applied nursing talents-Taking the course of Internal Medicine Nursing as an example (2023JY08). The general project of teaching reform in Shandong province’s undergraduate colleges and universities: “Innovative research and practice on the training system of diversified undergraduate nursing talents” (M2022049).

“This thesis is supported by the funds for teachers’ visiting and studying in ordinary undergraduate universities in Shandong Province”.

References

- [1] Wang Yunyun, Liu Zhiyan, Xiong Wuyan, et al. Practice and effect of basic nursing experimental teaching reform under the opportunity of nursing professional certification [J]. *China Higher Medical Education*, 2020,(12):76-77.
- [2] Zhang Jieqian. “Wisdom+Practice+Ideological and Political” Trinity Classroom Design and Implementation [J]. *Journal of Higher Education*, 2021,7(15):55-58+63.
- [3] Gao Deyi, Zong Aidong. From Ideological and Political Curriculum to Curriculum Ideological and Political Education: Constructing Ideological and Political Education System in Colleges and Universities from a Strategic Perspective [J]. *China Higher Education*, 2017(1):43-46.
- [4] Ministry of Education. Notice on Implementing the Spirit of the National Conference on Undergraduate Education in Colleges and Universities in the New Era [a]. Jiao Gaohan [2018] No.8.
- [5] Liu Juanli. Exploring the reform of clinical practice teaching guided by nursing skill competition [J]. *Health Vocational Education*, 2019 (20): 93-94.
- [6] Cui Kai, Meng Weihang, Ge Xiaoyan. Teaching reform of medical statistics based on OBE concept [J]. *Journal of Jinzhou Medical University (Social Science Edition)*, 2024,22(03):58-61+66.