



Importance of integrating ideological and political education into anesthesiology training

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Acknowledgement: This work was supported by the The Educational Research Project of Nanjing Medical University (SLYB 2023-02).

Declaration of conflict of interest: None.

Received October 28, 2024; Accepted February 17, 2025; Published March 31, 2025

Highlights

- Integrating ideological and political education into anesthesiology residency training enhances doctor-patient communication and humanistic care.
- Residents in the combined training model demonstrated improved professional competence and clinical skills compared to those in the traditional training model.
- Patient satisfaction was significantly higher in the observation group that received additional ideological and political education.
- Mini-CEX and DOPS assessments can effectively measure the impact of the new teaching model on resident performance and patient interactions.

Abstract

Objective: To evaluate the effectiveness of incorporating ideological and political education into anesthesiology residency training, using the Mini Clinical Evaluation Exercise combined with Direct Observation of Procedural Skills. **Methods:** Sixty resident physicians undergoing standardized training in the Anesthesiology Department of Jiangsu Cancer Hospital from December 2023 to June 2024 were randomly assigned to a control group and an observation group, with 30 residents in each. The control group received traditional clinical skill training, while the observation group received additional ideological and political education on the basis of control group. Both groups were evaluated using Mini Clinical Evaluation Exercise and Direct Observation of Procedural Skills. Patient satisfaction with the residents was rated anonymously, and student feedback on the training model was collected via a questionnaire. **Results:** The residents in the observation group demonstrated superior performance in doctor-patient communication, humanistic care, and professional competence compared to the control group. Patient satisfaction scores were also higher in the observation group. **Conclusion:** Integrating ideological and political education into standardized anesthesiology residency training can significantly enhance residents' communication skills, humanistic care, and professional competence, leading to higher patient satisfaction.

Keywords: Ideological and political education, standardized residency training, mini-clinical evaluation exercise, clinical skills, direct observation of procedural skills, teaching

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Introduction

Since the Ministry of Education released the Guidelines for Ideological and Political Education in Higher Education Curriculum in May 2020, integrating ideological and political education into university courses has become a crucial initiative for improving talent cultivation and achieving the “Three-Wide Education” goal [1, 2]. In medical education, it is insufficient for students to merely acquire clinical skills; they must also cultivate strong ethics and social responsibility. This is particularly critical in anesthesiology residency training, where both technical proficiency and humanistic care are paramount. Anesthesiology residents must master complex procedures, such as tracheal intubation and arterial and venous catheterization. However, surgical patients often endure emotional distress and physical pain due to illness and financial pressures, which can lead to feelings of hopelessness and even resistance to treatment. These challenges heighten expectations for anesthesiologists, who must not only demonstrate strong procedural skills but also effectively communicate, provide emotional support, and make sound ethical decisions.

Integrating ideological and political education into clinical skill training offers a way to enhance anesthesiology residents’ professional competence, moral integrity, and humanistic care [3]. This approach addresses the unique challenges faced by surgical patients by fostering a deeper awareness of humanistic care and social responsibility among residents, enabling them to better meet patients’ emotional and physical needs. Embedding ideological and political concepts into the entire clinical teaching process has become a vital and unavoidable focus of current educational reform [4, 5]. Despite its importance, research on the specific effects of integrating ideological and political education into procedural skill training in anesthesiology remains limited. Previous studies have shown that under the “New Medicine” framework, constructing an ideological and political system for anesthesiology graduate courses based on the Outcome-Based Education concept improves students’ clinical practice ability, enhances assessment outcomes, and increases satisfaction with graduate teaching [6]. To fully implement the “Three-Wide Education” concept, prioritizing moral education is essential. It is necessary to continuously explore the internal connection between anesthesiology and curriculum ideology and politics. By identifying the ideological and political elements within the “Anesthesiology” course and aligning them with students’ learning process-

es, educators can organically integrate these elements with professional training, thereby improving teaching efficiency and cultivating high-quality medical talent [7].

This study enrolled 60 resident physicians undergoing standardized training in the Department of Anesthesiology at Nanjing Medical University Affiliated Cancer Hospital between December 2023 and August 2024. It investigated the incorporation of ideological and political education into clinical procedural training, assessing its effectiveness with the Mini Clinical Evaluation Exercise (Mini-CEX) and Direct Observation of Procedural Skills (DOPS) systems. By combining ideological and political education with clinical skill training, the study aims to cultivate medical professionals with both exemplary moral integrity and advanced clinical skills, providing valuable insights for advancing educational practices.

Materials and methods

Ethics statement

All the participants provided informed consent prior to participating in the study. The ethics approval was obtained from the Institutional Review Board at Jiangsu Cancer Hospital.

Preparatory work

To ensure the effective implementation of the Mini-CEX and DOPS evaluations, specialized training was provided to the teaching staff. The research team developed tailored scoring criteria for procedural skills, aligning with the hospital’s clinical anesthesiology teaching requirements and the evaluation standards of the Mini-CEX and DOPS systems. Training sessions, including lectures and simulated teaching, were conducted to ensure that each instructor fully understood the methodology and steps involved in Mini-CEX and DOPS assessments. Furthermore, instructors were thoroughly familiarized with and required to internalize the specific scoring details for each evaluation criterion, ensuring consistency and reliability in the assessment outcomes.

Teaching process

In developing the curriculum for standardized residency training in procedural skills, our research team incorporated four routine clinical procedures: arterial puncture, nerve block, central venous catheterization, and lumbar puncture. During the two-month training period, the control group received standard skills practice

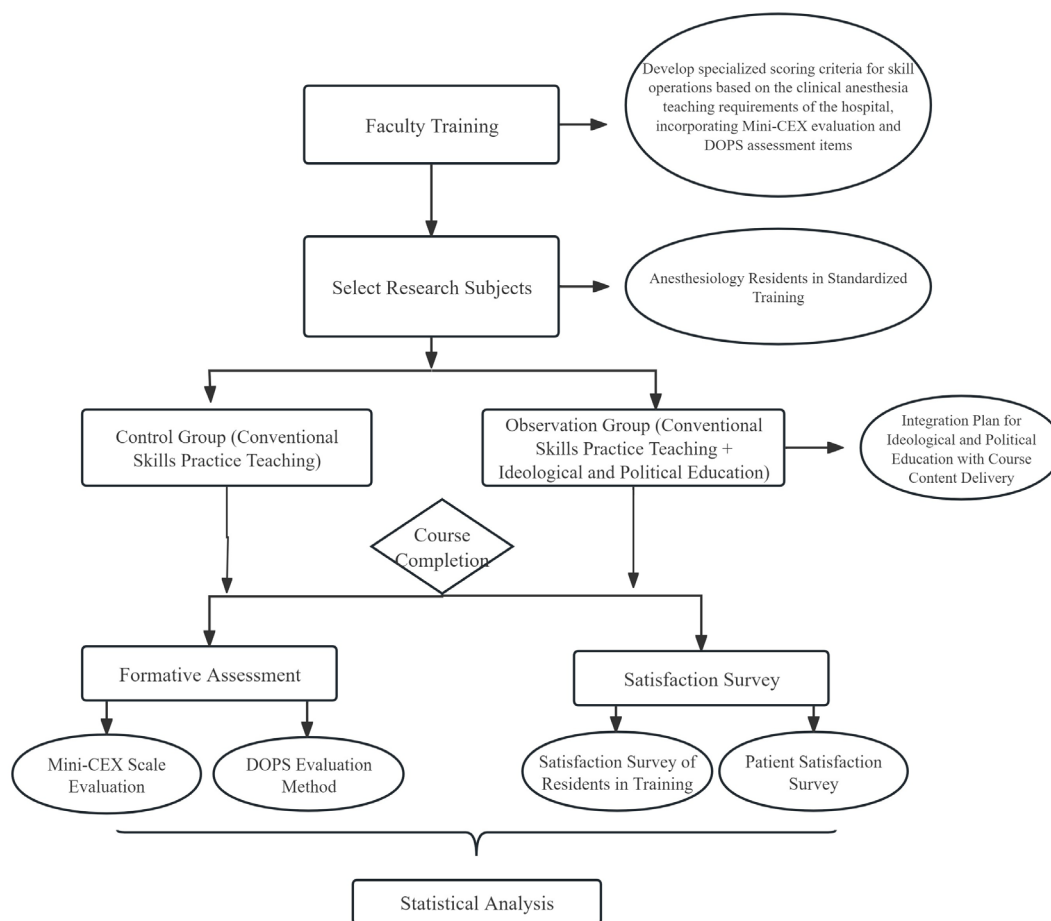


Figure 1. The flowchart of the process.

and was evaluated at the end of each month using the Mini-CEX and DOPS assessments. The observation group received the same standard skills practice with additional ideological and political education throughout the teaching process. Instructors in the observation group integrated elements of medical ethics into procedural skills training through consistent and timely interactions with students. Key values such as respect for life, dedication to science, commitment to medicine, and compassion for patients were woven into the technical instruction. By adopting patient-centered practices, including explaining the purpose of each procedure to patients, monitoring and responding to patients' reactions, and demonstrating genuine care, instructors subtly influenced students' attitudes and behaviors. Throughout the training, instructors reinforced the importance of precision, meticulousness, and standardized techniques, while also instilling the value of patient care and respect for life. The detailed flow of the teaching process is illustrated in **Figure 1**.

Observation indicators

Formative assessment

During the standardized training, residents selected patients requiring one of the following procedures: arterial puncture, central venous catheterization, nerve block, or lumbar puncture from those they were responsible for anesthetizing. After fully informing and obtaining consent from both the patients and their families, the procedural steps were incorporated into the assessment. Evaluators accompanied the residents throughout the procedure and provided on-site scoring and feedback, utilizing a modified Mini-CEX combined with the DOPS assessment system.

Mini-CEX evaluation

The Mini-CEX (Micro-clinical exercise evaluation) is a micro-multi-focus evaluation method known for its feasibility, reliability and efficiency. It is well-suited for daily clinical settings such as outpatient and inpatient wards. Implementing the Mini-CEX in clinical teaching enhances practical learning opportunities in bedside teaching and improves students' overall clinical abilities [8, 9]. This assessment includes ten scoring criteria: preoperative consultation, anesthetic planning, preoperative preparation, anesthetic procedure execution, intraoperative manage-

ment, communication skills, professionalism and confidence, responsiveness to instructions and accountability, overall clinical competence, and patient satisfaction.

DOPS evaluation

The DOPS assessment is an effective tool for teaching and evaluating anesthesia-related operation skills. It has been shown to enhance students' competency in anesthesia operations [10]. The DOPS assessment includes ten specific criteria, covering understanding of anesthetic procedure indications, knowledge of anatomy and techniques, obtaining preoperative informed consent, procedural preparation, adherence to aseptic practices, compliance with anesthetic protocols, appropriate escalation to senior physicians, professionalism in patient care, delivery of humanistic care, and an overall evaluation.

Both the Mini-CEX and DOPS employ a streamlined 9-point scoring system, with each criterion rated from 1 to 9. The maximum score for both evaluations is 90 points. The scoring criteria were tailored to reflect the specific attributes of each invasive procedure, ensuring a fair and relevant assessment. Each assessment session lasted 15 - 20 minutes, allowing sufficient time for observation of resident performance and feedback delivery. They specifically highlighted areas of excellence with positive remarks while also identifying aspects that require improvement. This approach ensures that residents receive clear, actionable insights into their clinical strengths and areas for development. The streamlined evaluation process is designed to minimize redundant assessments and comments while maximizing learning opportunities.

The combination of Mini-CEX and DOPS can improve the theoretical knowledge and clinical procedural skills of anesthesiology residents, increase teaching satisfaction among both students and educators, and enhance the overall quality of clinical anesthesia education. This evaluation model is particularly well-suited for application in the anesthesiology department, offering a robust framework for developing high-quality medical professionals [11].

Residents' satisfaction survey

A structured questionnaire was developed to evaluate the effectiveness of the training model from the residents' perspective. Responses were scored on a scale of 0 to 100 points, with higher scores indicating greater satisfaction with the training experience.

Patients' satisfaction survey

Patient satisfaction was assessed immediately following the completion of invasive procedures. Surveys were administered in the absence of the evaluated residents to ensure unbiased responses. The survey measured patients' perceptions of the physicians' diagnostic and treatment processes, with a maximum score of 100 points.

Statistical analysis

All statistical analyses were conducted using SPSS version 19.0 software. Continuous data were expressed as mean \pm standard deviation ($\bar{x} \pm s$), and comparisons between groups were conducted using the t-test. Categorical data were represented as proportions, with inter-group comparisons performed using the chi-square (χ^2) test. A p-value of less than 0.05 was considered statistically significant.

Results

A total of 60 anesthesiology master's students undergoing standardized residency training in the Department of Anesthesiology at Jiangsu Cancer Hospital were enrolled in this study. The participants were randomly assigned into a control group and an observation group, with 30 students in each group, using a random number method. In the observation group, there were 24 male and 18 female students, with an average age of (21.49 \pm 0.23) years (ranging from 22-24). In the control group, there were 26 male and 16 female students, with an average age of (21.38 \pm 0.35) years (ranging from 20-22). The gender and age distributions between the two groups were comparable, with no statistically significant differences ($P > 0.05$).

Comparison of Mini-CEX scores

The evaluation scores for intraoperative management, communication skills, responsiveness to instructions and accountability, integrity and confidence, overall clinical competence, and overall satisfaction in the observation group were significantly higher than those in the control group (all $P < 0.05$) (Table 1).

Comparison of DOPS evaluation scores between groups

The observation group also outperformed the control group in the DOPS assessment, with significantly higher scores in obtaining informed consent from patients or their families, profes-

Table 1. Mini-CEX scale (Score, Mean \pm Standard Deviation)

Evaluation Content	Control Group (n=30)	Observation Group (n=30)	t	P
Preoperative Visit	7.60 \pm 0.56	7.80 \pm 0.55	1.390	0.170
Anesthesia Plan Formulation	7.73 \pm 0.69	7.97 \pm 0.62	1.381	0.173
Preoperative Preparation	7.70 \pm 0.49	7.83 \pm 0.51	1.034	0.305
Anesthesia Procedure	7.83 \pm 0.64	7.93 \pm 0.64	0.602	0.549
Intraoperative Management	7.47 \pm 0.63	8.03 \pm 0.56	3.698	0.005 *
Communication Skills	7.27 \pm 0.70	7.73 \pm 0.58	2.825	0.007 *
Response to Instructions and Sense of Responsibility	7.13 \pm 0.68	7.73 \pm 0.52	3.832	0.003 *
Integrity and Confidence	7.37 \pm 0.61	7.93 \pm 0.58	3.662	0.005 *
Overall Clinical Competence	7.37 \pm 0.56	7.73 \pm 0.45	2.808	0.007 *
Overall Satisfaction	7.40 \pm 0.50	7.77 \pm 0.50	2.834	0.006 *

Note:*=P<0.05 compared to control group.

sionalism and patient management, ability to correctly and promptly seek assistance from senior physicians, humanistic care, and overall assessment (all P < 0.05) (Table 2).

Comparison of student satisfaction with teaching models

The satisfaction score of residency physicians in the observation group regarding the teaching model was 92.83 \pm 2.18, significantly higher than 87.43 \pm 2.70 in the control group (P<0.05) (Table 3).

Comparison of patient satisfaction between two groups

The patient satisfaction with the physician's diagnostic and treatment process in the observation group was 92.97 \pm 2.15, notably higher than 87.23 \pm 2.91 of the control group (P<0.05) (Table 3).

Discussion

The role of ideological and political education in anesthesiology courses

The clinical skill training curriculum in anesthesiology covers a wide range of teaching content and knowledge points. As a high-risk, high-stress, and highly practical discipline, anesthesiologists must be equipped with not only advanced technical proficiency but also exceptional professional integrity. With the expanding role of anesthesiology in medical services and patient safety, the ethical expectations for resident anesthesiologists continue to rise. Ideological and political education (IPE) is a fundamental component in modern higher education.

Its primary objective is to transform course knowledge into core values and personal qualities, ultimately improving the overall quality of education and talent development [12, 13]. IPE plays a vital role in medical education, particularly in anesthesiology, where strengthening IPE is essential for achieving training goals and advancing the quality of talent cultivation. Standardized anesthesiology training programs should comprehensively integrate IPE resources to improve teaching quality across objectives, methods, content, and evaluation [14]. This integration fosters a holistic approach to education that combines knowledge transmission and character development. The ultimate goal is to cultivate anesthesiologists with both high moral and professional standards, aligned with the mission of standardized residency training in anesthesiology.

Integration of IPE and teaching evaluation

Traditional clinical skills assessment often face limitations in format and feedback quality, particularly in evaluating humanistic aspects of medicine such as doctor-patient communication and professional integrity. An effective evaluation system for IPE is essential, as the absence of assessment and feedback impedes timely teaching improvements [15, 16]. The Mini-CEX and DOPS are flexible and rapid assessment tools that incorporate humanistic medicine elements, including medical ethics, communication skills, and professional integrity. These tools provide scientifically grounded evaluations, facilitating clinical training through feedback-driven exercises that swiftly improve clinical skills. This teaching model effectively merges problem-based learning with practice content [17-19]. The combined use of Mini-CEX

Table 2. DOPS evaluation method (Score, Mean \pm Standard Deviation)

Evaluation Content	Control Group (n=30)	Observation Group(n=30)	t	P
Mastery of Anesthesia Indications	7.63 \pm 0.56	7.87 \pm 0.63	1.603	0.114
Understanding of Anatomy and Procedural Technique	7.77 \pm 0.63	7.80 \pm 0.61	0.209	0.835
Informed Consent with Patient or Family Pre-operatively	7.43 \pm 0.77	8.13 \pm 0.51	4.143	0.001 *
Procedure Preparation	7.80 \pm 0.55	7.73 \pm 0.53	0.481	0.631
Aseptic Technique	7.77 \pm 0.50	7.80 \pm 0.55	0.245	0.808
Compliance with Standards in Anesthesia Procedures	7.77 \pm 0.43	7.90 \pm 0.55	1.049	0.299
Ability to Seek Timely Assistance from Senior Physicians	7.40 \pm 0.62	7.87 \pm 0.57	3.028	0.003 *
Professional Competence and Patient Management	7.53 \pm 0.63	8.03 \pm 0.61	3.114	0.003 *
Humanistic Care	7.43 \pm 0.68	7.93 \pm 0.58	3.060	0.003 *
Comprehensive Evaluation	7.57 \pm 0.50	7.93 \pm 0.52	2.771	0.008 *

Note:*=P<0.05 compared to control group.

Table 3. Satisfaction scores of residents on incorporating ideological and political education into training (Score, Mean \pm Standard Deviation)

	Control Group (n=30)	Observation Group (n=30)	t	P
Student Satisfaction	87.63 \pm 2.53	92.83 \pm 2.18	t=9.035	<0.01
Patient Satisfaction	87.03 \pm 2.97	93.19 \pm 1.99	t=9.591	<0.01

and DOPS offers distinct advantages by closely simulating real clinical scenarios. This approach not only provides a comprehensive evaluation of students' technical proficiency but also assesses professional integrity, empathy, and communication abilities [20]. Previous studies have explored the integration of IPE throughout the entire teaching and training process of Traditional Chinese Medicine clinical skill courses, offering valuable insights for the reform of IPE in Traditional Chinese Medicine clinical training [21]. Furthermore, research from a moral development perspective in clinical medicine curricula, such as oral sciences, indicates that ideological and political guidance helps shape proper values and contributes to the cultivation of well-rounded medical professionals [22].

In this study, the evaluation using the Mini-CEX and DOPS showed that the observation group significantly outperformed the control group in critical areas, including obtaining informed consent, appropriately consulting senior physicians, demonstrating professional competence, managing patient care, showing empathy, and overall assessment. Students who received IPE showed superior performance in intraoperative management, communication skills, responsiveness to instructions, responsibility, integrity, confidence, clinical competence, and overall

satisfaction. These findings indicate that a comprehensive evaluation system not only provides a fair and thorough assessment of professional skills but also enhances self-directed learning, ultimately helping students master anesthesiology more effectively. IPE guidance offers anesthesiology students a profound understanding of the responsibilities and obligations underlying technical procedures. This guidance increases students' respect for the anesthesiology profession and fosters a genuine understanding and acceptance of its ethical imperatives. Consequently, students become more cautious and attentive in their practice, recognizing the significant impact of their actions on patients' lives. Cultivating this sense of responsibility is crucial in promoting professional integrity, preparing students to undertake anesthesiology work with greater accountability [23].

The role of IPE in enhancing humanistic care and patient satisfaction

The results demonstrate that incorporating IPE elements into residency training significantly improved patient satisfaction during clinical invasive procedures. This highlights the value of integrating IPE into residency training in procedural skills. IPE encourages students to priori-

tize patient rights and safety, promoting respect for patient privacy and dignity. Humanistic care goes beyond physical health, addressing patients' psychological and emotional well-beings. Surgical patients often experience anxiety and fear, and empathy and support from medical staff are critical. IPE guides students to attend to patients' mental health by providing verbal and behavioral encouragement, recognizing patient needs, and delivering timely care.

Improved teaching satisfaction and increased student engagement

This study also found that students in the observation group reported significantly higher satisfaction with the teaching process compared to the control group. This increased satisfaction may stem from IPE's ability to help students recognize that medical education involves not only technical instruction but also cultivating social responsibility and values [24]. Through IPE, students may gain a deeper understanding of their professional responsibilities, leading to enhanced engagement and a stronger sense of purpose in their educational journey. Integrating IPE into anesthesiology clinical skills teaching encourages instructors to adopt diverse and student-centered teaching methods. This innovative teaching methods can further boost students' interest, promote active participation, and enhance their sense of accomplishment, ultimately improving their satisfaction with the teaching process.

Improvements and future prospects for the IPE evaluation system

While this study demonstrated the effectiveness of integrating IPE in anesthesiology education, several limitations highlight areas for further refinement. While the Mini-CEX and DOPS evaluation systems were effective in assessing clinical skills, potential subjectivity and limitations in fully capturing the breadth of students' capabilities remain concerns. Developing a more detailed and tailored set of assessment indicators specifically for anesthesiology could enhance the scientific validity and reliability of the evaluation process. Additionally, applying IPE in anesthesiology education must keep pace with advances in medical technology and evolving healthcare needs. Achieving this requires regular updates to teaching content, enhanced faculty training, robust feedback mechanisms, and strengthened interdisciplinary collaboration. These enhancements will contribute to a more comprehensive and effective anesthesiology education framework.

Conclusion

This study validated the effectiveness of IPE in standardized residency training for anesthesiology, especially through the application of the Mini-CEX and DOPS evaluation systems. The results demonstrate the significant value of IPE in enhancing students' clinical competencies and professional ethics. This provides an important reference for future improvements in teaching anesthesiology skills and lays the foundation for broader IPE integration in medical education. As teaching practices continue to evolve, the comprehensive integration of IPE will help cultivate anesthesiologists with both high-level professional skills and exemplary medical ethics, providing robust talent support for the sustainable development of healthcare.

Author contributions: Zhenghuan Song, Jing Tan, and Tongyan Liu conceived and designed the study; Miao Zhou, Tingting Bao, Zhu Yu, Yihu Zhou, Mengling Huwang, Qinyu Bao performed experiments; Jing Tan, Miao Zhou contributed significantly to analysis and manuscript preparation; Zhenghuan Song, Jing Tan, Tongyan Liu performed the data analyses and wrote the manuscript; Miao Zhou, Tingting Bao helped perform the analysis with constructive discussions.

References

- [1] Wang YT, Jing WJ, Huang XH, et al. Promoting the Construction of the Ideological and Political Teaching Materials from the Perspective of the Three-wide Education. *Res Adv Educ* 2023;2(5):20-26.
- [2] Liu M, Xu X. "Three-Wide Education" Reform, Innovation, and Practice in Guangdong University of Petrochemical Technology. *J Contemp Educ Res* 2024;8(1):186-191.
- [3] Yu J, Wang J, Ji H. Research on curriculum Ideological and political teaching model innovation in Higher vocational medical colleges -- taking medical professional curriculum as an example. *Mod Vocat Educ* 2021;32(32):208-209.
- [4] Liu C, Qiao L, Kang XW, et al. The exploration and implementation path of integrating curriculum ideology and politics into clinical medicine practice teaching. *Basic Med* 2023;5(1):29-31.
- [5] Wang XY, Huang Y, Zhang W, et al. A Preliminary Study on the Ideological and Political Model of Postgraduates from the perspective of All-round Education A Case Study of West China School of Medicine, Sichuan University (SCU). *J Xihua Univ (Philos Soc Sci)* 2020;39(1):12-21.

- [6] Tan QY, Wang QD. Ideological and political construction and practice of OBE concept Anesthesiology graduate course under the background of "New medicine". *Contin Med Educ China* 2024;16(5):144-149.
- [7] Lei EJ, Pan TY. Discussion on curriculum ideology and politics in anesthesiology teaching from the perspective of "three whole education". *Educ Teach Forum* 2024;(41):135-138.
- [8] Yang D, Jin ML, Bai CX. Application and significance of Mini-CEX in clinical teaching and Learning assessment: A case study of 8-year clinical bedside teaching in respiratory department. *Med Philos (B)* 2014;35(5):87-89.
- [9] Li HW, Ban B, Yao B, et al. Mini clinical practice of evaluation in the teaching of medical students clinical application. *Chin J Diagn (Electron Ed)* 2015;(4):260-261.
- [10] Lin SY, Yin ZL, Gao J, et al. Application and evaluation of direct observation of procedural skills in anesthesia-related teaching. *Chin J Med Educ Res* 2016;15(12):1251-1254.
- [11] Guo N. Application of improved Mini-CEX combined with DOPS in anesthesiology teaching. *Res - Chin Sci Technol J Database* 2022;(5):16-19.
- [12] Wang SQ, Xun Y, Gong FQ. Realistic barriers, practical gist and promoting strategies of curriculum thinking and politics. *Sci Educ* 2023;39(4):63-68.
- [13] Wu T. The Design and Implementation of PBL in College English Reading Teaching under the Background of Curriculum Ideology and Politics. *Adv Educ* 2024;14(8):1377-1382.
- [14] Huang J, Ji LY. the season start a prairie fire. - Take the computer major course as an example. *Educ Teach Forum* 2020;9(9):32-33.
- [15] Zhu N, Liang XH, Li GZ, et al. Application of teaching reform in clinical nursing teaching. *Educ Theory Appl* 2024;6(2):28-30.
- [16] Li WW, Xiao M, Zhang YN, et al. Research on the influence of online teaching problems and improvements on graduate students' willingness to continue to use. *J Grad Educ* 2023;(03):53-62.
- [17] Luo XP, Liang AP, Yin Y, et al. Discussion on the difference of expectations between anesthesia nurses and anesthesiologists on the role of anesthesia nurses. *Chin Nurs Manage* 2014;10(10):1089-1091.
- [18] Gu JT, Tian GP, Tang X, et al. Application of improved Mini-CEX in teaching rounds of anesthesiology residents. *Chin J Med Educ Explor* 2019;18(6):631-635.
- [19] Qin Q, Zheng LQ, Wu JJ, et al. Application of situational teaching based on Mini-CEX assessment in clinical thinking training of health assessment. *Health Vocat Educ* 2022;40(4):65-66.
- [20] He YN, Qi DJ, Chen XY, et al. Application of direct observation assessment of operational skills as formative evaluation in basic medical and health service graduation internship. *Chin J Gen Pract* 2021;19(6):1026-1028,1052.
- [21] Li YJ, Wang JL, Mao N. Exploration on ideological and political teaching of TCM clinical skills training course for TCM specialty. *Chin Tradit Med Mod Dist Educ* 2024;22(8):19-22.
- [22] LIN D, LINLIN, SONGYUEFENG, et al. Ideological and political exploration and practice of oral science course in clinical medicine specialty from the perspective of Lide and people; proceedings of the Proceedings of the 18th Annual Conference of Oral Medicine Education of Chinese Stomatological Association Oral Medicine Education Committee in 2023, F, 2023 [C].
- [23] Xu W, Wang JF, Tian XY. Research on the teaching reform of Ideological and Political course for Medical majors based on literacy orientation. *Educ Res* 2024;6(4).
- [24] Zhang ZM. Thoughts on Ideological and Political Construction of Characteristic Courses in Colleges and Universities of Traditional Chinese Medicine. *J Nanjing Univ Tradit Chin Med (Soc Sci Ed)* 2021;22(4):235-241