

Constructing Online Open Courses in Geriatric Nursing for Secondary Vocational Schools Using the OBE Framework

Xin Han^{1,2}, Yingying Li¹, Li Li¹, Liang Li^{1*}

¹Zaozhuang Vocational College, Zaozhuang 277000, Shandong Province

²Zaozhuang Health School, Zaozhuang 277800, Shandong Province, China

*Corresponding author: Liang Li, hxzzwx@126.com

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Abstract: Based on the Outcome-Based Education (OBE) concept, the design of the secondary vocational online open course “Geriatric Nursing” plays a crucial role in enabling students to effectively acquire relevant knowledge and skills in geriatric nursing. First, an integrated design of learning outcomes should be established in line with the OBE framework, clearly outlining the competency levels students must achieve in geriatric nursing. Second, a structured curriculum must be developed to address the practical needs of geriatric nursing roles, ensuring course content aligns with real-world applications. Lastly, it is essential to implement a student-centered approach that combines online and offline teaching, prioritizing the learning experience and personalized needs of students. Adhering to the principles of “integrated design, structured curriculum, and blended teaching,” the development of the “Geriatric Nursing” online open course facilitates the transition from discipline-oriented to goal-oriented instruction and shifts the focus from teacher-centered to student-centered learning, ultimately advancing the training of geriatric nursing professionals.

Keywords: OBE; Aged care; Open online courses; Secondary vocational school

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1. Introduction

Outcome-Based Education (OBE) is an educational philosophy emphasizing student-centered, ability-focused, goal-oriented, and needs-driven approaches [1-3]. This concept advocates a reverse design of educational objectives, curriculum content, implementation, and evaluation, with a focus on the competencies students are expected to achieve as learning outcomes [4]. OBE has demonstrated significant success in foundational courses such as basic nursing science and nursing ethics, as well as in clinical nursing education [5-9].

The OBE framework prioritizes students’ final learning outcomes, emphasizing the competencies acquired upon course completion. For the Geriatric Nursing course in secondary vocational schools, this entails ensuring that students master professional geriatric nursing skills and can provide high-quality care to elderly patients.

Traditional teaching models have demonstrated limitations in achieving these goals. In contrast, online open courses offer a robust platform to implement the OBE framework effectively.

Online open courses provide advantages such as overcoming spatial and temporal constraints and offering diverse and rich resources. The interactive capabilities of online platforms enable teachers to monitor students' progress more effectively and provide timely feedback, aligning with the formative assessment practices central to the OBE philosophy. This approach allows for more efficient training of professionals who meet the practical requirements of geriatric nursing roles, thereby enhancing the overall quality of geriatric nursing services.

2. Integrated design of learning outcomes based on the OBE concept

The OBE concept emphasizes defining learning outcomes to guide the reverse design and organization of teaching activities ^[10]. The online open course “Geriatric Nursing” aims to meet the specific needs of geriatric nursing positions and the practical care scenarios of elderly patients. It integrates theoretical knowledge acquisition, practical skill enhancement, comprehensive case analysis, and professional ethics cultivation while embedding ideological and cultural elements such as humanistic care, dedication, and filial piety. The ultimate teaching goal is to achieve a “trinity” of knowledge, skills, and literacy. Accordingly, the overall learning outcomes for the course are defined as follows:

2.1. Knowledge objectives

- (1) Understand geriatric care practices, procedures, and standards, with the ability to identify common health risks for elderly patients, such as falls, pressure sores, and choking.
- (2) Be familiar with the functions, usage methods, and precautions of various elderly care aids (e.g., wheelchairs, walkers, and nursing beds) and demonstrate the ability to guide their correct usage.
- (3) Apply acquired knowledge to assess the life circumstances and conditions of elderly patients, enabling the development of personalized nursing plans.
- (4) Utilize learned knowledge to enhance the scientific approach and effectiveness of elderly nursing practices, optimizing processes and outcomes.

2.2. Competency objectives

- (1) Acquire the ability to independently study geriatric nursing, foundational medicine, rehabilitation training, psychology, and emerging nursing technologies.
- (2) Demonstrate proficiency in locating relevant information for geriatric care through professional books, academic databases, online medical platforms, and other media resources.
- (3) Analyze and synthesize geriatric nursing cases to draw meaningful conclusions, apply lessons learned to similar situations, and foster critical thinking skills.
- (4) Integrate theoretical and practical knowledge to design and implement elderly nursing plans, with the flexibility to adjust measures according to situational needs.

2.3. Quality objectives

- (1) Demonstrate strong professional ethics and a sense of responsibility by showing respect, care, patience, and compassion toward elderly patients.
- (2) Perform nursing duties in compliance with relevant laws and regulations, ensuring adherence to legal

requirements in geriatric nursing while safeguarding the legitimate rights and interests of both elderly patients and caregivers.

- (3) Exhibit effective communication and coordination skills with hospital management, community health institutions, family members, and other external stakeholders to facilitate seamless nursing operations.
- (4) Collaborate proficiently with internal team members such as medical staff, rehabilitators, and dietitians to deliver comprehensive and high-quality care for elderly patients.
- (5) Cultivate awareness of potential risks in geriatric nursing, including sudden health changes or accidents, to prioritize and ensure the safety of elderly patients.

3. Constructing structured courses for elderly nursing positions

Based on the learning outcomes of the online open course “Geriatric Nursing” in secondary vocational schools, structured courses can be developed to meet the specific needs of geriatric nursing positions. These courses integrate the real-world requirements of geriatric nursing practice, aligning with actual operational processes and professional standards. The curriculum system is designed around the application of geriatric nursing knowledge and skills to address common health problems in elderly populations. This approach ensures that students gain a deep and comprehensive understanding of both practical operations and theoretical applications in geriatric nursing.

3.1. Arrangement of teaching content

The online open course “Geriatric Nursing” in secondary vocational schools comprises six modules and 23 tasks, as outlined in **Table 1**.

Table 1. Teaching content arrangement for the open online course in geriatric nursing

Module	Task
Module 1: Older People with an Aging Population	Task 1: Aging and geriatric care Task 2: Geriatric care
Module 2: Comprehensive Assessment of Elderly Health	Task 1: Physical, mental, and social health assessment of the elderly Task 2: Assessment of quality of life, pain, and life experience of the elderly
Module 3: Daily Life Care for the Elderly	Task 1: Diet care for the elderly Task 2: Elderly activity nursing Task 3: Elderly excretion nursing Task 4: Elderly sleep nursing Task 5: Medication care for the elderly Task 6: Elderly safety precautions nursing
Module 4: Care of Common Health Problems and Diseases in the Elderly	Task 1: Chronic obstructive pulmonary disease Task 2: Coronary heart disease Task 3: High blood pressure Task 4: Diabetes Task 5: Alzheimer’s disease Task 6: Parkinson’s disease Task 7: Osteoporosis in old age Task 8: Visual impairment
Module 5: Care of Common Mental and Spiritual Problems in Old Age	Task 1: Nursing for geriatric anxiety disorder patients Task 2: Nursing for geriatric depression patients Task 3: Nursing for retirement syndrome patient Task 4: Nursing for patients with empty-nest symptom
Module 6: Life Education for the Aged	Task 1: Care of the elderly at the end of life

3.2. Integration of ideological and political elements

To effectively implement the fundamental task of fostering moral values and educating individuals, the online open course “Geriatric Nursing” in secondary vocational schools integrates ideological and political education resources within the existing curriculum framework^[11]. This integration is achieved through two primary approaches. First, the curriculum highlights the development of the elderly care sector to inspire a sense of responsibility and mission among students. By understanding the advancements made in elderly care in response to an aging population, students gain insight into the positive impact of health security for older adults. Second, through the contextual application of elderly nursing, students are guided to comprehend the socialist core values and the essence of relevant national policies.

Ideological and political elements are seamlessly embedded into each course module. By incorporating touching narratives and exemplary deeds from the elderly nursing field, the curriculum integrates themes such as humanistic care, professional ethics, and social responsibility. This approach ensures that ideological and political teaching is deeply intertwined with professional education, thereby enhancing the overall educational impact.

3.3. Modular teaching design

The online open course “Geriatric Nursing” in secondary vocational schools adopts a modular teaching design based on the framework of “theory-skills-development.” This reorganization of knowledge points allows for the independent structuring of each content module, facilitating flexible selection, combination, and arrangement of course materials to cater to diverse teaching scenarios and learning needs.

- (1) Modules 1, 2, and 6: These modules focus primarily on theoretical learning, delivered through a combination of “online resource learning + online exercise testing + offline topic discussion.” This approach establishes a strong foundational knowledge base, enhances independent learning skills, and nurtures professional competency. Before each class, instructors upload teaching materials for students to study independently. Students then participate in group discussions on specific topics and complete assessments to reinforce their understanding of key concepts.
- (2) Modules 3, 4, and 5: These modules emphasize practical nursing skills and address common psychological problems in the elderly. The focus is on technical aspects of elderly nursing, particularly the application and execution of skills for managing common health issues among older adults. Practical abilities are cultivated through “online video tutorials + offline skill-based training + comprehensive project-based operations.” Students are organized to conduct health assessments, formulate nursing plans, and perform nursing procedures for elderly patients.
- (3) Expansion module: This module employs “real case analysis + group collaboration and exploration” to develop communication skills, teamwork abilities, and innovative practices. Students are encouraged to showcase their creative outputs on digital platforms, such as personalized elderly care plans and rehabilitation training programs.

This modular design ensures the integration of theoretical knowledge with practical application, enabling students to acquire a comprehensive skill set that meets the demands of geriatric nursing positions while fostering innovation and collaboration.

4. Design of student-centered online and offline blended teaching

4.1. Design principles

The teaching framework for “Geriatric Nursing” in secondary vocational schools is centered on addressing students’ personalized growth and diverse learning needs. The approach employs real-life cases to introduce geriatric nursing scenarios and problem-based situations, constructing learning tasks with practical relevance and scenario-based characteristics. This design aims to stimulate students’ motivation for independent learning through a modular-driven, blended teaching method.

Students are guided to observe the conditions of elderly patients, formulate nursing plans, and perform nursing operations. Concurrently, a comprehensive evaluation index system is meticulously developed, focusing on process, value-added outcomes, and result-based learning effectiveness. This system supports continuous and multifaceted assessment throughout the learning process, enabling dynamic optimization of the teaching approach. The overall goal is to enhance students’ abilities in disease assessment, nursing plan development, and practical nursing execution.

4.2. Teaching activity process

In accordance with the curriculum structure, the online and offline blended teaching model integrates teacher guidance, modular instruction, and student-centered activities. This approach shifts the focus from “teaching” to “learning” as the central objective ^[12].

The teaching practice adopts the PDCA cycle model of “pre-class planning (Plan, P), in-class execution (Do, D), in-class evaluation (Check, C), and post-class reinforcement (Act, A).” This model encourages students to engage in the sequence of “independent learning, guided instruction, and practical application,” achieving seamless integration of learning, teaching, and practice.

- (1) Pre-class planning (Plan, P): Three days prior to each class, the teacher defines specific teaching objectives tailored to students’ learning needs and course content. Relevant course resources are disseminated via the teaching platform to stimulate students’ interest in independent exploration and learning.
- (2) In-class execution (Do, D): To address unresolved issues from pre-class independent learning, the teacher adjusts classroom content and methods accordingly. Detailed guidance is provided using typical elderly nursing cases, supplemented with pre-prepared or collected engaging questions to stimulate students’ critical thinking and enhance their interest in the subject. Various instructional methods, such as multimedia demonstrations, simulated scenarios, and physical model displays, are employed to simplify complex concepts. Students’ operational skills are strengthened through group cooperative exercises, incorporating values such as compassion for the elderly, respect for life, and a professional ethos of responsibility, patience, and meticulousness during practical sessions.
- (3) In-class evaluation (Check, C): Research indicates that teachers can track students’ performance using test result analysis charts, allowing real-time monitoring of learning progress and adjustment of teaching content ^[13]. To this end, phased assessments are integrated into the course. Teachers create and publish time-limited quizzes based on key and challenging topics to ensure the effectiveness of classroom instruction. Practical training sessions further assess students’ assimilation and application of knowledge. These sessions include group case-based practice, testing students’ ability to apply theoretical knowledge, and enhancing their skills. Teachers identify learning gaps and use this feedback to inform subsequent instruction.

- (4) Post-class reinforcement (Act, A): Based on in-class assessments and practical feedback, targeted after-school practice is designed to address identified gaps. Extracurricular activities aim to deepen understanding, refine skills, and promote balanced development of moral character and professional competence, bridging the gap between theory and practice.

5. Conclusion

As an advanced educational framework, the Outcomes-Based Education (OBE) approach emphasizes learning outcomes as the foundation for designing teaching activities. It supports the formulation of teaching strategies, content, and methods while promoting continuous improvement and innovation in curriculum and evaluation systems to align with students' expected learning objectives^[14,15].

Guided by the OBE concept, the secondary vocational open online course "Geriatric Nursing" was developed to enhance teaching effectiveness. Utilizing an online platform and fostering collaboration between educational institutions and nursing or medical facilities, the course leverages shared teaching resources to advance curriculum construction. This advancement encompasses the restructuring of teaching content, integration of resources, innovation in teaching methodologies, and optimization of teaching management.

The course effectively combines offline practical training with online theoretical instruction, fostering students' autonomous learning capabilities and enhancing teachers' ability to deliver targeted instruction. This integrated approach improves the overall efficiency of teaching activities, shifting the focus from discipline-oriented to goal-oriented education, and from teacher-centered to student-centered learning.

By adopting this model, the course establishes a robust foundation for cultivating highly skilled geriatric nursing professionals, addressing the growing societal demand for quality elderly care services.

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