

# Reconstruction and Practice of Online-Offline Hybrid Teaching Model for Higher Vocational Maritime English under the OBE Concept

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**Abstract:** Against the backdrop of the globalization of the shipping industry and policies promoting the informatization of vocational education, this paper addresses the current issues in higher vocational maritime English teaching, such as low classroom participation, low skill conversion rate, and low job fit. It deeply integrates the OBE concept with online-offline hybrid teaching to reconstruct the teaching model for higher vocational maritime English. The study first analyzes the alignment between the OBE concept and higher vocational maritime English teaching in terms of goals, practice, and improvement. It then proposes practical pathways, including the construction of a "DACUM-OBE" dual-track goal matrix, the development of "three databases and one platform" resources, the design of "pre-class, in-class, post-class" three-stage teaching activities, and the innovation of a "dual-line, three-dimensional" evaluation system. Practice shows that this model has increased the pass rate of students' oral English tests by 24% and enterprise satisfaction by 39%, effectively bridging the gap between "classroom and workplace." The research provides a practical example for the digital transformation of vocational education, and future work will explore the application of metaverse technology and the establishment of an international certification system.

**Keywords:** OBE concept; higher vocational maritime English; hybrid teaching; teaching model reconstruction; vocational competence.

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## 1. Introduction

Against the backdrop of the booming global shipping industry, cultivating high-quality maritime talents is crucial. The International Maritime Organization (IMO)'s *Manila Amendments to the STCW Convention* explicitly requires maritime personnel to possess "effective communication" skills to ensure the safety and smoothness of international shipping operations. The scale of Chinese seafarers' overseas deployment has been growing annually, with data from the Maritime Safety Administration in 2023 showing a year-on-year growth rate of 9.2%. As a core skill for students majoring in maritime-related fields, maritime English directly affects their communication capabilities and career development in the international shipping environment. However, according to the DNV-GL assessment report, English communication deficiencies account for 34% of the competency deficiencies among Chinese seafarers, highlighting a significant gap between current higher vocational maritime English teaching and the actual needs of the industry. There is an urgent need to reform the teaching model to enhance seafarers' English communication skills.

*China Education Modernization 2035* emphasizes accelerating the reform of talent cultivation models using modern technologies to integrate large-scale education with personalized training, pointing out the direction for integrating the OBE concept in vocational education into the reform of maritime technology English teaching models.[1] Traditional higher vocational maritime English classrooms have long faced the "three low dilemmas": low classroom participation, low skill conversion rate, and low job fit. Hybrid teaching, with its complementary advantages of online and offline methods, has become a key path to address these dilemmas, aligning with the informatization development trend and policy requirements of vocational

education.

## 2. Alignment between the OBE Concept and Higher Vocational Maritime English Teaching

### (1) Core Connotation of the OBE Concept

The OBE (Outcome-Based Education) concept originated in the United States in the 1980s. It emphasizes student-centeredness and student learning outcomes as the orientation, highlighting that teaching design and implementation should revolve around expected learning outcomes, focusing on the cultivation and development of students' abilities, and valuing the continuous improvement of learning outcomes. Introducing the OBE concept into higher vocational maritime English teaching and reconstructing the online-offline hybrid teaching model is of great significance for improving teaching quality and cultivating maritime talents who meet industry needs.

### (2) Characteristics and Needs of Higher Vocational Maritime English Teaching

Higher vocational maritime English teaching is highly professional and practical, with the core goal of cultivating students' ability to use English for effective communication in maritime practice. This is reflected in three specific characteristics and needs:

**Professionalism:** The curriculum involves a large number of maritime professional vocabulary, terminology, and industry norms, requiring students to have a solid reserve of professional English knowledge to cope with professional communication in fields such as ship navigation and cargo transportation.

**Practicality:** Teaching emphasizes students' application ability in real maritime scenarios, requiring proficiency in using English to transmit instructions and exchange

information during actual operations such as ship navigation, cargo loading/unloading, and emergency handling.

**Internationalization:** Due to the global nature of the shipping industry, students must also possess cross-cultural communication literacy to collaborate smoothly with seafarers from different countries and regions, ensuring safety and efficiency in international navigation.

### **(3) Alignment Points between the OBE Concept and Higher Vocational Maritime English Teaching**

The OBE concept and higher vocational maritime English teaching are highly aligned, mainly in three dimensions:

**Goal Consistency:** The OBE concept focuses on student learning outcomes, ultimately aiming to enhance students' professional literacy and competitiveness. The core goal of higher vocational maritime English teaching is to cultivate students' ability to use English in maritime practice, which also serves students' career development needs, forming a deep resonance in educational goals.

**Practice Orientation:** The OBE concept prioritizes the cultivation of practical abilities, emphasizing the deepening of learning effects through operations and applications in real scenarios. Higher vocational maritime English teaching inherently has a strong practical attribute, requiring students to skillfully use English in real scenarios such as ship navigation and emergency communication. Both take practical links as important carriers to promote the transformation of knowledge into abilities.

**Continuous Improvement Logic:** The OBE concept advocates optimizing the teaching process through dynamic evaluation and feedback to ensure students achieve expected outcomes. Higher vocational maritime English teaching also needs to iterate teaching content and innovate methods in response to technological advancements in the shipping industry and changes in international regulations. Both rely on "adaptive adjustments" to ensure the continuous improvement of teaching quality. This multi-dimensional alignment provides a solid logical foundation for integrating the OBE concept into higher vocational maritime English teaching.

## **3. Analysis of the Current Status of Higher Vocational Maritime English Teaching**

### **(1) Single Teaching Model**

In the hybrid teaching model, the role of teachers has undergone significant changes: they must not only complete traditional offline classroom teaching but also organize online teaching.[2] Currently, most higher vocational maritime English teaching still adopts the traditional "teacher lectures, students listen" model, with a single teaching method lacking interactivity and interest. Students passively receive knowledge in class, resulting in low learning enthusiasm and difficulty in cultivating autonomous learning and innovative thinking.

### **(2) Disconnection between Teaching Content and Industry Needs**

The content of some current higher vocational maritime English textbooks is outdated and disconnected from the actual needs of the shipping industry. The maritime knowledge and English expressions in textbooks can no longer meet the development requirements of the modern shipping industry, making it difficult for students to quickly adapt to work positions after graduation.

### **(3) Underutilization of Online Teaching Resources**

With the development of information technology, online teaching resources have become increasingly abundant, but their utilization in higher vocational maritime English teaching is insufficient. Many teachers still rely on traditional textbooks and lesson plans, failing to fully utilize online resources such as network platforms and online courses, which cannot meet students' needs for personalized learning.

### **(4) Unreasonable Evaluation Methods**

Current evaluation of higher vocational maritime English teaching mainly focuses on final exams, with a single evaluation method that emphasizes assessing students' mastery of knowledge while neglecting the evaluation of practical abilities and comprehensive quality. This method cannot fully reflect students' learning outcomes and is not conducive to stimulating their learning enthusiasm.

## **4. Practical Pathways for Teaching Model Reconstruction**

### **(1) Construction of the Goal System**

Based on industry needs and educational standards, a "DACUM-OBE" dual-track goal matrix is developed: On one hand, it closely aligns with the 7 core competencies proposed in the STCW Convention to ensure teaching goals are in line with international maritime industry standards. On the other hand, it references the Level 3 competency indicators in the *English Exam Syllabus for Seafarers on Seagoing Vessels* to meet the requirements of vocational qualification examinations. It also integrates 5 key soft skills valued by shipping companies, such as cross-cultural sensitivity and teamwork ability, to comprehensively enhance students' comprehensive vocational literacy.

### **(2) Resource Development Strategies**

Adopting modern teaching methods such as "Internet +" online teaching platforms for communication and classroom management has become one of the essential teaching skills for college teachers.[3] The construction of the "three databases and one platform" resource system should always focus on achieving teaching goals, with its core value being to provide multi-level, high-quality resource support for teaching activities: The corpus should systematically collect real communication recordings covering full scenarios such as ship navigation, cargo loading/unloading, and emergency handling, allowing students to gradually familiarize themselves with expression habits in real contexts through exposure to authentic maritime English language materials.

The case database should select typical maritime accident handling cases (including collision, fire, grounding, etc.). Through case analysis and group discussion sessions, students' efficiency in using English to solve problems in real-world contexts is improved.

The virtual cabin, a virtual simulation bridge system developed based on Unity3D technology, should accurately simulate dynamic scenarios such as ship navigation, berthing/departing, and emergency operations, creating an immersive environment for students to practice English communication and operations.

The intelligent learning platform should incorporate a dialogue training module equipped with NLP technology, which can real-time analyze students' English expressions (including grammatical accuracy and semantic coherence) and provide targeted improvement suggestions, thus strongly supporting students' autonomous learning and personalized

development.

### (3) Design of Teaching Activities

Based on the OBE concept, curriculum teaching is designed with an outcome orientation, constructing a hybrid teaching model implementation plan characterized by "student-centered, teacher-guided, diverse forms, group implementation, and phased feedback." [4] The application of the "pre-class, in-class, post-class" three-stage linkage model aims to optimize the teaching process and smooth the closed-loop connection of "learning-practice-application":

**Pre-class preparation stage:** The intelligent learning platform serves as the main carrier for teachers to push learning tasks, including micro-course video learning, preview of maritime English vocabulary and grammar, and online tests. This guides students to independently build a basic knowledge framework and mark learning difficulties, laying a solid foundation for in-depth classroom learning.

**In-class deepening stage:** Offline classes adopt a problem-oriented approach, focusing on the difficulties and key points fed back by students before class. Interactive activities such as group discussions, role-plays, and scenario simulations are carried out simultaneously. For example, by setting up simulated scenarios such as bridge watchkeeping communication, port business negotiations, and maritime emergency rescue command, students are provided with opportunities to use English to complete tasks in collaboration. Teachers' real-time guidance and precise comments accelerate the transformation of knowledge into abilities.

**Post-class expansion stage:** Students can complete extended exercises, participate in thematic online discussions, and conduct virtual cabin simulation training through the intelligent learning platform to consolidate classroom learning. Teachers, relying on learning data generated by the platform, provide personalized tutoring and learning suggestions for students' weak links, achieving precise teaching.

### (4) Innovation of the Evaluation System

The development of the "maritime English ability radar chart" and the construction of the "dual-line, three-dimensional" evaluation system should form a synergistic effect to promote the integration of industry standards and teaching evaluation: The language ability dimension adopts standardized maritime English tests covering listening, speaking, reading, and writing, systematically and comprehensively assessing students' English knowledge reserve and comprehensive application ability.

The operational ability dimension uses simulators to create real maritime work scenarios, evaluating students' English communication fluency, accuracy in command execution, and effectiveness in problem-solving during operations.

The professional literacy dimension introduces a 360-degree evaluation mechanism, integrating feedback from teachers, peers, and enterprise mentors to comprehensively assess students' professional attitudes, teamwork efficiency, and cross-cultural communication adaptability.

Notably, the evaluation system must achieve online-offline synergy: online, the intelligent learning platform automatically records students' learning process data (such as task completion rate and interaction participation); offline, classroom performance and practical operation scores are included in comprehensive evaluation. This comprehensive and objective evaluation method can clearly reflect students' learning outcomes and ability development trajectories, providing solid data support for teaching improvement.

## 5. Practical Effects and Reflections

### (1) Quantitative Effects

Practical verification shows that the teaching model has achieved significant quantitative results: the pass rate of students' oral English tests has increased from 58% to 82%, indicating a substantial improvement in their English application ability. Enterprise satisfaction surveys show that the compliance rate of students' communication skills has increased by 39%, fully demonstrating that the teaching model reform has effectively enhanced students' job adaptability and met enterprises' needs for maritime talents.

### (2) Qualitative Findings

During practice, a series of qualitative findings were obtained: Teachers' TPACK (Technological Pedagogical Content Knowledge) abilities have significantly improved through participating in the reconstruction and implementation of the teaching model, with a noticeable increase in awards in teaching competitions. A "learning community" self-organization phenomenon has emerged among students, with increased enthusiasm for mutual learning and collaborative communication, creating a stronger learning atmosphere.

### (3) Directions for Continuous Improvement

To further optimize the teaching model, the following directions for continuous improvement are proposed:

Establish a dynamic resource update mechanism, updating 15% of teaching resources quarterly to ensure teaching content keeps pace with industry developments.

Develop an adaptive learning system to intelligently push personalized learning content and tasks based on students' learning characteristics and progress.

Build a school-enterprise collaborative "teaching innovation laboratory" to strengthen cooperation, jointly conduct teaching research and practice, and promote the continuous innovation and development of the teaching model.

## 6. Conclusion and Outlook

This research confirms that the reconstruction of the online-offline hybrid teaching model for higher vocational maritime English under the guidance of the OBE concept can effectively bridge the "classroom-workplace" gap, significantly improve students' vocational abilities and teaching quality, and provide a successful example for the digital transformation of vocational education. Future research will focus on:

Exploring the application of metaverse technology in maritime English teaching to build more immersive and interactive learning environments.

Studying artificial intelligence-driven personalized learning paths to achieve precise and intelligent teaching.

Committing to establishing an internationally recognized maritime English proficiency certification system to enhance the international influence of China's maritime English teaching and promote the high-quality development of maritime education.

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