Internationalized Development of Maritime Law Vocational Education Curriculum and the “Going Global” Strategy of Vocational Education

Xinyi Ma, Aimin Wei*, Yuhan Wang, Zhengmian Fu

Hainan Vocational University of Science and Technology, Haikou, 571126, China
**Corresponding author: 15091071829@163.com*

Abstract: *Against the backdrop of accelerated integration in the global shipping industry and the growing demand for the internationalization of vocational education, the internationalized development of maritime law vocational education curriculum has become a crucial pathway for cultivating high-quality shipping professionals. Based on the logical framework of “competency-driven—structural coupling—dynamic evolution,” this paper systematically analyzes the theoretical foundations and structural logic of the internationalization of maritime law vocational education curriculum. It further explores implementation pathways for curriculum module reorganization, content optimization, and competency standard alignment under international orientation. The study points out that curriculum internationalization is not only the result of knowledge renewal but also a systematic process of generating job competency and intercultural adaptability. Its core lies in forming a closed-loop mechanism for competency transfer through modular design, contextualized teaching, and data-driven evaluation. In the context of the “going global” strategy of vocational education, the curriculum must possess a high degree of cross-regional adaptability and the portability of knowledge output. By means of standardized competency frameworks, dynamic feedback, and continuous iterative optimization, it can achieve rapid adaptation and long-term competitiveness in international vocational education environments, providing sustainable and high-quality talent support for the global shipping industry.*

Keywords: *Maritime Law Vocational Education Curriculum; Internationalized Development; Going Global in Vocational Education; Competency Transfer; Structural Optimization*

Introduction

With the continuous expansion of global maritime trade and the convergence of international vocational standards, the shipping industry has an increasingly urgent demand for interdisciplinary and internationally-oriented technical talent. As a key form of education serving high-mobility sectors such as shipping, ports, and international logistics, maritime law vocational education must undergo internationalized curriculum development—not only as a necessary response to global vocational education trends but also as a critical link in achieving the strategic goal of “going global” in vocational education. Traditional vocational education curricula are often oriented toward domestic job requirements and thus fall short of meeting the needs for competency transferability and multi-regional adaptability in multinational shipping operations. The maritime law vocational education curriculum, therefore, requires a systematic reconstruction of its knowledge structure, competency standards, and teaching models. This research is of great significance. On one hand, it contributes to the construction of a curriculum system that balances local professional depth with international applicability, fostering talents equipped with cross-cultural communication skills and international business competencies for the shipping sector. On the other hand, by exploring the logic and pathways of curriculum internationalization, it offers replicable and scalable models for curriculum export, thereby promoting the deep participation and value enhancement of vocational education in the global shipping industry chain.

1. Theoretical Foundations and Structural Logic of the Internationalized Development of Maritime Law Vocational Education Curriculum

1.1 Connotation and Adaptation Requirements of Internationalized Vocational Education Curriculum

The internationalization of vocational education curriculum refers to the construction of an educational model that can meet the professional demands of different countries and regions, achieved through cross-regional integration of knowledge systems, universalized design of competency structures, and open allocation of educational resources, all within the context of global industrial division and the gradual convergence of vocational standards. At its core, it is competency-oriented and aims to realize the transferability of knowledge and skills as well as multi-environment adaptability by introducing international standards and reconstructing local knowledge. An internationalized curriculum not only emphasizes content renewal but also focuses on the logic of competency development and alignment with learning outcomes. It requires a high degree of alignment between teaching objectives and global vocational competency standards.

The adaptation requirements of an internationalized curriculum are mainly reflected in structural design and the optimization of learning pathways. Structural design should be centered on competency-based principles, forming a clearly layered modular curriculum system that enables learners to grasp fundamental theories while enhancing cross-cultural vocational competencies through applied and integrative modules. The optimization of learning pathways should be based on diversified teaching interactions and dynamic evaluation mechanisms to provide adaptive support for learners with different backgrounds and goals. Particularly in vocational education, internationalization demands curricula that are characterized by bidirectional integration and flexible transferability—that is, they must preserve local industrial knowledge and experience while achieving balanced coupling with international vocational standards, thereby establishing an efficient competency transformation mechanism for global professional contexts [1].

1.2 Disciplinary Attributes and International Orientation of Maritime Law Vocational Education Curriculum

As an educational carrier that supports highly mobile industries such as shipping, port operations, and international logistics, the maritime law vocational education curriculum is marked by significant cross-regional applicability and diversified competency demands. Its disciplinary attributes necessitate a curriculum centered on core knowledge such as maritime regulations, port operation standards, and international trade procedures. By integrating professional skills to a high degree, the curriculum forms a comprehensive training system that combines theoretical support with operational capabilities. These attributes also require the curriculum development to stay highly synchronized with technological innovations, regulatory changes, and talent standards within the international shipping industry, thereby ensuring that learners are fully competent in global maritime environments.

International orientation in the maritime law vocational education curriculum is not only reflected in the extension of knowledge content but also in the holistic optimization of competency formation and the cultivation of professional qualities. Curriculum development must incorporate internationally recognized shipping standards, cross-cultural communication capabilities, and multilingual professional communication skills into the local knowledge system. Through contextualized, task-driven, and interactive instructional approaches, it should strengthen learners' understanding of and responsiveness to the complexities of international shipping operations. The core of international orientation lies in the operability of competency transfer. This is achieved by logically reorganizing knowledge modules and dynamically aligning competency goals, enabling learners to adapt and transfer skills effectively across different national and regional professional contexts, thus meeting the global shipping industry's demand for versatile technical talent.

1.3 Framework Construction and Logical Evolution of Curriculum Internationalization

The framework for the internationalized development of maritime law vocational education curriculum should follow the core logic of "competency-driven—structural coupling—dynamic evolution." Competency-driven development refers to designing curricula based on job competency, cross-cultural adaptability, and professional literacy. Using reverse design methodology, it aligns the competency standards of international shipping job clusters with curriculum objectives, thus

establishing a systematic pathway for competency formation tailored to international professional environments. Structural coupling requires a multi-level integration of theoretical knowledge, operational skills, and cross-cultural literacy within the curriculum module design. Through modular design and the restructuring of knowledge units, the curriculum can retain disciplinary depth while achieving cross-national transferability [2].

The key to logical evolution lies in dynamic adaptation and continuous iteration. With the rapid updates of international shipping regulations, technological applications, and vocational standards, curriculum development must build a self-adjusting and real-time feedback mechanism. By conducting data-driven analysis of learning outcomes and applying dynamic evaluation, it is possible to achieve cyclical optimization of curriculum goals, content, and instructional organization. Logical evolution is reflected not only in the renewal of knowledge and skills but also in the flexibility and scalability of curriculum structure. By establishing a systematic closed loop among learning objectives, instructional resources, and competency transfer pathways, the curriculum can maintain long-term competitiveness and adaptability within the international vocational education environment, thereby providing stable and sustainable curriculum support and competency assurance for the "going global" strategy of vocational education.

2. Structural Optimization and Pathway Design for the Internationalized Development of Maritime Law Vocational Education Curriculum

2.1 Curriculum Module Reorganization and Content Optimization under International Orientation

The internationalized development of the maritime law vocational education curriculum should achieve a systematic reconstruction of knowledge structures and a competency-oriented approach in module design. Module reorganization must be guided by the vocational competency demands of the international shipping industry, with job competency at its core, and should involve the scientific layering and orderly integration of foundational theory modules, professional skills modules, and intercultural literacy modules. The foundational theory modules primarily support learners' conceptual understanding of maritime law and shipping operations; the professional skills modules focus on practical operations related to port activities, international trade procedures, and shipping risk management; the intercultural literacy modules enhance learners' cross-cultural communication and collaboration skills through contextual simulations and multilingual communication training. This multi-level, progressive module design enables a systematic linkage between theoretical understanding, skill application, and professional quality development, thereby dynamically coupling knowledge acquisition with competency generation and effectively improving learners' adaptability and flexibility in multi-regional maritime environments.

Content optimization serves as the in-depth support for module reorganization and focuses on the integration and reconstruction of international vocational standards and local industry experience. During this process, the latest international shipping procedures, industry regulations, and multilingual communication strategies should be dynamically incorporated to ensure that the curriculum content remains aligned with developments in the global shipping industry. At the same time, curriculum design must reinforce the principles of contextualization and task-driven instruction. By simulating international shipping operations, incorporating case-based task training, and organizing cross-cultural collaboration projects, learners are encouraged to achieve deep knowledge internalization and competency transfer within near-authentic international work environments. The optimized curriculum thus becomes not merely a tool for knowledge transmission, but a comprehensive platform for competency development and intellectual expansion. Its value lies in the systematic integration of knowledge units and the innovative construction of learning contexts, enabling learners to develop internationally standardized professional thinking patterns and sustainable learning abilities [3].

2.2 International Alignment Mechanism between Learning Objectives and Competency Standards

The internationalized development of the maritime law vocational education curriculum should establish a tightly aligned mechanism between learning objectives and competency standards through precise objective design and standards mapping. Learning objectives should be based on the job competency models of the international shipping industry, integrating theoretical knowledge, practical skills, and intercultural literacy into a structured, competency-based logic that forms a tiered objective system ranging from cognitive understanding and operational application to comprehensive innovation.

This system must be both operable and measurable, with a progressive design that guides learners from basic knowledge acquisition to independent decision-making and innovative thinking in complex business scenarios. As a result, the curriculum will not only meet the skill requirements for entry-level positions but also foster advanced, integrative capabilities suited to the dynamic environment of international shipping.

In the process of international alignment of competency standards, a dynamic balance must be achieved between internationally recognized job standards and localized competency requirements. By applying reverse design methodology, the core competency elements of international standards should be mapped to each instructional unit of the curriculum, thereby creating a direct correlation between learners' outcomes and international job competencies. Curriculum development must incorporate a finely tuned linkage mechanism between competency decomposition and performance evaluation in every instructional component. Periodic competency assessments and dynamic feedback adjustments ensure that curriculum objectives remain synchronized with international standards. This mechanism not only enhances the international adaptability of the curriculum but also enables learners to efficiently transfer and reuse their competencies in transnational professional mobility, thereby effectively supporting the sustained demand for high-level maritime professionals in the context of the "going global" strategy of vocational education.

2.3 Internationalized Support through Diverse Interactions and Evaluation Systems

The internationalized maritime law vocational education curriculum must establish a teaching support system centered on diverse interactions, enhancing learners' communication and collaboration abilities within international maritime contexts through multidimensional engagement and contextual experiences. Diverse interaction should not be limited to the transmission of knowledge between instructors and students, but should also extend to interactions among students, between students and industry experts, and with international partners. This broader engagement aims to construct a learning ecosystem that closely mirrors real-world maritime operations. Through cross-cultural seminars, virtual simulations, and collaborative international projects, learners are able to integrate knowledge and skills in high-fidelity, task-driven environments, significantly enhancing their sensitivity to cross-cultural communication and their flexibility in collaboration [4].

Internationalized evaluation support should operate on the coordinated foundation of formative and summative assessments, forming a closed-loop system driven by competency orientation and data analytics. Formative assessment, including learning journals, task performance, interaction records, and simulation feedback, provides a comprehensive view of learners' competency development trajectories in diverse interaction settings. Summative assessment must strictly follow international vocational competency standards to quantitatively evaluate learners' comprehensive application capabilities in complex international business contexts. The system must be equipped with continuous iteration and optimization functions, dynamically adjusting curriculum goals and instructional methods based on structured analysis of assessment data. This ensures the curriculum content remains closely aligned with the evolving needs of the international shipping industry, providing long-term, stable quality assurance and sustainable talent output capacity for the "going global" initiative of vocational education.

3. Adaptation and Competency Transfer Mechanisms of Maritime Law Vocational Education Curriculum under the "Going Global" Strategy of Vocational Education

3.1 Structural Requirements for Curriculum Internationalization under the "Going Global" Strategy

Under the "going global" background, the maritime law vocational education curriculum must reflect high cross-regional adaptability and knowledge system portability in its structural design. The curriculum structure should transcend the limitations of single-region job demands by forming an educational system capable of efficient operation in different national shipping environments through multidimensional integration of modularization, standardization, and contextualization. Structural requirements are manifested not only in the selection of knowledge elements but also in the systematic linkage among modules, requiring organic coupling between theoretical foundations, operational skills, and intercultural literacy to meet the diversified competency demands of shipping jobs in various countries.

These structural requirements dictate that the curriculum maintain flexibility and dynamic update

capability throughout internationalized development. Curriculum modules must be combinable and extensible to allow rapid adjustment according to the industry characteristics and job standards of target regions. Instructional organization needs to align with regional shipping process features by employing contextualized tasks and simulation operations, ensuring that students develop competency systems closely matching international job standards regardless of their educational environment. This highly structured and scalable design enables rapid adaptation across multiple regions in the "going global" initiative, enhancing the overall competitiveness of international vocational education.

3.2 Intrinsic Logic of Cross-Regional Competency Transfer and Knowledge Output

Cross-regional competency transfer constitutes the core goal of the maritime law vocational education curriculum's internationalization under the "going global" strategy. Its intrinsic logic lies in enabling learners to rapidly transform vocational competencies across different shipping environments by coordinating standardized competency frameworks with contextualized instructional organization. Achieving competency transfer depends on the universal expression of knowledge and skills—that is, the abstraction and reorganization of shipping regulations, operational procedures, and communication skills within the curriculum to ensure applicability across cultural and institutional contexts. This competency-based transfer pathway allows learners to seamlessly connect knowledge and skills within maritime business scenarios across countries, thus fostering efficient job adaptability [5].

The logic of knowledge output emphasizes the systematic and replicable nature of curriculum content dissemination in an international context. The curriculum should establish a portable knowledge output system through standardized teaching resources, visualized knowledge presentation, and modular competency training pathways. Different regions can locally adjust the curriculum within this standard framework according to their industrial characteristics, achieving a dual fusion of localization and internationalization. Knowledge output extends beyond content dissemination to the propagation of competency development models. Through continuous optimization of curriculum frameworks and resource sharing, this promotes deep collaboration and coordinated development in international vocational education within the shipping sector.

3.3 Continuous Evolution Mechanism for the Curriculum under the "Going Global" Strategy

The maritime law vocational education curriculum urgently requires the construction of a continuous evolution mechanism centered on dynamic feedback and iterative optimization to address challenges posed by accelerated technological iteration in international shipping, frequent updates of industry standards, and diversified job demands [6]. The core objective of curriculum evolution is to shift from static knowledge transmission to dynamic competency generation. By utilizing big data-based learning effect analysis and competency tracking, a cyclical optimization path for curriculum content, instructional organization, and evaluation systems can be formed. The evolution mechanism design should be competency-demand oriented, with real-time updates of job competency models, and precise alignment with the latest global shipping standards and operational protocols, endowing the curriculum with foresight and international adaptability. Continuous iterative optimization not only enhances learners' job competitiveness in changing environments but also provides structural guarantees for curriculum international dissemination and the "going global" strategy [7].

Implementation of the continuous evolution mechanism also requires embedding adaptive regulation and resource update functions into the curriculum structure. By establishing an open database of instructional resources and a real-time learning behavior analysis system, the curriculum can dynamically adjust teaching content and interaction methods based on learners' performance and competency generation status in different regions. Flexible combinations of modular structures and dynamic updates of competency goals equip the curriculum with both cross-regional transferability and long-term optimization capability. Through this continuous evolution mechanism, the maritime law vocational education curriculum can maintain a high level of update speed and adaptability throughout the "going global" process, providing stable technical and intellectual support for international vocational education export.

Conclusion

The core of the internationalized development of maritime law vocational education curriculum lies

in competency orientation, achieving systematic integration of knowledge, skills, and professional qualities through modular reorganization, contextualized teaching, and standardized competency framework construction. Research indicates that international curriculum adaptation depends not only on content updates and structural optimization but also on forming a sustainable iterative pathway via dynamic alignment of competency standards and data-driven feedback mechanisms. Under the "going global" strategy of vocational education, the curriculum must possess cross-regional applicability and portability of knowledge output. Through flexibly combined modular structures and real-time optimized instructional organization, the curriculum can achieve rapid adaptation and competency transfer within international shipping business environments. Future research may further build competency generation models driven by multi-source data from the perspectives of intelligent data analysis and learning behavior prediction to realize dynamic curriculum evolution and personalized optimization [8]. At the same time, exploring collaborative international teaching resource sharing and mutual recognition mechanisms for standards will provide long-term support for the sustainable international development of maritime law vocational education curriculum and the steady advancement of the "going global" strategy.

Fund Projects

This paper is supported by the following projects: "Innovation of the 'Three-Dimensional Integration and Three-Body Linkage' System for Intelligent Shipping Industry-Education Integration Curriculum under the Double-High Construction," Ministry of Education Industry-Education Integration Project; "Maritime Law," Hainan Vocational University of Science and Technology Internationalized Curriculum Project; "Research on Talent Cultivation Path for 'One Port and Three Zones' Intelligent Port and Shipping under the Construction of International Shipping Hub of Haikou Port" (2025-ZCKT-110), Haikou Philosophy and Social Science Planning Project.

References

[1] Liu Weichao. "Strategies for the Internationalization of Basic Education Curriculum under the 'Three Highs and Four News' Strategy." Innovative Talent Education, 01 (2025): 48–51.
[2] Ma Deyi. "Several Methods to Improve College Students' International Literacy Centered on Curriculum Internationalization." Modern Educational Science, 05 (2024): 10–15+22.
[3] Li Wei, and Zhang Jianwei. "The Evolution of the Connotation, Development Dilemmas, and Practical Logic of Internationalization in Chinese Higher Education." Heilongjiang Higher Education Research, 42.03 (2024): 26–32.
[4] Geng Yanbo. "Vocational Education Curriculum Transformation in the Digital Era: Rationale, Risks, and Dialectics." Proceedings of the 2024 Cultural Information Development Forum. Ed. Changbaishan Vocational and Technical College, 2024, 76–78.
[5] Ma Ting, et al. "Research on Higher Vocational Physical Education Curriculum Construction under the National Vocational Education Reform Background." Abstracts of the 13th National Sports Science Conference — Poster Exchange (School Sports Branch) (5). Ed. Chongqing Industry and Commerce Vocational College; Yunnan University, 2023, 169–171.
*[6]Ashari, I. (2025). Contributions and Characteristics of Maritime Higher Education Institutions (PTKL) in the Sea Transportation Sector Supporting the Advancement of the National and International Ship** Industry. International Journal Papier Public Review, 6(3), 37-49.*
[7] Xu Tong. "Research on the Construction of Vocational Education Program Clusters Based on the 'Double High Plan' Background." Proceedings of the 5th Life Education Academic Forum, 2023. Ed. Changchun Normal College of Higher Vocational Education, 2023, 576–579.
[8]Malau, A. G. (2025). Integration of Ship Law and Maritime Policies in Indonesian Maritime Vocational Education: A Qualitative Assessment of Professional Competency Development. Meteor STIP Marunda, 18(1), 1-7.