

Exploration and Research on the Construction Path of High-level Professional Group in Modern Navigation

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Abstract: Guided by the thoughts on Socialism with Chinese Characteristics for a New Era, the professional group has taken the initiative to serve major national projects such as economic planning and Marine affairs and civil-military integration, has adhered to the fundamental principle of establishing morality and cultivating people, has deepened the reform of mixed ownership, has promoted the reform of modern apprenticeship and the "1+X" certification system, and has implemented the fusion of production and education and school-enterprise cooperation to build a modern maritime high-level professional group with seaman education as the main body and naval officers and social training as the two wings of "one body and two wings".

Keywords: Mixed ownership system; The fusion of production and education; High level professional group

1. Deepen the reform of mixed ownership and explore to form diversified school running models

First, we will establish a system for integrating social funds. Actively attract large shipping enterprises to participate in the construction of professional group, enhance the motivation and vitality of private enterprises to participate in school running; gradually optimize the evaluation of school shareholders, stock change and exit mechanism, and gradually establish the pattern of diversified education of the whole society. The second is to study the mechanism of setting up part-time and part-time salaries for teachers. We promote the part-time and part-time salary mechanism for backbone teachers in universities and high-level personnel in shipping enterprises further, establish the "post exchange and salary replacement" mechanism between college teachers and the staff of shipping companies and try out the promotion bonus mechanism that regards social training input as individual performance salary.

2. Strengthen the "1+7" certification system and build a lifelong education system for seafarers

First, improve the three-level training system. Docking with STCW International Convention (International Convention on Standards of Training, Certification and Watchkeeping of Seafarers), we follow the rules of career growth of seamen, improve the three-level training structure from support level, operation level to management level and form a modern maritime vocational education and training system combining education and training, long and short, and internal and external, integrate the marine vocational training and certification training, break through the boundary between full-time and part-time and establish a lifelong training system serving the seafarers. Second, we need to fully promote the "1+7" certification system. We implement the integration of courses and certificates, and comprehensively carry out the education system of "academic certificate + skill certificate". In addition to obtaining the academic certificates, the learners also need to obtain seven professional skills certificates issued by the maritime administrative authority, such as raft operation and fire-fighting safety work.

3. Revise the certification standards of professional courses and promote the access mechanism of industry and education being simultaneous

First, the government, the college, the industry and the enterprises revise professional and curriculum standards jointly.

Work with the competent maritime authority to revise the standards for the construction of professional groups, the standards for the provision of teachers and teaching equipment, etc. Revise course teaching standards of professional group and certification standards and reconstruct the training system of compound talents. Second, school-enterprise cooperation in developing new media textbooks. School and enterprise cooperate in the development of core course textbooks such as "Route Design" and "Operation and Maintenance of Marine Auxiliary Machinery", compile the new training textbooks in the form of loose-leaf and workbook and develop the corresponding information resources to meet the requirements of ubiquitous learning. Third, promote the construction of online open courses. We participate in the upgrading project of the national teaching resource base of Marine engineering, build core courses according to the national standards of online quality courses of vocational education and construct education package meeting lifelong education and ubiquitous learning for seafarers.

4. Update the teaching concept of teachers and education and lead the development of teachers of maritime vocational education

The first is to build a "National Maritime Teacher Education and training base" to train teachers for all kinds of maritime schools, maritime enterprises and institutions nationwide. Second, establishment teachers' teaching innovation team. Led by senior captains/ chief engineers, visiting professors and industry professors, it has formed a highly structured marine professional group teachers teaching innovation team composed of enterprise science and technology experts, marine industry doctors and backbone teachers of universities and so on. Third, improve the innovation ability of teachers' information-based teaching. To keep up with the new requirements of the development of Chinese vocational education field and to take the transformation of teachers' information teaching concept as the guide, we introduce new technologies actively, such as "VR/AR + navigation", integrate the "big data + navigation" and new teaching resources, such as the cloud platform, support the teachers of professional group to participate in the national teaching ability competition and demonstrate to promote teachers' ability of applying modern information technology.

5. Promote the deep integration of production and education comprehensively, and build and share practical teaching bases jointly

The first is to build seafarers examination and evaluation service center of Shandong Province jointly. We integrate the resources of maritime authorities and shipping companies to build a large-scale and well-equipped shared seafarers examination and evaluation service center in Shandong Province. We will give full support to the construction of Blue Economic Zone in Shandong Peninsula of China and establish the brand of "Shandong Crew". Second, create a platform for the inheritance and innovation of navigation skills. The VR Virtual Simulation Center of navigation teaching is jointly built by the university and the enterprise, and the "Virtual Simulation Center of Ship model Making" is built to jointly undertake scientific and technological research, practical training and other work so as to improve students' practical skills. Third, improve the technical service capacity of water transport research institute. Relying on Marine scientific research platform, aiming at the forefront of development of current maritime technology, we set cooperation projects with colleges and universities jointly, such as technology development projects, skills training projects, personnel training projects, etc., and take many forms to cooperate extensively to provide dynamic navigation technology forefront information for cooperative institutions actively and to provide valuable reference for curriculum reform and talent cultivation of the college.

By precisely connecting major engineering projects of maritime development, national strategy of civil-military integration and transformation project of old power to new power, the modern Marine professional Group has established a complete modern seafarers education system, has cultivated outstanding talents with excellent navigation technology and skills and has served the transformation and promotion of modern maritime enterprises to carry out in-depth scientific research and social services for the company, to enhance business strength and provide talent support for shipping companies to "go global".

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