

Research on the Teaching Reform Path of Navigation Major in Vocational Colleges under the Background of the New Era

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Abstract: After the international financial crisis and the official implementation of the manila amendment to the international convention on standards for training, certification, and watchkeeping, the demand for maritime talents in the shipping talent market has undergone profound changes. The reform of the training plan for maritime talents must consider the particularity of maritime vocational education, optimize course content and system, improve teaching methods, strengthen practical teaching, and build a "dual teacher" team with a reasonable structure and solid professional skills. Through practical research, the aim is to solve the current problems faced in the cultivation of shipping talents in China, and to provide experience and reference for the cultivation of "skilled and educated" "maritime craftsmen" in maritime vocational colleges.

Keywords: Teaching Reform Path, Navigation Major, Vocational Colleges, New Era

1. INTRODUCTION

As the highland of vocational education, vocational colleges should highlight the characteristics of cultural education when orderly promoting the development of various undertakings in the school, take service and moral education as the foundation, scientifically construct a long-term mechanism for cultural education, promote cultural education with a high degree of cultural consciousness, strengthen the linkage between politics, administration, schools, and enterprises, and promote the construction of cultural education with the school's own characteristics. As a vocational college in the field of transportation, Guangdong Jiaotong Vocational and Technical College has distinct educational characteristics and a significant influence on navigation within the province. Strengthening the research on collaborative education of shipping culture and exploring the cultivation of "navigation craftsmen" from the "four dimensions" of practical exploration has significant practical significance. Vocational colleges have elevated the cultivation of national craftsmen to a national strategy.

Maritime vocational colleges shoulder the mission of building a shipping talent team for the national strategy of serving the "the Belt and Road" construction and realizing a maritime power. At present, there is a significant gap between the professionalism, professional ethics, practical skills, English proficiency, adaptability, and management abilities of employed seafarers and the job requirements. In the stage of maritime vocational education, it is necessary to strengthen the cultivation of craftsmanship spirit to enhance the comprehensive quality of maritime talents and enhance the international competitiveness of China's maritime talents.

The implementation of the Manila Amendment to the STCW Convention will have a significant and far-reaching impact on maritime education in China. Maritime vocational colleges should have a proactive awareness in crew training, carefully study the impact of changes in conventions and regulations on future shipping development, strengthen the construction of

teaching staff and textbooks, comprehensively adjust existing teaching plans, syllabuses, and curriculum settings, enrich teaching equipment, carry out new training projects, and strengthen the cultivation of students' comprehensive qualities. To ensure that the reform and innovation of courses in vocational maritime colleges truly meet the needs of modern maritime technology development, and to cultivate high-quality maritime professionals who meet the requirements of the convention and have strong international competitiveness.

Create a distinctive campus shipping culture and build a unique brand activity system for shipping culture. Thirdly, establish new practice bases both on campus and off campus based on the characteristics and needs of shipping enterprises and industries. Fourthly, systematically tap into alumni resources and establish a normalized alumni collaborative communication platform. The fifth is to establish an intercollegiate teacher-student collaborative exchange platform using the shipping industry summer camp activities as a carrier; Sixth, offering general courses related to navigation and strengthening the popularization of navigation education. Seventh, through cultivation and practice, the passing rate of professional student crew qualification certificates has significantly increased, and the employment quality of professional graduates has significantly improved. Eight is to cultivate a group of "maritime craftsmen" who are suitable for the development of the industry through three years of systematic cultivation in vocational colleges. Due to factors such as cultural discrimination, social changes, deficiencies in the education system, improper educational models, and inadequate integration of work and learning, the cultivation of craftsmanship spirit in higher vocational education in China is lacking.

2. THE PROPOSED METHODOLOGY

2.1 The Necessity of Reforming the Training Mode for Maritime Talents in Vocational Colleges

With the implementation of the "the Belt and Road Initiative" and the maritime power, a strong shipping talent team is an indispensable support force for achieving a maritime power. In recent years, due to changes in material life and population structure, there has been a serious loss of navigation professionals, causing instability in the crew. However, there is a significant gap between the professional dedication and ethics, practical operational skills, English communication skills, and the ability to handle complex problems and management abilities of graduates in the maritime industry and the requirements of shipping enterprises. With the continuous application of modern technology in ships and the continuous revision of international maritime conventions, Higher requirements have been put forward for the comprehensive quality of crew members. The knowledge and skills learned and trained in various professional courses should be based on the requirements of conventions and regulations, higher than the actual needs of ship navigation and management at present, especially considering the application trends of new knowledge and technologies in future ships, such as electronic navigation, digital navigation, ship enlargement and modernization, etc., Enable students to adapt to the requirements of advanced ships for pilots in a timely manner after graduation

Carry out various forms of maritime campus cultural activities and create distinctive campus maritime cultural brand activities. One is to hold a water sport meet and carry out maritime rescue "triathlon", rope skipping, tying knots, and inserting triple ropes and other navigation skills competitions, showcasing professional students' "survival at sea" and "escape at sea" skills, showcasing seafarers' demeanor, and enhancing the popularization and demonstration role of basic navigation skills. The second is to hold a ship model making competition to encourage professional students to understand the hull structure through hands-on production, strengthen the learning of professional theoretical knowledge, and reduce the boredom in learning hull knowledge.

The third is to hold a celebration event for Seafarers' Day, carry out spiritual education for students majoring in navigation, enhance the recognition and understanding of seafarers and the shipping industry from all sectors of society, and enhance the sense of professional belonging of the seafarer community. The fourth is to popularize the scientific and cultural knowledge of navigation, regularly hold themed lectures, organize professional students to participate in provincial-level maritime high-level forums and navigation forums, and enhance their thirst for knowledge about navigation. China's maritime education strictly complies with the requirements of the STCW Convention, and the trained maritime talents can fully meet international standards in terms of technical level. However, due to cultural differences, language limitations, social environment and other constraints, the international recognition of China's shipping market and individual crew members is not high.

Under the premise of equal distribution of professional skills, professional competence becomes the main factor restricting the development level of crew members. The rigorous and serious professional spirit, the dedication to excellence, and the innovative spirit of pursuing excellence that are included in the "craftsmanship spirit" are the key factors to measure

professional competence. Able to approach repetitive work with rigor, study hard in the face of challenging tasks, and always rely on rationality, beliefs, and morality to regulate one's own behavior. For example, the "Navigation" exam subjects determined by the Maritime Safety Administration are divided into four courses based on the systematic nature of navigation education, teaching content, sequence of knowledge learning, and semester arrangement: "Fundamentals of Navigation", "Navigation Instruments", "Navigation Methods", and "Navigation Meteorology and Oceanography".

2.2 Discussion on the Reform of Talent Training Mode in Maritime Vocational Education under the New Situation

The content of deck equipment and ship structure is consistent with the division of competency standard functional blocks in the new crew competency examination outline of the maritime safety administration and the convention. The content of ship repair is placed in the "Ship management" examination module, and the construction of vehicles, helmets, and anchor equipment is directly placed in the "ship handling and collision avoidance" examination module; include basic knowledge of ship structure, piping, lifting equipment, and cargo warehouse equipment in the exam module of ship structure and freight transport.

Pay attention to providing students with practical opportunities, intersperse practical links during the learning period, equip practical guidance teachers, and strengthen the full integration of practical content and professional theory. Give full play to the functions of the campus practical training base and use the campus practical training base as the competition site for navigation skills competitions and science popularization knowledge explanation competitions, to enhance the skill proficiency of professional students in an intuitive way and promote learning through competitions. Fully leverage the collaborative educational role of off campus practical teaching bases, arrange teachers and students to participate in practical teaching activities in batches, carry out ship classes, move the classes to ships, and jointly build a "dual teacher" teaching team with the school and enterprise that "teachers are crew members, and crew members are teachers", forming a mechanism where practical skills courses and on-the-job internships are mainly taught by part-time teachers, achieving deep integration between schools and enterprises, and strengthening the navigation cognitive internships of vocational students, comprehensively promote the internship of professional students as crew members and improve their practical skills.

The third is to establish an intercollegiate teacher-student collaborative exchange platform, aiming to spread maritime culture among young people and enhance their feelings and identification with the maritime profession and culture. Exploring and practicing the "transmission, assistance, and guidance" of youth (college students) - youth (primary and secondary school students) to continuously strive to achieve the Chinese Dream, the Dream of a Strong Country, and the Ocean Dream, comprehensively enhancing the spirit of unity and cooperation, legal and environmental awareness, knowledge of shipping culture, and the spirit of voluntary service of "dedication, friendship, mutual assistance, and progress" among professional students, and cultivating them to become high-quality shipping talents with "skills and culture".

Organize and carry out summer social practice activities for Guangdong university student party members with the theme of shipping culture, to enhance professional students' high awareness and understanding of shipping culture. The purpose of strengthening industry awareness is to cultivate students' professional ethics and literacy, help them strengthen the guiding role of value orientation in the practical process, and help them better comply with industry standards in their work. For education itself, cultivating technical and skilled talents with the spirit of craftsmanship in the new era is the mission of vocational colleges, which is conducive to regulating talent cultivation behavior, avoiding the problem of disconnection between goals, content, and process in practical cultivation, and promoting the integration and mutual promotion of craftsmanship spirit cultivation and skill training. This educational philosophy is also relatively close to the expectations of industry enterprises for talent cultivation in vocational colleges, which is conducive to promoting the integration of industry and education, and innovating talent cultivation models.

3. CONCLUSION

The reform of vocational education in the field of navigation is imperative, especially in the face of the financial crisis and the changes in the requirements of shipping companies for navigation talents after the implementation of the Manila Amendment to the STCW convention. As a university that cultivates highly skilled navigation professionals, it must closely follow the changes in talent demand in the shipping market, adjust teaching plans and change teaching and training models in a timely manner, only then can we cultivate high-level maritime talents with comprehensive qualities that meet the needs of enterprises and the market.

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