

Research and Practice of "three types" Teachers' Team of Marine Engineering

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Abstract

This paper analyzed the talent requirements and talent quality status quo of the new situation of the shipping industry, innovative put forward the concept of "three types" teacher' team, and made a deep discussion about how to create and realize the "three types" teachers' team, we also received preliminary results. We provided the theoretical guidance and practical experience for building the higher engineering education which has industry characteristics.

Keywords: marine engineering; "three types" construction; implement measures

1. Introduction

Along with the international competition and development of shipping industry, the requirements of shipping talents becomes higher and higher. The shipping talents in new century must have solid foundation, wide range of knowledge, strong ability of practice, high comprehensive quality, innovation and sustainable development consciousness and so on. This put forward higher request to our country's maritime education, at the same time, it must speed up the reform and development of maritime education and it also can enhance China's shipping talents of international competitiveness. In the past few days, MOT printed the *Some Suggestion of Further Improve the Maritime Education Quality*, it required us to improve the management system, pro-

mote special talents training mode innovation, improve practice teaching conditions, strengthen the construction of professional teachers' team of maritime education, and develop high-quality talents with international competitiveness. As one of the main body of maritime education, teacher is the first element of talent training quality guarantee. If there is no high levels teachers' team, we can't cultivate the high-quality shipping talents. Hence, building a high level of teachers' team with characteristics, and maritime education reform and development is always the eternal subject.

With a long history of maritime education, WHUT was the first batch of maritime education college entering into IMO, the major marine engineering was the national key subjects. To adapt to the international shipping industry development to our shipping talent quality requirements, to propose the development of "international competitiveness, the leading ability, practice ability, learning ability, innovation ability" as the target, and develop exquisite course system, practical teaching system, the innovation ability training system, maritime education quality management system training the five-ability; Relying on the national key subject marine engineering, using STCW78/95 international convention and new *The People's Republic of examination and fitness of sea-going ship's crew license issuing rule* printed by MSA as guidelines, combined with international education, develop distinctive characteristics of high quality marine engineering

talents which can give service to national shipping field.

The construction of the teachers' team is the key problems to develop distinctive characteristics of high quality maritime engineering professionals. Relying on the national key subject, exploring new ways to build "three types"- "academic type", "bilingual type", "dual-qualification type" teachers' team which has international vision, to ensure the development of high-quality theory course system and the implementation of internationalized personnel training programs.

2. Connotation of "three types" construction

2.1. "Academic type" teacher

Now in the multicultural society, Scientific and technological progress is rapid, Changes are also with each passing day, the renewal of the teaching content speed is far behind the emergence of new technology using in society. And the college students to learn something of new channel is less, the vision field relatively narrow, especially with "international seaman" goals of the marine engineering students; it is hard to form international knowledge system. This has to be part of the academic study of Marine engineering professional teachers as the teaching task. Permeate the industry lead technology in teaching. Let students understand the domestic and foreign academic frontiers. At the same time teacher rigorous, scientific research academic attitude can also affect the students. Building the foundation for further study or entering the classification society and ship research institute. Implement the training of "learning ability" and "leading ability". So a team of professional teachers must have a certain amount of "academic type" teachers.

2.2. "Bilingual type" teacher

With the development and the demand of the world economy, Chinese seafarers are not limited to work only in China. They have been in the international ocean shipping market and became "international seafarers". Chinese students majoring maritime majors will be the main source of the "international seafarers". Therefore, the aim of maritime colleges should be to develop students the ability to adapt the internationalization. And it is necessary for students to strengthen the English listening, speaking, reading and writing ability to adapt the future work. However, the bottleneck problem of bilingual teachers is the teacher. The existing Marine engineering professional teachers all have solid professional knowledge and rich experience. What they lack is English teaching ability. So the "bilingual teachers" are needed. Focusing on training Marine engineering students who have "international competitiveness", maritime colleges will urgently cultivate a team of "bilingual teachers" who have both marine engineering knowledge and high English language knowledge and the expressing ability.

2.3. "Dual-qualification type" teachers

For marine engineering which is a highly technical major, the engineering practice knowledge and practice ability is indispensable. However, the hardware facilities in maritime colleges used for teaching are unevenness. Due to the difference in the level of attention, it results that the equipments in some simulation cabins and laboratory of colleges are old and even missing. The students' practical operation training will not be guaranteed. And in inland maritime colleges or the colleges without practice ships, the effect of the voyage of the practice will discount. This requires that the marine engineering

teachers have the working experience in ships and rich relevant professional experience in practice. They can provide students the supplementary in practice. By the organic combination of textbook knowledge and practical application, they develop students "the practice ability" and "the innovation ability". So for a good teaching team of marine engineering, "dual-qualification type" teachers are necessary.

3. The teaching effect of "three types" Teachers' team

Compared with the traditional student of professor teacher team, the students trained by "three types" teachers' team shown more fully comprehensive quality. On the premise of consolidation of specialized courses and related courses, receive more new information from the community, better to apply study into the object, communicate more fluent in foreign languages and improve the ability to read and write. The ability to apply what they have learned, fundamental tenets of the theory allows the students to have better development in our work.

3.1. Excellent professional quality

"Academic type" teachers who master this professional related all area provides a good platform for students has continues to coin, they and students common discussion research academic problem, fired students learning interest, training students thinking ability, boot students' studied method, makes students to maximum degree of expansion and deepened expertise ability, to formed qualified students with excellent professional literacy, which lay good of Foundation for students development of future. Students will be benefited whether choose to further education or work, the academic ability of further studies undoubtedly required very high, even excel-

lent professional quality of work can make students more outstanding.

3.2. Good foreign language ability

A large number of middle-aged and young teachers are "bilingual" teacher's main force, is also teaching teacher's main force.

After solid foreign language training, as well as their own professional knowledge, they can guarantee the quality of bilingual education. Students learn expertise while also raise the level of English, in particular the ability of listening, speaking, consolidated foundation for international crew. Its most notable performance in our school is the English pass rates of the sea card increasing immensely and also comes with the improvement of CET-4 and CET-6 for marine engineering pass rate. In the past three years a total of 16 students of Marine Engineering get the competition of the National College English first, second, third prize; many people study abroad exchange.

3.3. Outstanding ability of practice

Because of "Dual-qualification type" exists in the team of teachers, they can not only play a normal teachers' function--teach textbook knowledge, but also can give students the latest knowledge which close to the actual practice mostly. On the basis of language expression and courseware elaborated, fully make use of all kinds of simulation equipment in school, lead the students to immersive feel of the actual circumstances, experimental equipment in the field in person so that students experience not only test, more like a genuineness of field operations. Great exercise the students' practical ability; on the basis of experimental achieved the above test results.

4. Further measure

To further optimize the structure of teachers, make the rate of doctors ascend to a new level, focus on training the more young teachers, encourage them to improve their professional level, the level of foreign language and ability of practice, and creating a good environment and platform for them on the foundation of original teachers' team. Make them become the talent of comprehensive, Jack of all trades of compound through catching the advantage of young teachers' good ability of learning and adapting quickly, receiving more influence that from social, other colleges and universities. At the same time, to achieve purpose that communicating with each other, common progress, and create a harmonious atmosphere of team that ask middle-aged and young teachers to bring fresh blood when they are trained and guidance by older backbone teachers.

5. Conclusion

The rejuvenation and development of Chinese shipping industry closely concern with the raising talent people of shipping. Maritime university take the important responsibility of cultivating talents, it is not only a kind of education but also a kind of social responsibilities, especially shipping industry is slumping, it is more necessary to develop high quality talents of turbine engineering. For the major maritime colleges and universities that own good foundation and background. That should pay attention on the new situation on industry, adjust the

teaching plans in time, train with high level teachers that meet requirements of industry, optimize educational resources. Although we have made some achievements, still need quite a long time to explore and practice.

6. References

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