

Research on Ideological and Political Teaching of Navigation Specialty Courses under the Mixed Teaching Mode based on OBE

-- Taking the Course of Marine Main Engine Plant in Marine Engineering as an Example

Tao Ge, Yanghe Wu

Guangzhou Maritime University, Guangzhou 510000, China

Abstract

Taking the core course of Marine Engineering "marine main engine plant" as an example, this paper fully excavates the ideological and political elements of the course, constructs the online and offline mixed teaching mode and OBE Course Ideological and political evaluation mechanism, so as to make the course Ideological and political run through the whole professional course learning and through teaching practice, On the basis of mastering professional knowledge, it not only effectively improves students' ideological awareness and political level, but also enhances students' interest in learning this course, and achieves the goal of implicit ideological and political education of professional courses.

Keywords

Transportation Power; Marine Main Engine; Curriculum Thought and Politics; OBE; Mixed Teaching.

1. Introduction

In September 2019, the CPC Central Committee and the State Council issued and implemented the outline for building a transportation power, which clearly accelerated the construction of a transportation power [1]. Shipping industry plays an indispensable role in national transportation and foreign trade. The novel coronavirus pneumonia novel coronavirus pneumonia epidemic was spreading throughout the country in early 2020. The Ministry of Education issued a guidance on organizing and managing the online teaching in ordinary colleges and universities during the critical period of the fight against new crown pneumonia. Effectively ensure the teaching quality during epidemic prevention and control. [2-4].

The school actively responded to the call of the Ministry of education and put forward the working principle of "teaching and learning reform and innovation with the deep integration of information technology and education and teaching, promote the reform of education methods, adopt the mode of" students do not return to school, classes do not stop ", teachers carry out online teaching and students learn flexibly and independently". In the "big test" to combat the epidemic, Guangzhou Institute of navigation turned "crisis" into "opportunity", which promoted the teaching reform and innovation in the information age. This course implements the OBE teaching concept in the teaching of ship main propulsion power plant to ensure the substantive equivalence of online teaching and offline classroom teaching quality. At the same time, based on the practical exploration and teaching reflection of online teaching, this paper puts forward new ideas for teacher development and teaching reform in the post epidemic era. [5].

2. Teaching Research based on OBE Mode

OBE (outcome-based education), results oriented education, that is student-centered, learning results oriented and continuous improvement. The purpose of OBE concept is to ensure "students' income", that is, the goal of teaching design and teaching implementation is the final learning achievement of students through the educational process. The emphasis is on learning achievement oriented, reverse completing the "student-centered" teaching design, and forward teaching practice. The core of OBE teaching concept is "student-centered", which is in line with the online teaching requirements during epidemic prevention and control. Therefore, it is necessary to actively explore how to fully practice the OBE teaching concept in online and offline teaching. [6-8] Therefore, the online and offline Teaching Reconstruction Design of the course marine main engine plant based on OBE concept is carried out, and a preliminary exploration is made from the aspects of teaching objectives, teaching contents, teaching methods, quality monitoring and evaluation system.

Adhering to the school running philosophy of "Building Morality and cultivating people, learning for application, serving the school and developing with characteristics", the course of marine main engine plant constructs the four in one course goal of "knowledge ability thinking value" based on Bloom's teaching goal classification theory. In order to uphold and practice OBE's "student-centered" teaching concept, the teaching goal emphasizes "students' income", that is, through the learning of this course, students can gain in four aspects: knowledge, ability, thinking and value. In order to realize the whole staff, whole process and all-round education task, the organic combination of professional courses and ideological and political education is the only way. As one of the core courses of marine engineering, marine main engine has the characteristics of rich content, wide coverage and many teaching cases. STCW Manila amendment [4] stipulates that qualified crew members need to meet corresponding skill requirements, one of which is ship engine maintenance and management.

Marine main engine plant is a comprehensive core compulsory course for marine engineering majors. It is opened for junior undergraduates. It is one of the three tube wheel competency examination courses for marine crew. It is a necessary course for the operation, management, disassembly and overhaul of marine diesel engine and its auxiliary equipment. This course is based on the Manila amendment to STCW78 / 10 Convention and the training program for seamen of seagoing ships (version 2021) issued by the Ministry of transport. It adopts the OBE online and offline teaching concept and integrates the online teaching mode of "project training and practical teaching". The online course focuses on the cultivation of comprehensive logical analysis ability and skill training such as disassembly, overhaul and operation management of diesel engine parts in ship engine room, so that students can have professional core skills such as fault diagnosis logical thinking, skilled operation, maintenance and overhaul and maintenance management. The course includes basic knowledge of diesel engine, main components and structure of diesel engine, overhaul of diesel engine lifting cylinder Theories and online teaching projects such as diesel engine parts measurement, diesel engine operation and management. At the same time, with the help of the marine engine simulator training course of Dalian Maritime University, which reflects the comprehensive application of marine engine professional knowledge, supporting its fully independently developed software, and passing the international certification, it has reached the international leading level in three-dimensional, networking and fidelity. In order to improve students' ability to comprehensively use their knowledge and solve complex real ship application problems, the course mainly adopts the combination of classroom teaching and experiment, which has strong theoretical and practical significance. Therefore, it has certain reference significance to explore the online and offline teaching mode of ship main propulsion power plant.

3. Excavation of Ideological and Political Elements

3.1. Excavation of Ideological and Political Elements

There is a big difference between the course of Ideological and political education and the course of Ideological and political education. Its focus is still the teaching of professional knowledge and skills. It cannot be full of Ideological and political education. The elements of Ideological and political education play the role of the finishing touch. In the process of implementing curriculum ideological and political education, we should give full play to the role of implicit ideological and political education of professional curriculum, achieve the effect of "moistening things silently", and have high requirements for the professional knowledge and cultural literacy of teaching personnel [5]. The contemporary engineering concept reflects the new trend of cross integration and coordinated construction of engineering technology and society, economy, culture, health, law and ecology in solving complex engineering problems, including engineering values, engineering systems, engineering safety, engineering ecology, engineering law, engineering ethics, engineering society, engineering science Engineering technology view, etc.

After repeated speculation and discussion by the teaching team, combined with the knowledge structure of the course marine main engine plant, and based on the original teaching content, in order to achieve the four in one course goal of "knowledge ability thinking value", build a "Course Ideological and political case base", which will integrate navigation culture, maritime hot spots, scientific and technological achievements of shipping industry, academic frontier Various types of materials such as marine engineering scientific research experience are seamlessly connected and organically integrated with the teaching content, realizing the infiltration of moral education elements into the teaching content. Specially designed classroom novel coronavirus pneumonia related diseases, such as: facing the new crown pneumonia epidemic situation, as a ship's crew, please talk about how to understand the special feelings of the country, social responsibility and occupation spirit. By strengthening ideological and political education in professional courses, students can establish correct socialist core values and modern ship engine managers under the background of new engineering, clarify family and country feelings, social responsibility and professional ethics, and cultivate the innovative spirit of daring to take responsibility, willing to contribute and actively explore and the craftsman spirit of excellence. In order to realize the deep combination of "teaching scientific research management", a "course professional case base" is built, including four types of cases: new diesel engine principle, scientific research topic, marine diesel engine fault case and academic frontier of fault diagnosis. The in-depth analysis of various cases through group discussion or non-standard answer homework has stimulated students' interest in learning, cultivated the logical thinking of fault diagnosis, and improved the ability to solve real ship fault diagnosis, analysis and problem-solving. Through the construction of "curriculum ideological and political case base" and "curriculum professional case base", this course has improved the high-level, highlighted the innovation, increased the challenge, and realized academic leading teaching, which not only realizes the connection between teaching and applied technical knowledge of front-line jobs, but also improves the academic education of teaching and scientific research.

3.2. Reform of Mixed Teaching Method of Ideological between Political Course and Professional Knowledge

The traditional teaching method takes teachers as the main body and students passively accept knowledge. This method is easy to lead to the disconnection between the teacher and the receiver. Teachers do not understand students' mastery of knowledge, and students do not understand teachers' teaching methods. As one of the backbone professional courses of marine engineering, the course of marine main engine plant has many knowledge points and long class

hours. If it is monotonous classroom teaching after a semester, students will inevitably feel boring. Therefore, exploring a new online and offline mixed teaching mode can better attract students' attention and enhance the teaching effect. At present, the mixed teaching method has been implemented in many schools and achieved good teaching results. In the long-term teaching and research of the teaching team, a set of online and offline mixed teaching mode integrating ideological and political elements has been summarized. Combined with the advantages of hybrid teaching mode, based on OBE education concept, student-centered, problem-oriented, value-oriented, superstar learning and other teaching platforms, build a target problem-oriented online and offline hybrid teaching mode with the characteristics of this course, so as to form "independent learning before class, face-to-face guidance during class and consolidation and expansion after class" Three stage teaching links lay the foundation for the sustainable development of curriculum ideological and political education. The teaching mode and method of curriculum ideological and political integration are shown in Figure 4.

OBE regards students as the main body of teaching activities, focusing on what students have learned, rather than what teachers have taught. No matter how perfect the teaching design is and how rich the teaching activities are, it cannot directly prove what students have learned. Therefore, it is imperative to establish a set of curriculum ideological and political evaluation mechanism based on OBE. In the long-term teaching activities, the course team has explored a set of effective evaluation mechanisms including debate competition, knowledge competition, questionnaire survey, course summary and so on. Through these methods, we can clearly understand the mastery degree of students' professional knowledge and ideological and political trends, and indirectly reflect the effect of curriculum ideological and political. Limited by space, the specific evaluation scheme is not repeated here.

4. Conclusions and Recommendations

By the time of submission, the teaching team had completed the ideological and political teaching reform practice of ship main propulsion power plant in four natural classes in the major of marine engineering. Based on the OBE curriculum ideological and political evaluation mechanism, the team organized 4 debate competitions and 5 knowledge contests, and sent and received 207 valid questionnaires. After the evaluation of the teaching team and teachers, the results show that the effect of Ideological and political teaching is satisfactory. The vast majority of students' Ideological and political consciousness has been greatly improved. At the same time, it has also enhanced students' interest in learning this course, and achieved the goal of implicit ideological and political education in professional courses.

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