

Considerations on Maritime Watch Keeping Officers' Vocational Training

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ABSTRACT: The activities on the board of the ships are based on competences and skills. In order to have competent people, you must to create them. This is the role of the maritime training system, to create competent persons for the maritime field. Part of this system is the vocational training for the deck officers. Maybe the most important role of the vocational system is to create competences based on the previous skills and knowledge acquired during the practice period on the board of the ship.

1 INTRODUCTION

The actual Constanta Maritime University maritime academic training is based on the Bologna process. Inside of this process, the training period has four years and at the end, the graduates receive a double qualification, as officers for maritime industry and as engineers for complementary industries. To achieve this double qualification is necessary, during the four years of study, to cover the special curricula for both of them. The curricula for maritime competencies are based on the STCW Convention requirements and for the engineer qualification is structured based on the national requirements.

These double qualifications are very useful for those who do not want to have a long career on sea, offering them the possibility to find a job on shore after a number of years on sea, or from the beginning, after the graduation for those who do not want to work on the sea. On the other hand, this system is not convenient for a person with years of practice on sea as seaman or motorman and who wants to increase the level of training and pass to a superior rank, as officer. In this case, more efficient will be to have implemented a vocational system of

training, shorter and based exclusively on the STCW Convention requirements for duty onboard ships as watch keeping officer.

2 VOCATIONAL TRAINING INSIDE OF THE MARITIME ACADEMIC TRAINING SYSTEM

Starting from idea that the maritime vocational training is designed especially for those persons with a background in the maritime field, as ordinary seaman or helmsman, the training process must cover only the areas of interest which are not covered by the onboard activities.

This concept leads to the present stage of vocational maritime training that exists all over the world, based on two years of study, when the students learn only the curricula according with the STCW Convention requirements. During these two years, all necessary knowledge required for a duty activity on the ship bridge is compulsory to achieve. Taking into account, that the background knowledge, practical part, about these activities, already exists in the trainee, the main focus has to be on the theoretical knowledge and in this direction,

more efficient, could be a modular system of training.

Inside of this modular system can be included modules about navigation techniques, ship handling, cargo handling, regulations, maritime English and other valuable knowledge for a safety activity on the bridge.

The modular system represents in the same time the solution for compression of three or four years of study in only two, making possible the coverage of all specialized curricula for the deck officer.

Another opportunity in the way of decrease the study period is represented by the possibility to exclude from the training period the on board practice, this part being considered covered during previous periods of working on board ships.

The main problem regarding the vocational maritime training is about the equivalence between Bologna process training, of four years, and the vocational training, of only two years. Due to the shorter period of training inside of the vocational system, the modular system will be difficult to be considered as academic level studies and to possess the same statute. Some actual opinions consider as optimum to accept the vocational system as training for the operational level and the long form, as training for the operational and managerial level too.

These opinions are based on the consideration that it is not possible to cover all the requested number of training hours for the managerial level in only two years of study.

Below, there are described an education scheme and an assessment system for the maritime deck officer's vocational training starting from the previous consideration and according with the present situation in Romanian maritime training system.

3 MARITIME DECK OFFICER'S VOCATIONAL EDUCATION SCHEME AND ASSESSMENT SYSTEM

The education scheme for the vocational training of a deck officer must be centred on the STCW Convention requirements and on the functions as navigation, cargo handling and stowage, controlling operations and care for the persons on board.

Building on these functions as modular system, the result will be a number of eight modules containing knowledge in the navigation field, four modules for the cargo handling, two modules for the controlling operations and care for the persons on board, two modules will include the complementary knowledge as electronics, marine engine and on board equipments other than navigation ones.

The navigation modules are:

- Module 1: Coastal navigation and celestial navigation
- Module 2: Navigation equipments and ship handling
- Module 3: Radar and electronic navigation
- Module 4: Voyage planning, Bridge Team Management, Collision Regulation

The modules about controlling operations and care for the persons on board are:

- Operation and maintenance of the ship
- Search and Rescue Operation

Also, adjacent to these principal modules will be other two modules dedicated exclusively to the compulsory IMO Courses, grouped in the basic and advanced courses.

- This structure will be distributed on four semesters as:
 - First semester: Coastal Navigation, part of complementary courses as electronics and on board equipments other than navigation ones and basic IMO courses;
 - Second semester: Coastal Navigation, Celestial Navigation, Navigation Equipments, Ship Handling, Operation and maintenance of the ship, Cargo handling and stowage and marine engine;
 - Third semester: Radar Navigation, Electronic navigation, Collision Regulation, Cargo handling and stowage, Search and Rescue Operation;
 - Fourth semester: Radar Navigation, Voyage Planning, Bridge Team Management, including Human Factor and advanced IMO Courses.

A semester of 16 to 18 weeks long is considered adequate in order to comprise the aforementioned structure and to cover the complete number of training hours requested by the STCW Convention.

The arrangement of the modules during the semesters permits to structure the knowledge in a natural order and thus, to have continuity.

A part of the modules can be arranged in another chronology, but it is very important to assure that the necessary knowledge is offered by a previous module in order to pass to a new one. So, in this context, is unnatural to place Celestial Navigation or Radar Navigation before Coastal Navigation, course which provides the basic knowledge for all the following navigation modules.

The introduction of the IMO courses is necessary in order to proceed to the certification as deck officer at the end of the training period.

During the courses development, it must be taken into consideration that the trainees have as background a period of practice on the ship board and some knowledge is possible to be known and in this way is necessary to see first how and what they know and to try to involve them actively in the

training process and to facilitate the knowledge acquiring and understanding.

An important idea that has not be forgotten is that one of the main scopes of the vocational training in the maritime field is to create competences, competences that can be based on the previous skills developed during the periods of service on sea.

Any competence based system must be managed within recognized arrangements for assuring quality. The requirements for a quality standards system are included in the revised STCW Convention (Regulation I/8). They cover all training courses and programmes, examinations and assessments and the qualifications and experience of instructors and assessors. The regulation I/6 requires all training and assessments to be structured in accordance with documented programmes and procedures necessary to achieve the prescribed standard of competence and conducted and supervised by persons qualified in accordance with the convention.

It is absolutely necessary to define the standards of competence required, so that the assessor can make a judgment against those standards. Otherwise, each assessor will be guided by opinion and the own experience. Within the definition of these standards must be a clear indication as to the level of competence required.

Assessment is the process of obtaining and comparing evidence of competence with the standards. The sources of evidence could be:

- Direct observation: in-service experience, laboratory equipment training, simulation.
- Skills, proficiency and competency tests.
- Projects/assignments.
- Evidence from prior experience
- Questioning techniques: written, oral, by computer.

4 CONCLUSIONS

The activities on the board of the ships are based on competences and skills. In order to have competent people, you must to create them. This is the role of the maritime training system, to create competent persons for the maritime field. Part of this system is the vocational training for the deck officers. Maybe the most important role of the vocational system is to create competences based on the previous skills and knowledge acquired during the practice period on the board of the ship.

Also, the vocational training is a viable alternative for those individuals who have not enough time for a fourth years training, active individuals in the maritime field who want in the same time to increase their level of training and to

have possibility to get an upper position on board, as officers.

The training scheme must satisfy in the same time the STCW Convention requirements and also to offer to the trainee the necessary knowledge for the future duties. In this way, it is considered as useful to use a modular scheme, containing a combination of traditional nautical sciences, as different types of navigation, cargo handling, ship handling, regulations and communication.

The assessment must offer the possibility to obtain and compare evidence of competence with the standards. The aim is to ensure that sufficient, reliable and verifiable evidences are available to enable an assessor to be satisfied that a candidate has the ability to work in accordance with the required standards.

The vocational training is in accordance with the International Maritime Organisation (IMO), STCW and shipping internationally recognized classification societies, as DNV, for training and bridge, engine and liquid cargo handling simulators but also Telenor Norway for additional equipment GOC -GMDSS. The training is accredited by National Council for Adult Vocational Training (CNFPA), Romanian Agency for Quality Assurance in Higher Education (ARACIS) and Romanian Naval Authority (RNA).

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