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Seafarers' education and training in the context of improvement leadership and managerial knowledge and skills

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Abstract: *This paper presents the observations about changing conditions and circumstances affecting seafarers' professional lives, today and in the near future. The focus is on the Leadership and Teamwork Course in terms of its objectives, purpose, content and ways of implementation, all in the context of presenting the latest achievements in the field of education and training of seafarers. Furthermore, the paper provides an analysis of results of the survey performed in order to investigate how trainees of the Course are satisfied with some specific aspects of teaching process and staff at the Faculty of Maritime Studies Kotor.*

Keywords: *seafarer; leadership; teamwork; management*

1. INTRODUCTION

Educational systems in the area of maritime affairs differ from country to country. Due to this fact, International Maritime Organization's conventions and related recommendations have the goal to specify basic levels of knowledge and skill necessary to meet challenges in maritime industry. In 1978 the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) was the first convention according to which were proposed the minimum standards of competence for seafarers. In 1995 this Convention was updated with aim to clarify the standards of competence required and provide effective mechanisms for enforcement of its provisions (IMO, 2016).

A comprehensive review of the STCW Convention was done in Manila, Philippines from 21 to 25 June 2010, where was adopted a significant number of amendments to the STCW Convention and STCW Code. These amendments, mostly known as the Manila amendments, which provide enhanced standards of training for seafarers, entered into force on 1st of January, 2012 (IMO, 2016).

In the literature seafarers are mostly considered as „the unsung heroes of an unsung industry”, whereby 50,000 ships and 1.25 million seafarers carry over 90% of international trade (Global Maritime Education & Training Association, 2011). Every day, it loses two ships, pays out US\$4 million in claims, which confirms that the global shipping industry is a dangerous place and radically changes the lives of hundreds of people for ever (Gregory and Shanahan, 2010). It was investigated that the accidents in maritime industry were mainly caused by human error, or there were no major technical issues. Namely, the reasons are as

follows: a) outside control of crew – 19%, b) lack of skills – 10%, and c) crew management errors – 71% (Oxford Aviation Academy, 2011). Some of them are: a) preoccupation with minor technical problems, b) failure to delegate tasks and responsibilities, c) failure to set priorities, d) inadequate monitoring, e) failure to utilize available data, f) failure to communicate intent and plans, g) failure to detect and challenge deviations from SOP's, rules and safe actions (Cowburn, 2011; Oxford Aviation Academy, 2011).

All mentioned refers to conclusion that for the purpose of effective training of the operational level in the hierarchy on board it was necessary to organize a Course called Leadership and Teamwork. According to the conclusions from Manila 2010 this Course is mandatory to be taken and passed until 2017 for all seafarers who currently sail worldwide, and what is more, its implementation will continue even after 2017 (IMO, 2014).

The aim of this paper is to show how effective training can improve the skills, knowledge, experiences of human resources who are essential factor in achieving safety and efficiency of the entire ship's passage operation. Below are given an overview of scope, objectives and the mechanism of delivering this Course, as well as presentation its practical implementation at the Faculty of Maritime Studies Kotor.

2. EDUCATION AND TRAINING BASED ON LEADERSHIP AND TEAMWORK COURSE

2.1. Scope, objectives and delivery of the Course

The model course is designed to meet STCW requirements, in accordance with the 2010 Manila Amendments, and has the intention to improve a person's knowledge, skill and understanding of leadership and team working at the operational level on board a ship.

After the successful completion of the course a trainee should be able to present sufficient managerial kind of knowledge, primary leadership and team working. Also, trainee will acquire the relevant skills to competently respond to the job requirements of officer in charge of a navigational watch on ships of 500 gross tonnage or more, as well as officer in charge of an engineering watch in a manned engine-room, or designated duty engineer in a periodically unmanned engine-room. Namely, the knowledge, understanding and proficiency should include, but not be limited to (IMO, 2014):

- Working knowledge of shipboard personnel management and training.
- A knowledge of related international maritime conventions and recommendations, and national legislation.
- Ability to apply task and workload management.
- Knowledge and ability to apply effective resource management.
- Knowledge and ability to apply decision-making techniques.

Depending on the methods, the outcome of the Course may be achieved using: a) classroom learning through presentations, b) group discussions, c) role play, d) simulations, and e) case study analysis. These methods can be used only in the way which will ensure that all trainees through interaction and expression of themselves in face-to-face cases get the opportunities to consider similar to those likely to occur when performing shipboard operations.

On the other side, an instructor is a person who has remarkable experience in interactive teaching of leadership and team working, with respect to the knowledge of shipboard situations, conducting the multicultural crews and overcoming barriers in communicating

clearly in the English language, on board as well as with people based ashore.

In the case of the Faculty of Maritime Studies Kotor all mentioned prerogatives are sufficiently fulfilled, but what is more, its facilities for Course delivering include additional rooms for break-out discussion groups, as well as the usual equipment such as overhead projection, interactive whiteboard, flip charts and access to computer terminals. The trainees are provided with leadership and teamwork training presentations and hard copy handouts materials, and they are also addressed to relevant library books and other publications. Nautical and Marine Engineering simulators are at the disposal of the trainees and instructor when practicing individual's situational awareness, leadership and team working skills in various safety risk situations and decision making processes.

2.2. Course outline

The Program of the Course consists of 8 subject areas, where particular area has its own number of working hours, as given in the Table 1.

Table 1. *Leadership and Teamwork Course Program*

Subject Area	Description	Hours
1.	Introduction and administration	1,0
2.	Working knowledge of shipboard personnel management and training	4,0
3.	Need for international maritime conventions, recommendations and national legislation	1,0
4.	Ability to apply task and workload management	4,0
5.	Knowledge and ability to apply effective resource management	4,0
6.	Knowledge and ability to apply decision-making techniques	4,0
7.	Self-awareness, personal and professional development	1,0
8.	Conclusion	1,0
	Total:	20,0

Source: IMO, 2014.

According to the subject's areas from 1-8 the instructor is obliged to present the following topics (IMO, 2014; Global Maritime Education & Training Association, 2011; IMO, 2016):

- Subject area 1 comprises instructor's interpretation of the Course objectives and outline of the Program through introduction and administration.
- Subject area 2: It is necessary to describe the typical shipboard organization, explain the management, operational and support level, state positions and describe roles, as well as outline the chain of command.
- Subject area 3: It is necessary to introduce to international maritime conventions,

recommendations and national legislation (emphasis to be on human factors, not on technical factor regarding the SOLAS, including the ISM and ISPS Codes, MARPOL, STCW and MLC Conventions; describe the role of IMO with respect to maritime conventions and give examples of recommendations in accordance to the Montenegrin legislation dealing with human factors, as well).

- Subject area 4 comprises planning and coordination, personnel assignment, human limitations, personal abilities, time and resource constraints, prioritization, workloads, rest and fatigue, leadership styles, challenges and responses.
- Subject area 5 is referred to effective communication on board and ashore, decision making reflecting team experience, assertiveness and leadership, including motivation, obtaining and maintaining situational awareness, appraisal of work performance, short and long term strategies.
- Subject area 6: After passing this section, trainees will acquire knowledge about decision-making techniques, situation and risk assessment, judgement and emergencies and crowd management, and they will be able to identify and consider generated options.
- Subject area 7: Trainees will be introduced with self-awareness, personal and professional development, what is about acquiring knowledge of personal abilities and behavioural characteristics, as well as getting opportunities for personal and professional development.
- Subject area 8: The course is finished after the evaluation, individual assessments and advice and certificate presentations are performed.

The Course reflects the attitudes and impressions of the instructor in a sense, but it also imposes techniques to encourage trainees' involvement in interactive communication, such as break-out groups, workshops, panel and round table discussions, which only could be affirmative methods of improving leadership and teamwork knowledge and skills.

3. LEADERSHIP AND TEAMWORK COURSE EXPERIENCE AT THE FACULTY OF MARITIME STUDIES KOTOR

The Faculty initiated a program of lectures according to the Course on 13th of January, 2014. Since then, 1,135 trainee have been attending the Course. The instructors' task has been to ensure that trainees completing this course will be more competent in carrying out their role in the operation of a ship efficiently, safely, cleanly and securely, with a multi-cultural team where levels of knowledge, skill and competences differ very often. The intention of the Faculty and teaching/instructor staff was not to make a guarantee of production of leaders or effective members of a team on board; at best this Course delivery will create an awareness of the issue in matter, and initiate the self-development of the trainees and their motivation to succeed as a leader, as well.

It is also noted that individual differences of trainees result in their different approaches to leadership and team working. While some people express natural leadership abilities, others are supposed to be led. Regarding mentioned, the groups of seafarers undertaking these course have different characteristics and needs, hence the subject of management and leadership at the Faculty is best taught not through "ex cathedra" lectures, but stimulating trainees' interaction.

Leadership and teamwork are fundamental to training in order to ensure competence at sea

across the wide range of shipboard operations. Thus, simulators that Faculty offers are a good tool for reinforcement of what was learnt in the class over the period of Course implementation. Some of the applications were in the form of case studies, where instructor has been illustrating specific examples of maritime accidents, as the capsizing of the Herald of Free Enterprise off the Belgian Coast in March 1987 with the loss of 188 lives and the role of poor leadership and teamwork aboard and ashore that led to this disaster, etc.

During and after completion of the Course each trainee has been advised about his or her own progress. In respect to the Quality Management System of the Faculty it is mandatory to conduct the survey about trainees' satisfaction, as shown in questionnaire form (see Table 2).

Table 2. *Questionnaire form*

No.	Question
1.	Is the given literature appropriate for the content of the training?
2.	Was the instructor/lecturer well prepared for training sessions?
3.	Were the classes regularly performed according to the terms of timetable?
4.	Was the method of presenting course materials clear?
5.	Was the equipment functioning satisfactorily during the training?
6.	What is the relationship established between the instructor and the trainees during the training (interactivity)?
7.	Did the lecturer succeed to make the trainees of the course interested in the subject matter?
8.	What was the efficiency of utilization of the available time?
9.	Did the instructor test the level of the trainees' acceptance of matter during the training process?
10.	Were there any additional consultations?

Source: Internal documentation of the Quality Management System of the Faculty of Maritime Studies Kotor

Since the beginning of 2016 the Course has been carried out for 3 times, and trainees were obliged to give the answers regarding the questions in Table 2, using the Likert scale 1-5. The result is that 35 respondents expressed their attitudes about quality of the Course lectures as follows: an average score that represents trainees' satisfaction about the quality of the Course implementation at the Faculty of Maritime Studies Kotor is 4.945. This is very important data for the management and instructor staff at the Faculty, and at the same time strong motivation force to continue respecting international and national rules and regulations, improve human and material resources of the Faculty, as well.

4. CONCLUSION

In the contemporary environment quality seafarer could be only one who can ensure the provision of an efficient, safe, clean, secure running of the ship, fulfilling “triple E” requirements – running the business efficiently, economically and environmentally friendly. In such a situation, seafarers need to be continuously educated and trained. Maritime industry's competence requirement is leadership and team working on board. Through the attending of Leadership and Teamwork Course seafarers seriously raising the level of knowledge of situational and industry awareness, improve their soft skills and much better assess the competences.

Seafarers who pass Leadership and Teamwork Course at the Faculty of Maritime Studies Kotor are successfully supplied with the following topics related to managerial knowledge and skills on board: a) maritime conventions and regulations, b) effective workload management, c) resource-management techniques, d) communication and teamwork, e) leadership and motivation, f) situational awareness, g) decision-making process, g) fatigue and stress, i) cultural awareness, and j) situation and risk assessment.

Based on the results of continuous measuring trainees' satisfaction, it can be concluded that Faculty of Maritime Studies Kotor successfully realizes its mission, what means that this Institution is leader at the market of providing educational and training services in the local and regional environment.

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