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ROLE OF THE HUMAN ELEMENT

Quality of Onboard Training (OBT): First Certificate of Competency (FCoC)

Submitted by the International Association of Maritime Universities (IAMU)

SUMMARY

Executive summary: This document provides the Sub-Committee with information on the IAMU research project "Comprehensive study on quality of onboard training", part II: OBT-oriented analysis of international instruments-IAMU interpretation

Strategic direction, if applicable: 1

Output: Not applicable

Action to be taken: Paragraph 53

Related document: HTW 4/INF.4

Introduction

1 The quality of prospective officers is predominantly dependent upon the quality of onboard training (OBT) they received. OBT is the only opportunity to strategically align the theoretical knowledge acquired in a maritime institution with practical day-to-day shipboard operations. When accomplished without any compromise on quality, OBT has the potential to instill the underpinning skills and knowledge needed to transform trainees into effective manpower.

2 The 1978 STCW Convention, as amended, contains requirements and guidance regarding OBT for the first Certificate of Competency (FCoC) to be issued for prospective officers. However, according to IAMU understanding, there are some sensitive OBT issues that are to be considered and shared in the maritime community in more detail, and these issues are consistently linked with the Quality Standards System (QSS) required by STCW regulation I/8 and quality of OBT for FCoC. These issues necessitated the IAMU carrying out research into OBT processes, using feedback information from prospective officers, which is presented in document HTW 4/INF.4.

3 This project is an IAMU community-based study committed to identifying and understanding the existing challenges in prospective officers OBT organization, and also to managing, sustaining and monitoring its quality.

Background

4 In accordance with the 1978 STCW Convention and Code requirements, the OBT timeframes for issuing the FCoC take about 25% of all Maritime Education and Training (MET) time periods and play a unique and decisive role in achieving qualification standards for future maritime professionals. IAMU has conducted a post-OBT anonymous feedback survey of prospective officers' views after their recent OBT in order to obtain first-hand information on the quality of training, provided for prospective officers by different shipping companies around the world (HTW 4/INF.4).

5 According to IAMU's vision, the OBT organization for issuing the FCoC due to its exclusive significance for quality of prospective officers entails a high level of safety at sea, security and protection of marine environment. These points should be highlighted among all the other types of training on board the ship according to the following:

- .1 it is not the conventional refreshing training of ship's personnel, who already has experience working at sea, but the training for newcomers as prospective officers in conditions they have never faced before. In the majority of cases, it might be their first real trial by sea;
- .2 the OBT for FCoC is designed to significantly enrich the quality of training acquired at the MET institution. It forms the prospective officer as a marine professional, completes the shaping of his/her competencies in accordance with the STCW requirements, and forms his/her attitude towards the profession and also towards the ship's crew, often multinational, which he/she has to join. The majority of human element professional components needed to work at sea are formed during OBT;
- .3 it is the very beginning of real sea life and the core of shaping the student/cadet into a ship's officer, which is why the OBT for FCoC is significantly different from all other types of training for crew aboard ships. It depends not only on the knowledge, understanding and proficiency (KUP) received by trainees at MET institutions, but also depends on the KUP of the master, ship's officers, crew and their attitude towards trainees and appropriate organization of OBT. This OBT should effectively transform newcomers with the help of ship's personnel from theoretician to competent ship's officer; and
- .4 in the end, it forms the level of attractiveness of the seafarer profession and defines the level of their retention in the industry and sustainability of the industry as a whole. IAMU member universities have a lot of examples where students/cadets leave the marine profession after they experienced their first OBT, which they assessed as unsatisfactory for various reasons.

6 The OBT for the FCoC, issued by Administrations in compliance with the STCW regulations II/1, III/1 and III/6, is being carried out in the unique MET timeframes, within which prospective officers keep relations both with shipping companies and MET institutions and in this period of time theory and training of their thinking go together to make the background for their future professional activities. Therefore, the quality of the OBT for prospective officers is extremely significant and should be carefully monitored by Administrations, companies, MET institutions and ship personnel.

7 As per STCW regulation I/2 (Certificates and endorsements), certificates of competency shall be issued only by the Administration, following verification of the authenticity and validity of any necessary documentary evidence. This means that flag State Administrations are responsible for the first STCW license certification in accordance with STCW regulation I/2. But the FCoC, as part of STCW regulations II/1, III/1 and III/6, cannot be issued by Administrations if the prospective officers do not complete a mandatory and approved OBT programme. This also means that, to meet international law, flag State Administrations are responsible for establishing and approving the national regulations, and encouraging companies to provide OBT for prospective officers. These national regulations should be quite flexible, i.e. companies following them should facilitate motivation (for example, not only tonnage tax exemption) to be involved in the OBT process and admit prospective officers for OBT on their ships. These provisions are to be under control in accordance with STCW regulation I/8.

8 To follow article VI of the STCW Convention: (1) Certificates for masters, officers, (including FCoC) or ratings shall be issued to those candidates who, to the satisfaction of the Administration, meet the requirements for service (seagoing service), age, medical fitness, training, qualification and examinations in accordance with the appropriate provisions of the annex to the Convention.

9 Regulations II/1, III/1 and III/6 are mandatory for issuing the FCoC to prospective officers, but the term "prospective officer" (or possible equivalent terms: student, cadet, trainee), which is applied in section B-II/1 of the STCW Code, is neither defined in article II (Definitions), nor in regulation I/1 (Definitions and clarifications). Moreover, the term "candidate for certification" appears to be too flexible in these regulations and does not reflect the sense of further provisions regarding the issuing of the FCoC.

STCW: OBT for FCoC challenges

10 By IAMU's understanding, while analysing the Convention, the following OBT for FCoC related questions could be raised:

- 1 What is the official status of a trainee/student/cadet or prospective officer on board a ship? If the appropriate definition is omitted in the STCW Convention and Code and in other related international regulations, then is the prospective officer an official member of the crew?
- .2 As per section B-I/6 of the STCW Code (Guidance regarding training and assessment): Each Party should ensure that a register or registers of approved training providers, courses and programmes are maintained and made available to companies and other Parties on request. The following question arises: could the shipping company providing the berths for OBT of students/cadets, be defined and have a status as an approved training provider, and be interpreted also as approved OBT-provider for FCoC?
- .3 If the answer to sub-paragraph .2 above is positive, all the provisions of regulation I/6 "Training and assessment" are also applicable for OBT of prospective officers. Such key terms as "instructor", "assessor", "shipboard training officer", "company training officer", by IAMU's understanding, shall also be carefully defined and clarified in chapter I, as mandatory positions on board the ship.

- .4 Shall the shipboard training officer in charge of OBT-related duties for prospective officers also bear the responsibility as instructor and assessor? The answer should be positive, otherwise the OBT for FCoC requirements of the Convention cannot be completed on board the ship. But is this activity in line with regulation VIII/1 (rest hours), section A-I/6, paragraph 21, and with functional requirements for masters and ship's officers?
- .5 Shall the Administration issuing the FCoC for national prospective officers, recognize the OBT pursuant to regulations II/1, III/1 and III/6 on board ships, flagged by any other State without verification of compliance of this State with the provisions of regulation I/10?
- .6 Are the Quality Standards pursuant to regulation I/8 applicable to shipping companies carrying out the functions of OBT-providers for FCoC?
- .7 Can the status of shipping companies, as OBT-providers, pursuant to regulation I/8 be interpreted as governmental/non-governmental agencies or entities?
- .8 Can the term "OBT", when applicable, have the same meaning as "In-service training" (section A-I/6 of the STCW Code)? Clarification is needed.

Functional terminology

11 Optimum and effective OBT organization is essential for the candidates before issuing them the FCoC, as it lays the important components of general competency of prospective officers. IAMU believes that the absence of some OBT-related terms, provisions, links and definitions in the Convention sometimes introduces excessive flexibility in interpretations of some conventional requirements, transforming them into real challenges for quality OBT for FCoC in terms of uncertainties, inconsistencies and gaps. Thus, when making an analysis of IMO instruments relating to the procedures of issuing the FCoC for prospective officers, one can conclude that excessively flexible wordings of requirements relating generally to all types of OBT do not allow for effective implementation in the development of such an important mechanism for the certification for the FCoC.

12 Noteworthy is the fact that in section B-II/1 of the STCW Code the term "prospective officer" mentioned in the text is not defined and the appropriate guidance is confined to the master and deck department only. The appropriate terminology for engineer cadets is omitted in section B-III/1, but this section contains the term "qualified assessor", which is not defined either.

13 The key terms applied for OBT for FCoC need to be carefully defined in appropriate international instruments. IAMU believes that OBT key terms should have a unified interpretation that could give these instruments the best opportunity to work together as an integrated system. This non-exhaustive list of related terms might be as follows:

- .1 Seafarer
- .2 Shipboard training officer

¹ Persons conducting in-service training or assessment on board ship shall only do so when such training or assessment will not adversely affect the normal operation of the ship and they can dedicate their time and attention to training or assessment (section A-I/6 (Training and assessment)).

- .3 Company training officer
- .4 Prospective officer
- .5 Approved seagoing service
- .6 Company as [approved] OBT- provider
- .7 Onboard training for FCoC

14 Some OBT key provisions applied in the STCW Convention and Code might be considered as unclear. For example:

- .1 Regulation II/1: Every candidate for FCoC certification shall have approved seagoing service (or OBT) of not less than 12 months (in what capacity?) as part of an approved training programme which includes onboard training (in what capacity?) that meets the requirements of section A-II/1 of the STCW Code and is documented in an approved training record book, and also have performed, during the required seagoing service, bridge watchkeeping duties under the supervision of the master or a qualified officer for a period of not less than six months;
- .2 Regulation III/1: Every candidate for FCoC certification shall have completed combined workshop skills training and an approved seagoing service (or OBT) of not less than 12 months (in what capacity?) as part of an approved training programme which includes onboard training (in what capacity?) that meets the requirements of section A-III/1 of the STCW Code and is documented in an approved training record book, and also have performed, during the required seagoing service, engine-room watchkeeping duties under the supervision of the chief engineer officer or a qualified engineer officer for a period of not less than six months; and
- .3 Regulation III/6: Every candidate for FCoC certification shall have completed not less than 12 months of combined workshop skills training and approved seagoing service (or OBT) (in what capacity?) of which not less than six months shall be seagoing service (in what capacity?) as part of an approved training programme which meets the requirements of section A-III/6 of the STCW Code and is documented in an approved training record book.

15 In accordance with the Maritime Labour Convention, 2006 (MLC 2006), Article II (Definitions and scope of application), the key term "seafarer" is defined as follows:

"(f) Seafarer means any person who is employed or engaged or works in any capacity on board a ship to which this Convention applies;"

The STCW Convention does not make references to MLC 2006. However, here it is reasonable and consistent to use the system approach, and to develop the unified definitions of some key related terms mentioned in paragraph 13 above.

16 Following the STCW regulation I/1, "company means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the shipowner and who, on assuming such responsibility, has agreed to take over all the duties and responsibilities imposed on the

company by these regulations". To keep terminological consistency, which is followed by functional efficiency of the STCW Convention and, in particular, to comply with STCW regulation I/8, company, as a real OBT-for-FCoC provider, is to be considered as a non-governmental or governmental agency. The term "approved OBT- for- FCoC provider" is consistent with section B-I/6 but should not apply to companies that do not take prospective officers for OBT.

17 The examination of other instruments confirmed the lack of cross consistency in the set of terms related to the STCW Convention, namely OBT for FCoC. IAMU's vision is to increase the efficacy of this OBT-mechanism. The unified interpreted terminology, which is mentioned in paragraph 13 should be developed and introduced, at least, into the following instruments:

- .1 STCW Convention: article II (Definitions), regulation I/1 (Definitions and clarifications);
- .2 SOLAS: regulation I/2 (Definitions);
- .3 ISM Code: part A – Implementation, section 1.1 (Definitions);
- .4 ISPS Code: section 2 (Definitions);
- .5 MLC 2006: article II (Definition and scope of application);
- .6 *Principles of minimum safe manning* (resolution A.1047(27)): also could be amended by including the term of "prospective officer" or appropriate equivalent;
- .7 *Guidance on the preparation, reporting and review of independent evaluations and steps taken to implement mandatory amendments required by regulation I/7 on the STCW Convention* (MSC.1/Circ.1449);
- .8 IMO Instrument Implementation (III) Code;
- .9 *2017 non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III code)* (resolution A.1121(30));
- .10 *Framework and procedures for the IMO Member States audit scheme* (resolution A.1067(28));
- .11 *Revised Guidelines on implementation of the International Safety Management (ISM) Code by Administrations* (resolution A.1118(30)); and
- .12 *Procedures for port State control, 2017* (resolution A.1119(30)).

18 The following definition, formulated by BIMCO/ISF, can be used as a basic one:

"Officer trainees' means trainees, apprentices and other personnel following a training programme leading to the issuance of an operational level certificate in accordance with the provisions of chapters II, III and VII of the STCW 78 Convention",²

² BIMCO / ISF MANPOWER REPORT, The worldwide demand for and supply of seafarers, 2015.

In order to be in line with the terminology applied in the STCW Convention, a slight change can be proposed to this definition, as follows:

"Prospective Officers', [as members of the crew], means trainees, apprentices and other seafarers following a training programme leading to the issuance of an operational level certificate in accordance with the provisions of chapters II, III and VII of the STCW 78 Convention."

Recognition of certificates

19 Following STCW regulation I/10, each Administration shall ensure that the provisions of this regulation are complied with, in order to recognize, by endorsement in accordance with regulation I/2, paragraph 7, a certificate issued by or under the authority of another Party to a master, officer or radio operator and that:

"The Administration has confirmed, through an evaluation of that Party, which may include inspection of facilities and procedures that the requirements of the Convention regarding standards of competence, training, and certification and quality standards are fully complied with..."

The definition and unified interpretation of the term "training" in this regulation should include "the OBT for the FCoC".

Responsibilities of the companies

20 As per STCW regulation I/14, each Administration shall, in accordance with the provisions of section A-I/14 of the STCW Code, hold companies responsible for the assignment of seafarers for service on their ships in accordance with the provisions of the present Convention, and shall require every such company to ensure that...(5) seafarers, on being assigned to any of their ships, are familiarized with their specific duties and with all ship arrangements, installations, equipment, procedures and ship characteristics that are relevant to their routine or emergency duties.

In principle, the term "seafarer" can be included into the STCW Convention, and the term "prospective officer" (as in paragraph 18) can be interpreted as a "seafarer", so no additional clarification is needed. Otherwise, in order to strengthen the OBT-for-FCoC logic the appropriate provisions of regulation I/14 can be worded as follows:

"Each Administration shall, in accordance with the provisions of section A-I/14, hold companies responsible for the assignment of seafarers for service on their ships, including prospective officers for Onboard Training in accordance with the provisions of the present Convention, and shall require every such company to ensure that:...(5) seafarers, including prospective officers for Onboard Training on their ships, on being assigned to any of its ships, are familiarized with their specific duties (training programmes) and with all ship arrangements, installations, equipment, procedures and ship characteristics that are relevant to their routine or emergency duties;"

STCW and the ISM Code

21 The principles and objectives of the ISM Code provide an international standard for the safe management and operation of ships and for pollution prevention. The success of its implementation depends, to a great extent, on the continued commitment, competence, attitudes and motivation of individuals, at all levels, in the company and on board ships to which the ISM Code applies.

22 According to the ISM Code objectives (section 1.2.3), the safety management system should ensure:

- .1 compliance with mandatory rules and regulations; and
- .2 that applicable codes, guidelines and standards recommended by the Organization, Administrations, classification societies and maritime industry organizations are taken into account.

The following question arises: could the STCW Code be considered as an applicable standard in the context of the ISM Code? If we assume that the efficiency of Safety Management Systems (SMS) and quality of seafarers are inextricably linked, which is the case, then the reasonable answer to this question is positive. Then, extrapolating the logic of these arguments to comply with the ISM Code, the SMS shall include applicable mandatory provisions relating to OBT for the issuance of the FCoC by STCW regulations II/1, III/1 and III/6, if the prospective officer is taken on board the ship.

23 In accordance with the STCW Convention, the flag State Administration is responsible for the certification of seafarers, but this is not the responsibility of companies. It relieves companies of being in charge of the implementation of many of the STCW Convention and Code requirements directly if the appropriate Party regulations are not in place.

24 Analysing the STCW Convention logic chain that defines the control procedures, namely article X, regulation I/4, section A-I/4 and section B-I/4, attention can be drawn to the fact that there are no control provisions related to ship OBT procedures for FCoC in the Convention. It is absolutely in line with the concepts outlined in the STCW Convention, since the control of availability of such procedures on board, if applicable, is the ISM Code function as per section A-I/4.2, i.e. "It shall be borne in mind, ... that onboard procedures are relevant to the International Safety Management (ISM) Code and that the provisions of this Convention are confined to the competence to safely execute those procedures". So, the next question arises: Could the above OBT procedures be considered as components of safety concepts, taking into account the significance of Human Element for safety at sea? Could OBT for FCoC also be accepted as a part of the ISM Code training procedures supporting the safety management system and tracked by SMS? The IAMU answer is positive.

25 As per STCW regulation I/8 (Quality standards): each Party shall ensure that:

- .1 in accordance with the provisions of section A-I/8 of the STCW Code, all training, assessment of competence, certification, including medical certification, endorsement and revalidation activities carried out by non-governmental agencies or entities under its authority are continuously monitored through a quality standards system to ensure achievement of defined objectives, including those concerning the qualifications and experience of instructors and assessors; and
- .2 where governmental agencies or entities perform such activities, there shall be a quality standards system.

As per section 6.5 of the ISM Code, "the Company should establish and maintain procedures for identifying any training, which may be required in support of the safety management system and ensure that such training is provided for all personnel concerned". It would be reasonable for the terms "all training" and "any training" used in the STCW Convention and the ISM Code to have a unified interpretation, which includes the OBT for FCoC. STCW regulation I/8 does not contain the term "company". However, in accordance with the STCW Convention,

Administrations by developing the appropriate national provisions should encourage companies to be obliged to carry out the appropriate OBT, otherwise the compliance with regulations II/1, III/1 and III/6 is in evident doubt. These provisions consist of two categories:

- .1 category (a): Training related to certification of seafarers (including OBT related to certification for issuing the FCoC) are to be in place, otherwise the lack of such provisions can be considered as inconsistent with the ISM Code (section 6.5). In this case, STCW regulations II/1, III/1 and III/6 as noted above, are not workable for the Party of Convention. The verification of compliance with the STCW requirements is also the responsibility of flag State Administrations. The flag State Administration is responsible for confirming that training of seafarers (say, prospective officers) subject to certification is performed as a part of the Quality Standard System (QSS). Those companies that take cadets/students for OBT for issuing them the FCoCs by Administrations to comply with regulations II/1, III/1 and III/6, fall under requirements of STCW regulation I/8. All these OBT-for-FCoC activities of companies can be the subject to confirmation by Recognized Organizations (RO) and, in principle, it can be delegated to them by Administrations, but strictly speaking, it is not covered by the context of RO activities related to certification of companies by the ISM Code and can be considered as a gap, making regulations II/1, III/1 and III/6, in a lot of cases not efficient, as it was illustrated by the feedback questionnaire results presented in document HTW 4/INF.4; and
- .2 category (b): Training related to compliance with the ISM Code requirements. These responsibilities fall under the inspection regime subject to the ISM Code. These provisions are worded in an extremely flexible style in regulation I/14 (Responsibilities of companies) and section A-I/14 (and B-I/14), which gives little chance to use them in favour of an effective OBT-for-FCoC organization. That is why it can also be considered to be somehow inconsistent with STCW regulations II/1, III/1 and III/6.

Assessment and evaluation of OBT for FCoC. STCW regulation I/16 (Verification of compliance)

26 If the *Guidance on shipboard assessments of proficiency* (MSC/Circ.853) is to be followed, then the process of assessment is through a quality standards system, subject to verification to ensure validity, reliability and consistency of results. Therefore, if evidence of competence is to be assessed as part of onboard training, each ship would have to be approved as an assessment centre or be part of another approved establishment's quality standards arrangement. It can be disputed, but this paragraph of the referred guidelines, in its principle and spirit, is quite consistent with the position of IAMU on OBT for FCoC.

27 Communication of information by the Party pursuant to article IV and STCW regulations I/7 and I/8 does not confirm that the information provided demonstrates that "full and complete effect" regarding OBT for FCoC is given to the provisions of the STCW Convention. This information is not required by the *Guidance on the preparation, reporting and review of independent evaluations and steps taken to implement mandatory amendments required by regulation I/7 of the STCW Convention* (MSC.1/Circ.1449), nor is it required by new STCW regulation I/16 (Verification of compliance), introducing the III Code as a mandatory instrument for the STCW Convention and Code.

28 The above-mentioned guidance regarding the independent evaluation required by STCW regulation I/7 includes no items about companies as OBT-providers. That is why the results of independent evaluation on OBT for FCoC are absent in the terms of reference of assessors and are not reported either by the panel of competent persons to the IMO Secretary-General. It can be considered also as a gap in the mechanism of the STCW enforcement procedure.

The III Code and OBT for FCoC

29 As per STCW regulations II/1, III/1 and III/6, it is absolutely clear that OBT is mandatory for every candidate for the FCoC certification and the appropriate mechanism should be in line with STCW regulation I/8. The terms "all training, assessment of competence" shall include Onboard Training and Onboard Assessment for FCoC. So, in principle, regulation I/8 covers OBT and Assessment for the FCoC, and has a ground to be audited through the III Code.

30 The III Code and two Assembly resolutions³ supporting the Code, reveal to the auditors the logic chain of responsibility of STCW Parties on OBT for FCoC provided that the term "training" includes "OBT for FCoC".

31 Resolution A.1121 (30) regarding the implementation of the III Code urges Governments of all States, in their capacity as flag, port and coastal States, to make as much use as possible of the list in implementing IMO instruments on a national basis; but it has no advice on the verification of the OBT mechanism for issuing the FCoC, so the III Code does not work for the STCW Convention and Code at full strength regarding OBT for FCoC.

32 IAMU is of the view that, in accordance with new STCW regulation I/16 (Verification of compliance), adopted by resolution MSC.373(93), the following provisions should have the opportunity of being interpreted in favour of the OBT for FCoC:

- .1 Parties shall use the provisions of the Code for Implementation in the execution of their obligations and responsibilities contained in the present Convention;
- .2 every Party shall be subject to periodic audits by the Organization in accordance with the audit standard to verify compliance with and implementation of the present Convention; and
- .3 the Secretary-General of the Organization shall have responsibility for administering the Audit Scheme, based on the guidelines developed by the Organization.

In accordance with new section A-I/16, adopted by resolution MSC.374(93), the following questions shall be responded by Administrations during the audit, taking into account the OBT for FCoC:

- .1 Does the Administration recognize certificates issued by other Party in accordance with regulation I/10? If the answer is positive, has the Party submitted reports on the measures taken to ensure compliance with regulation I/10?

³ *Framework and procedures for the IMO Member State Audit Scheme (resolution A.1067(28)); 2017 non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code) (resolution A.1121(30)).*

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- .2 Has the Party communicated its report of independent evaluation pursuant to regulation I/8?
 - .3 Has the Party communicated a report concerning implementation of subsequent mandatory amendments to the STCW Convention and Code?

33 Quoting paragraph 6 (Scope) of the III Code, "the Code seeks to address those aspects necessary for a Contracting Government or Party to give full and complete effect to the provisions of the applicable international instruments to which it is a Contracting Government or Party, pertaining to... standards of training, certification and watchkeeping for seafarers".

34 As per paragraph 16, the III Code requires that "flag State should establish resources and processes capable of administering a safety and environmental protection programme, which, as a minimum, should consist of following:

- 16.3 compliance with the requirements related to international standards of training, certification and watchkeeping of seafarers. This includes, inter alia:
 - 16.3.1 training, assessment of competence and certification of seafarers;
 - 16.3.5 administrative arrangements, including those involving training, assessment and certification activities conducted under the purview of another State, which are such that the flag State accepts responsibility for ensuring the competence of masters, officers and other seafarers serving on ships entitled to fly its flag;"

35 Regarding the *Framework and procedures for the IMO Member State Audit Scheme* (resolution A.1067(28)), paragraph 7.2.1.3, the applicable IMO instruments related to these areas should be covered by audits for the purpose of determining how the relevant obligations and responsibilities relating to maritime safety and protection of the environment are carried out by Member States, with a view to further enhancing their performance. Standards of training, certification and watchkeeping for seafarers are in the list of that resolution.

36 As per annex 1 (Specific flag State obligations) of the *2017 non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code)* (resolution A.1121(30)), the following provisions should receive attention from the viewpoint of OBT for FCoC:

Obligation of contracting governments/parties

The list below contains a non-exhaustive set of obligations in accordance with the STCW Convention to be audited pursuant to the III Code, including those obligations imposed when a right is exercised:

- .1 Issue of certificates of competency (STCW Reg. I/2.12)
- .2 Training and assessment – administration, supervision and monitoring (STCW Reg. I/6.1)
- .3 Qualification of those responsible for training and assessment (STCW Reg. I/6.2)

- .4 Communication of the information as referred to in article IV of the STCW Convention and A-I/7 of the STCW Code (STCW Reg. I/7)
- .5 Quality standards system and periodical independent evaluation (STCW Reg. I/8.1,1/8.2)

Specific flag State obligations (annex 2)

- .1 Certificates (article VI)
- .2 Issue and endorsements of certificates of competency (STCW Regs. I/2.1, 2.2, 2.7 and 2.8)
- .3 Recognition of certificates and seafarers' knowledge of maritime legislation (STCW Regs. I/10.1 and 10.2)

37 In principle, all the instruments analysed above could be related to OBT for the FCoC and should be considered as components of an integrated and unified OBT-for-FCoC regulatory system.

Berths availability

38 The OBT availability for prospective officers is the first and core element in the international and national organization of OBT. If the prospective officer does not have the opportunity of OBT, it means that FCoC cannot be issued to him/her. This problem is clearly shown in prospective officers' answers to, and comments on, the Questionnaire presented in document HTW 4/INF.4 and has been discussed many times in the submissions⁴ to IMO and taking into account BIMCO/ISF Research,⁵ the forecast for 2020-2025 in this situation might be considered as non-optimistic. One of the questions asked to companies by INTERTANKO⁶ was: Do you think there should be a mandatory requirement for all ships to have cadet berths? Overall, the companies were split on whether it should be mandated or not – 39% said no, 36% said yes and 25% said yes but only for new ships.

39 Taking into account resolutions 6, 12 and 13 of the 2010 STCW Manila Conference, the model minimum safe manning document⁷ should include wording with unified recommendations relating to the compliance with the STCW first license certification provisions and the ISM Code requirements (section 6). A lack of common definitions is the reason for inconsistencies in these documents.

40 As per the *Principles of minimum safe manning* (resolution A.1047(27)), Administrations should take proper account of existing IMO, ILO, ITU and WHO instruments in force which deal with safety management, certification of seafarers, training of seafarers, occupational safety, health and hygiene, crew accommodation and food. This is important to highlight items that directly relate to the STCW Convention and the ISM Code and might be interpreted within the context of OBT for FCoC.

⁴ STW 40/13/1, MSC 85/23/6, MSC 83/12/4, STW 39/INF.2, STW 41/7/11, HTW 2/INF.2, HTW 4/INF.4.

⁵ BIMCO/ICSMANPOWER REPORT, The global supply and demand for seafarers in 2015.

⁶ Best Practice Guide for Recruitment, Welfare and Competence of Cadets, INTERTANKO 2014.

⁷ *Principles of minimum safe manning* (resolution A.1047(27)).

Model course 1.30 on Onboard assessment and others

41 As per the introduction of model course 1.30⁸ and others, the purpose of the IMO model courses is to assist training providers (what does it mean for OBT-for-FCoC providers?) and their teaching staff in organizing and introducing new training courses, or in enhancing, updating or supplementing existing training material where the quality and effectiveness of the training courses may thereby be improved.

42 To use this model course, the instructor for the model course 1.30 should review the course plan and detailed syllabus, taking into account the information provided under the entry standards specified in the course framework. The actual level of knowledge and skills and the previous technical education of the participants should be kept in mind during this review.

Responsibilities of Administrations should ensure that training courses delivered by training providers (and OBT-for-FCoC providers) meet the requirements of STCW regulation I/6

43 The expanded learning outcomes follow the format of the STCW Code and are defined by standards of knowledge, understanding and proficiency (column 2 of minimum standard tables). IMO references, textbook references and suggested teaching aids are included to assist the instructor in designing lessons. IAMU is of the view that it would be quite reasonable to state that training stands before assessment. The quality of seafarers' performance can be improved by continuous quality training. That is why the model course should cover both training and assessment. This model course 1.30 might have the title "Onboard training and assessment" and be defined based not only on "knowledge, understanding and proficiency", but also on "Methods for demonstrating competence" (column 3) and "Criteria for evaluating competence" (column 4). In order to follow the core of the ideology of this OBT-for-FCoC research, all other STCW model courses should follow the same logic to raise the level of training and assessment.

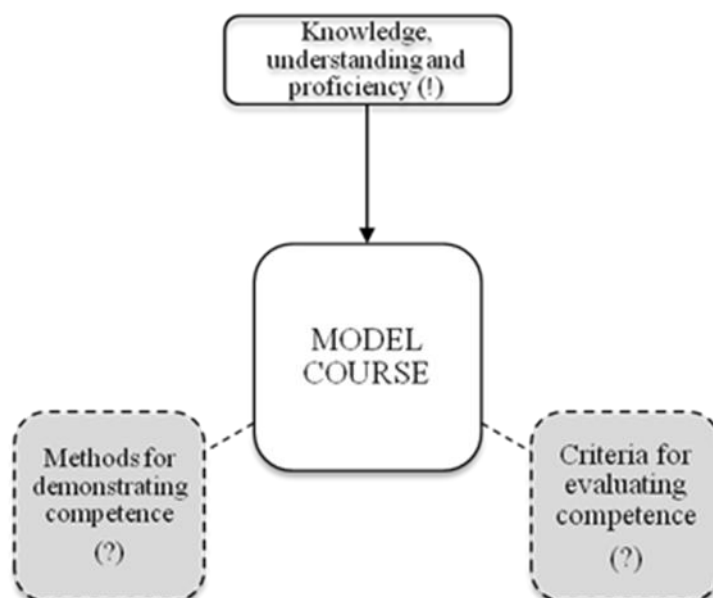


Figure 1: Model course and STCW Code tables of minimum standards

⁸ Onboard assessment, 2017 edition (IMO model course 1.30).

44 All other model courses, which can be related to OBT-for-FCoC, also aim to meet only the mandatory minimum requirements for knowledge, understanding and proficiency placed in tables A-II/1, A-III/1 and A-III/6 of the STCW Code. Columns 3 and 4 of minimum standard tables of part A of the STCW Code are not included in appropriate courses.⁹ IAMU universities' experience on verification of quality of OBT for FCoC gives clear ground for the necessity of further improving the content and structure of STCW IMO model courses, taking into account the content of columns 3 and 4 of above minimum standard tables.

Outcomes

45 The outcomes of this research revealed that the implementation of STCW requirements with regard to OBT-for-FCoC is a very critical item for the industry, and it plays one of the key roles for the training of prospective officers. At present, the efficiency of these requirements and quality of OBT-for-FCoC in a lot of cases leaves a great deal to be desired. Including the status of "approved OBT-for-FCoC providers" into the STCW Convention could help to make a step forward in raising the quality of this type of OBT and also could ultimately improve the mechanism for the training of prospective officers.

46 The difficulty in the implementation of this type of OBT regulations appears due to lack of unified, clear and common terminology in the above-mentioned documents and also due to a not always justified excessive flexibility of some specified wording available for an extremely wide interpretation, that does not only help to their implementation, but sometimes helps to ignore them. The above also relates to STCW regulation I/8 (Quality standards), which is to work effectively in frames of OBT-for-FCoC. All of this erects the barriers for regulations that prevent their effective use on a national level as the components of an integrated legal system for OBT-for-FCoC. In accordance with BIMCO/ISF MANPOWER Update, the Supply/Demand Balance in 2015 estimated a worldwide shortfall of 16,500 officers or 2% of the total workforce.¹⁰ In 2020 the estimates indicated a theoretical worldwide shortfall of 92,000 officers and in 2025 a shortfall of 147,500 officers. This is the major concern that directly relates to OBT-for-FCoC, which the stakeholders cannot afford to ignore.

47 It is recognized that human resources and human element are of the utmost importance for the development of a sustainable maritime transportation system. The OBT-for-FCoC has been found to be the most effective method of learning and at the same time acquiring the first hands-on experience. The OBT organization for the FCoC, due to its exclusive significance for quality prospective officers that entails a high level of safety, security and protection of environment should be highlighted among all other types of training on board ships. It is clearly recognized by the industry that the world needs more competent personnel at sea than ever before.

48 Although all world class maritime institutions invest routinely in expensive simulator technology for effective education and training, there is no real alternative to the experiential learning that takes place on board a ship; that is why it is a requirement for any approved MET programme. However, very few countries today have sufficient OBT facilities on their own and this is presently emerging as a serious global concern.¹¹

⁹ Officer in charge of a navigational watch, 2014 edition (IMO model course 7.03); Officer in charge of an engineering watch, 2014 edition (IMO model course 7.04); Electro-technical officer, 2014 edition (IMO model course 7.08).

¹⁰ BIMCO / ISF MANPOWER 2000 UPDATE, The worldwide demand for and supply of seafarers, 2015.

¹¹ Shashi Kumar, 2015 World Maritime Review (not published).

49 If the global fleet increases in size by 70% between now and 2030 (as has been widely predicted, based on the growth trend of the last five decades), the current number of 774,000 officers needs to be increased to 850,000. If half of the existing officers retire by 2030, that means 600,000 new officers will need to be recruited and trained from now. This equates to an annual requirement for officers in the order of some 40,000. This is a real challenge¹² for the whole MET system, including shipping companies as OBT-providers. That is why the conducting of Formal Safety Assessment research in this sphere relating to the balance and quality of seafarers would be quite reasonable.

50 It is obvious that the STCW Convention requires all seafarers to be properly qualified for the position that they hold on board, and the ISM Code requires the company to assess and document the position of responsibility and individual competency of each crewmember. OBT (including OBT-for-FCoC) instructors, supervisors and assessors themselves are also required to be appropriately qualified. Based on this research IAMU is confident that the terms "all training" and "any training" used in the STCW and ISM Codes need a unified interpretation, which includes the OBT-for-FCoC.

51 The experience that IAMU universities have had with verification of quality of OBT-for-FCoC gives clear ground for the necessity of further improving the content and structure of IMO model courses. IAMU believes that, in order to encourage and support an increase in the quality of training, at least model courses 1.30; 7.03; 7.04 and 7.08, relating to OBT-for-FCoC, should have a three level structure in line with the structure of minimum standard tables of part A of the STCW Code, as follows:

- .1 knowledge, understanding and proficiency (column 2);
- .2 methods for demonstrating competence (column 3); and
- .3 criteria for evaluating competence (column 4).

52 The OBT for the FCoC is being carried out in unique MET timeframes, within which prospective officers are keeping relations both with shipping companies and MET institutions. For prospective officers, theory and training in this period of time go together to establish the background for future professional activity. That is why the quality of OBT of prospective officers is extremely significant and should be carefully monitored by Administrations, companies, MET institutions and ships' personnel through international, regional and national legislation.

Action requested of the Sub-Committee

53 The Sub-Committee is invited to note the information provided.

¹² Circular Letter No.3578 – World Maritime Day-2015, 17 August 2015.