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Maritime Education and Training - Future Trend - On board Training Perspective

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1. Introduction

Over 90% of the global trade is realized because of the international shipping industry. Needless to say, Shipping is the backbone of global trade and without shipping, importing and exporting of goods on the scale necessary to sustain the modern world would simply not be possible. There are more than 50,000 merchant ships trading internationally manned by more than a million seafarers of virtually every nationality.

The future sustainability of the shipping industry is overwhelmingly dependent on the availability of an adequate pool of capable and effective manpower. When such is the case, it is imperative that the prospective officers (Trainees) are trained comprehensively onboard in order to acquire the necessary knowledge, understanding and proficiency to handle the three fold routine, critical and emergency shipboard operations with courage and confidence.

"Onboard Training" is a vital linking phase between shore based training and certification of competency. The quality of a prospective officer is predominantly dependent upon the quality of onboard training received by him/her. Onboard training is an opportunity to strategically align the theoretical knowledge acquired in a marine academy with the practical day to day shipboard operations. When accomplished without any compromise on quality, onboard training has the potential to instill the underpinning skills and knowledge needed to transform a trainee into an effective manpower.

Chapter II and Chapter III under Part B of the Standards of Training, Certification and Watch keeping for seafarers (STCW Code) as amended, provides the guidance regarding the conduct of onboard training for trainees in deck and engine department. The chapters set out guidelines with respect to training, roles and responsibilities of individuals involved in organizing and conducting onboard training, Induction, Shipboard program of training, Monitoring and reviewing, assessment of abilities in watch keeping and evaluation of competence. Despite such clear guidelines their lapse or shortcoming in the overall quality of OBT which necessitated the need for International Association of Maritime University (IAMU) to review the OBT process by attempting a comprehensive study on the quality of OBT

OBT Project description: *This Development Project is IAMU community-based study committed to identifying and understanding the existing challenges and gaps in students' OBT organization, and also managing, sustaining and monitoring of its Quality.*

OBT Project goal: *The results of this study will be used to enhance quality of MET through collaborating of IAMU with IMO and Industry stakeholders.*

OBT Project objective: *It is based on IAMU Tasmanian Statement (Objective 6: "Provision of quality sea time for cadets"). The project will achieve this goal by identifying factors that impact on quality of OBT and will put forth strategies for OBT improvement.*

2. Background

2.1 Training recommendations as per STCW Code

Recognizing the need that for today's increasingly sophisticated ships to be entrusted to seafarers who are competent in all respects to operate them in a safe, secure, efficient and environmentally sound manner Resolution 7 of the final act of the 2010 STCW conference appreciates that the overall effectiveness of selection, training and certification process can only be evaluated through the skills, abilities and competence exhibited by seafarers during the course of their service on board ship. The resolution further recommends that administration make arrangement to ensure that shipping companies:

- Establish criteria and processes for the selection of seafarers exhibiting the highest practicable standards of technical knowledge, skills and professionalism;
- Monitor the standards exhibited by ship's personnel in the performance of their duties;
- Encourage all officers serving on their ships to participate actively in the training of junior personnel;
- Monitor carefully and review frequently the progress made by junior personnel in the acquisition of knowledge and skills during their service on board ship;
- Provide refresher and updating training at suitable intervals, as may be required; and
- Take all appropriate measure to instill pride in the maritime profession and encourage the creation of a safety culture and environmental conscience among all those who serve on their ships.

2.2 STCW Code guidance regarding quality standards

Section B-I/8 of the STCW code identifies the guidance regarding quality standards model for assessment of knowledge, understanding, skills and competence, wherein the organization responsible for implementing these programmes should take account of the following:

- Where acquisition of a particular skill or accomplishment of a designated task is the primary

objective, the quality standards should take account of whether real or simulated equipment is utilized for this purpose and of the appropriateness of the qualifications and experience of the assessors, in order to ensure achievement of the set standards.
- The internal quality-assurance evaluations should involve a comprehensive self-study of the programme, at all levels, to monitor achievement of defined objectives through the application of quality standards

The outcome of fixing such quality standards is to ensure that the training received by a prospective officer onboard shall encompass proficiency in what to do, how and when to do it, and why it should be done. The proficiency thus acquired will help to ensure that a candidate can:

- Work competently in different ships and across a range of circumstances;
- Anticipate, prepare for and deal with contingencies; and
- Adapt to new and changing requirements

But the increasing proportion of trainees who fail to successfully complete their training courses and obtain an STCW certification is causing concern about the quality of OBT and cast a strong doubt whether the minimum standards for certification as recommended by code is met with true spirit or just in paper.

2.3 Prior Research Papers

The IMO accident analysis reports (cited in Ziarati, 2007) clearly indicate that the causes of many of the accidents at sea are due to deficiencies in education and training of seafarers or disregard for current standards and regulations, as well as poor delivery of existing standards. This finding has at least one reason relating to the type of ships in which onboard training is carried out.

Training onboard tall ships had been skeptical with respect to achieving the minimum standards to meet out within the approved sea service period. Onboard training on tall ships provide an excellent training opportunity for the development of seamanship skills, however it contributes only to the first phase of onboard training, whereas second part of the sea training will certainly require real commercial ships to have a feel for the profession and art of seamanship under the realistic conditions. This duration may be considerably reduced with the increased amount of hours to be dedicated for simulator training. This will also help to solve the problem of limited number of training berths under the increasing number of cadets [Albayrak, Ziarati, 2010]. Whereas the above finding may be true for those MET's that are in possession of tall ships, it may not strike a resolve for several other MET's especially in the Indian subcontinent where the concept of tall ships were never patronized and every aspect of onboard training is carried out on commercial vessels only. With the shortage of training berths, the trainees are faced with the following challenges;

- Great deal of hardship to find a berth onboard to complete minimum mandatory sea service prior to competency examination.
- Forced to complete the entire training period in one type of vessel only as they may not get an opportunity to find a different type of vessel.
- Not getting exposed to working in at least more than one ship during the training phase render the trainees ineffective to transform into a competent seafarer.

Article 1, General obligations under the convention on standards of training, certification and watch keeping for seafarers expects the parties undertake to promulgate all laws, decrees, orders and regulations and to take all other steps which may be necessary to give the convention *full and complete effect*, so as to ensure that, from the point of view of safety of life and property at sea and the protection of the marine environment, seafarers onboard ships are qualified and fit for their duties.

The spirit with which the guidance regarding onboard training given under section B-II/I of the code is complied with is seldom homogenous and that remains to be a primary cause for the variance and the gap in the quality of onboard training.

2.4 The need for comprehensive study on quality of onboard training.

As told earlier in this paper, Onboard training bridges the gap between shore based training and transformation of a trainee into a competent officer. Although onboard training is a mandatory phase and its minimum duration is stipulated as a criterion in Regulation II/1 and Regulation III/1 of the STCW code, the level at which OBT is linked in the training process varies with administration. For instance, in some administration, OBT is linked as an intermediate phase wherein the trainee completes the OBT and returns to the academy to complete the final phase of the training program before proceeding for certificate of competency examination Whereas, with some other administration, OBT is linked as the last phase of training, wherein the trainee, on completion of the OBT, proceeds directly for competency examination without returning to academy for post sea training. In the former case, after the completion of OBT, the trainee would have developed the capacity to think and relate theoretical aspects in a much better manner with reference to actual shipboard operations than it was before.

OBT is a phase where the trainee gets into the hands of a shipboard training officer[STO] who is not a professional teacher but a competent ship's officer. Hence the learning curve for a trainee who has been through a rigorous academic learning environment just before OBT will be very steep as he/she is left on his/her own to take initiative for learning in a systematic manner. Unlike in conventional academic environment where a learner is closely monitored through an academic curriculum and systematically evaluated, onboard training renders a great deal of difficulty on the STO to ensure effectiveness as STO is caught up with several other pressing and primary responsibilities for the successful running of the vessel. All of the above said difficulties undermine the quality of OBT.

To haul out the gaps in OBT a comprehensive study about the facts regarding the effectiveness of OBT became imperative

and thus this particular project was pressed into action. Feedbacks from those who have completed their OBT were collected in the form of an answer to an anonymous post OBT questionnaire containing 24 questions. The questions were so framed that it could recall the overall experience of the trainee with respect to meeting the minimum standards for OBT as mentioned in Regulation II/1 and III/1 of the STCW code. The respondents were from major manpower supply nations like Philippines, India, Ukraine, Russia and West Africa. All put together there were over 500 respondents from deck and engine department to the anonymous post OBT questionnaire. The strength of the primary data collected through this simple survey method provided firsthand information about the existing quality OBT and had the direction set for a comprehensive study and research process, the outcome of which will serve as feed to ensure the provision of a skilled maritime workforce thereby achieving the sixth objective of IAMU Tasmanian statement.

3. Project Content

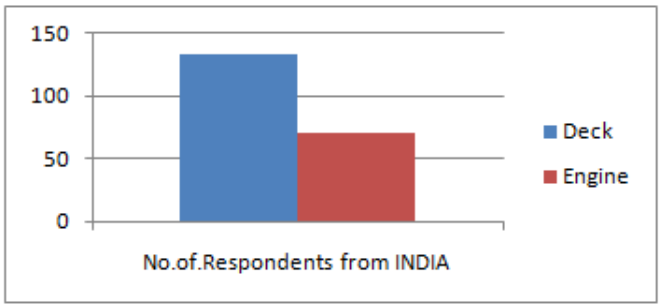
3.1 Methodology

Design

The simple survey method was used to generate the data needed and it was triangulated by qualitative data in the form of trainee's comments

Data gathering procedure

An anonymous Post-OBT questionnaire containing 24 questions were given to the respondents in hard and soft copy format depending on their availability either in person or online. From India 134 respondents from Deck department and 70 respondents from Engine department took part in the survey. It took almost a month and half for gathering the data alone, a process which commenced during the first week of April 16 and got completed during the second week of May 16.



Data Analyses and interpretation

Quantitative data were interpreted using the frequency count and percentages. While qualitative data were gathered through participant's written comments.

Results

Below bar chart is a selection from the 24 questions, which the respondents were asked to answer. Chart 1, reveals that most of the ship owner could afford to accommodate two cadets onboard their vessels, similarly, Chart 2 reveals that the quality of the last OBT was above average by scoring 4 on a scale of 5 which stood for high.

Chart 1

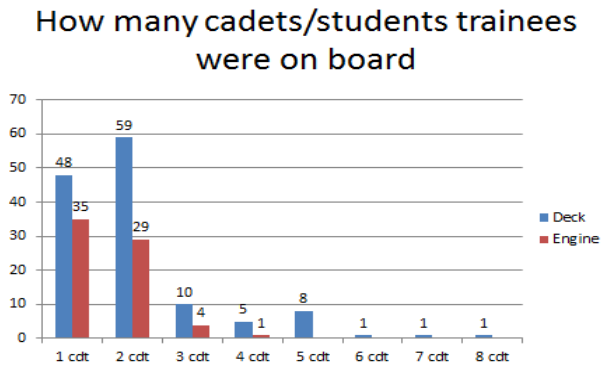
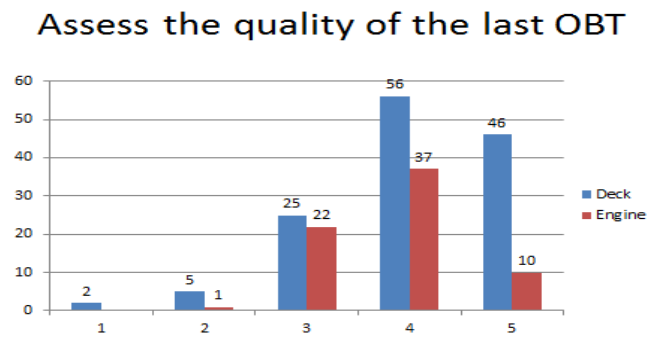


Chart 2



4. Conclusion

Over 80% of the feedback received from Indian respondents (Trainees) was positive to the fact that their onboard training was well monitored despite their personal work load being above average to high. They had free access to bridge and engine room for the purpose of getting trained and the OBT did confirm to their professional expectations. Although they agreed that there was shipboard training officer [STO] to supervise their OBT, the professional assistance from the Master and Chief engineer with respect to OBT doesn't seems to be encouraging. The respondents could realize that safety at sea; protection of environment and security levels depends on quality of OBT process for prospective officers.

From the standpoint of the trainees the routine shipboard operations were being observed as work done or time spent not related to OBT. This attitude probably needs a correction and they have to be guided to absorb the routine, critical and emergency shipboard operations as part of their OBT routine.

Most of the trainees from deck as well as engine department had done their OBT in tankers only and it happens to be the only type of vessel in which they had their entire OBT which raises concerns about their preparedness of such trainees to handle other type of vessel as a competent officer. The survey reveals that this limitation was due to the fact that the trainees had to put up with a great deal of difficulty to get berth onboard to complete their OBT. They were apprehensive about splitting their OBT in two different type of vessel as it may render them without a second chance due to shortage of berths. So, most of them were forced to complete their entire OBT at stretch in one type of vessel only.

Further the survey bring to the fore that the trainees were able to adapt to a multi-cultural environment as most of the them served onboard ships with multinational crew. Although the official working language was English, for the purpose of convenience, understanding, comfort and a sense of belonging the trainee spoke their national and regional languages whenever they found the fellow seafarer from the same nation or region.

Because of the conducive working environment with good quality accommodation most of the trainees wished to return to the same shipping company where they had their last OBT. They also related the reason for such intention to be a gesture of loyalty, a sense of security which will put them in good stead in the long run.

The gaps in the OBT exposed by this survey are;

- The involvement of CTO,STO, Master and Chief engineer in the training process is not as aggressive as it is done in training academy.
- Training of the prospective officer takes a back seat because of the pressing commercial, technical and regulatory demands to run the vessel.
- Self-initiative to get trained, to acquire knowledge and skill as much as possible during OBT period is a responsibility vested with the trainee. Unfortunately, this responsibility gets eroded with the passage of time during OBT. Eventually, the trainee manages to develop only a focused skill just enough to meet the immediate technical requirements of the job but fails to reflect the broader aspects needed to meet the full expectations of competent performance as a ship's officer.
- There is a lapse in the administration efforts to give full and complete effect to the STCW code essentially with respect to OBT, which results as shortage of training berths onboard and shortcomings inexpected quality standards.
- There is 'bottle neck' in the current system which creates severe stagnation of trainees waiting to find their berth onboard. As the duration of waiting period increases the motivation to perform well during OBT wanes and trainees try to adopt quick fix methods to complete their training record book without even knowing the tasks they are supposed to.
- Often the inability to retain the knowledge acquired and to retrieve it for a decision making process transpires to be the cause for the lack in quality which could be overcome by giving full and complete effect to the guidance given in section B-II/1 of the STCW code regarding evaluation of competence.

To conclude the comprehensive study on quality of OBT based on anonymous post OBT questionnaire reveals that the stake holders in shipping industry have an integrated role to play in giving the STCW Code its full and complete effect. The Administration, MET's, Shipping companies should understand that they are not a single entity but a component of the global marine environment and every stake holder has an interdependent responsibility to do the necessary correction to overcome the shortcomings that undermine the quality of OBT. The industry must continue to place utmost importance on training, recruitment and quality of seafarers employed onboard ships keeping in mind the sustenance of future shipping is in the hands of effective maritime posterity.

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