Study on the Ideal Ways of Enhancing the Quality of Maritime Education, Training and Research

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Abstract It is a well-known fact that more that 90% of global trade is accomplished through shipping and shipping is the back bone of international trade. Without shipping the transport of essential commodities across the globe on a scale necessary to sustain the world is yet to be discovered. Shipping is unarguably the safest, cheapest, cleanest and efficient means of transportation despite the disasters and its consequences through which it had evolved over centuries. Although ship is a single entity, it is a component of the marine environment the rest of them being the persons involved as seafarers taking care of the routine shipboard operations, the architects involved in the design, development and construction of ships, the managers taking care of the commercial, technical and human resources aspect of the ship under the domain of shipping company, the persons involved in the logistics sector, the administrators, policy makers and the most important component at the grass root level but with whom the growth, development and sustenance of present and future shipping industry is entrusted with is none other than the Maritime education and training (MET) institutes.

Keywords: MET, STCW, ISF, Sea Time, Watch keeping.

1. Introduction

Education is the process of facilitating learning or the acquisition of knowledge, skills, values, beliefs, habits whereas training is the one of the methods in pedagogy, the rest being teaching, discussion and directed research. Training per se is teaching, or developing in oneself or others, any skills and knowledge that relate to specific useful competencies. Training has specific goals of improving one's capability, capacity, productivity and performance. “Integrating maritime education and training along with directed research in order to provide a seamless supply of skilled manpower to all the components that make up the marine environment so as to sustain global trade by sea is the fundamental principle of every maritime education and training institute”.

2. STCW code – Brief review

The procedure to the accomplish the essence of the fundamental principle is framed as minimum standards in the international convention on standards of training, certification and watch keeping for seafarers (STCW) code 1978, as amended, wherein it contains, in:

- **Part A**, the mandatory provisions to which specific reference is made in the annex to the STCW Convention and which give, in detail, the minimum standards required to be maintained by parties in order to give full and complete effect to the provisions of the STCW convention;

- **Part B**, recommended guidance to assist parties to the STCW convention and those involved in implementing, applying or enforcing its measures to give the STCW convention full and complete effect in a uniform manner.

Under Article I – General obligations under the convention, parties to the STCW code have agreed to take all necessary 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 protections of the marine environment seafarers on board ships are qualified and fit for their duties.
To facilitate homogenous interpretation of the recommended guidance given in Part B, of the STCW code a table explaining the type of competence, expected level of knowledge, understanding and proficiency for the said competency and criteria for evaluating competence is given as below:

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competence</td>
<td>Knowledge, Understanding and proficiency</td>
<td>Methods for demonstrating competence</td>
<td>Criteria for evaluating competence</td>
</tr>
<tr>
<td>Transmit and receive information by visual signaling</td>
<td>Visual signaling</td>
<td>Ability to use the international code of signals.</td>
<td>Assessment of evidence obtained from practical instruction and simulation</td>
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<tr>
<td></td>
<td>Ability to transmit and receive by Morse light, distress signal SOS as specified in Annex IV of the international regulations for preventing collisions at sea, 1972, as amended and appendix I of the international code of signals and visual signaling of single letter signals as also specified in the international code of Signals</td>
<td></td>
<td>Communication within the operators area of responsibility are consistently successful</td>
</tr>
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Despite such revealing mandatory provisions and recommended guidance in the STCW code there still exists laps, gaps and inconsistency in the quality of MET as per BIMCO/ISF manpower report 2015. The parties who have agreed to give full and complete effect to the convention implement it as an expectation of the outcome of training given by MET.

3. Concerns about MET - BIMCO/ISF manpower report 2015

The MET institution survey, 2015 revealed some concerns about a number of issues including the:
- Proportion of trainees who fail to successfully complete their training courses and obtain an STCW certificate;
- Proportion of trainees who obtain STCW operational level certificates, but then only finding sea going employment as a rating;
- Difficulties for trainees in securing pre-qualification sea time;
- Problem faced by MET institutions in providing adequate facilities, instruction and experience to trainees; and
- Lack of quality and competency of some seafarers graduating from MET institutions.


The following comments from the MET institution and seafarer surveys provide an indication of some concerns that exist about training standards.

“There are no international standards of maritime education and training. The STCW convention is only the outline, and does not define the professional or academic level that graduates achieve” – MET institution.
“There are many institutions with different levels of standards. The job of regulating institutes should not only be of the Administration, but employers too should take this as their responsibility.” – MET institution.

“A global maritime control center regarding the quality and standards of teachers and of training institutes is needed” – MET institution.

“Junior bridge officers demonstrate an over reliance on modern electronic aids to navigation. Basic skills are not covered in college, which is of concern – Master, British

“My biggest complaint is the decreasing quality of new officers.” - Master Bulgarian

Although the comments are personal opinion, as a whole it calls out for a control on the perceived waning quality in the training standards as well as for the intervention of administration to get a better handle on the training imparted by the institutes in their states respectively.

5. Key ways to enhance quality of Maritime Education and Training

Recalling resolution 7 of the final act of the 2010 STCW conference which invokes the promotion of technical knowledge, skills and professionalism of seafarers, the stake holders primarily the MET, the shipping company and the administration have to realize that enhancing maritime education and training is not an independent responsibility but it is an interdependent responsibility.

5.1 Induction

It is imperative for the MET and shipping companies to be cognizant of the fact that the overall effectiveness of selection, training and certification processes can only be evaluated through the skills, abilities and competence exhibited by seafarers during the course of their service onboard ship, hence there should not be any compromise in the established criteria and in the process for the selection of seafarers exhibiting the highest practicable standards of technical knowledge, skills and professionalism.

At the beginning of the program itself the prospective officer (trainee) should be given full information and guidance as to what is expected of them and how the training programme is to be organized. Induction presents the opportunity to brief prospective officers about important aspects of the tasks they will be undertaking with particular regard to safe working practices and protection of the marine environment.

5.2 Training

The shipping company must have arrangements to encourage all officers serving on their ships to participate actively in the training of junior personal. The seafarers who are newly assigned to a ship should take of full advantage of every opportunity provided to become familiar with the shipboard equipment, operating procedures and other arrangements needed for proper performance of their duties. Immediately upon arriving on board for the first time, each seafarer has the responsibility to become acquainted with the ship’s working environment, particularly with respect to new or unfamiliar equipment, procedure or arrangements.

There should be a seamless transition between training imparted ashore and onboard, in a broader perspective the shore based training institutes should precisely map the onboard procedures which are eventually changing from the beaten procedures because of technological advancement. It is extremely important that the prospective officer (trainee) is given adequate opportunity for supervised bridge and engine room watch keeping experience, particularly in the later stages of the onboard training programme.
5.3 Monitoring

Guidance and reviewing are essential to ensure that prospective officers are fully aware of the progress they are making and to enable them to join in decisions about their future programme. Reviews should be linked to information gained through the training record book and other sources as appropriate. Training record book should be scrutinized and endorsed formally the Master and shipboard training officer beginning, during and at the end of each voyage. The training record book should also be examined and endorsed by the company training officer between voyages.

5.4 Evaluation

The MET must ensure that the curriculum is designed to take account of different methods of assessment which can provide different types of evidence about candidates competence, e.g:

- Direct observation of their seamanship activity;
- Skills/proficiency/competency test;
- Project and assignments;
- Written, oral and computer-based questioning techniques

Assessment of competence should encompass more that the immediate technical requirements of the job, the skills and tasks to be performed and should reflect broader aspects needed to meet the full expectations of competent performance as a ship’s officer, like; Anticipate prepare for and deal with contingencies & Adapt to new and changing requirements.

The entire training imparted to the prospective training officer should be comprehensively documented, periodically reviewed and appropriately corrected to ensure complete transformation from a prospective officer (trainee) to a competent officer.

6. Conclusion

The International Maritime Organization (IMO) in its unflagging efforts to defend its twin motto “safe ships and clean seas” have taken constant measures and method to keep the quality of maritime education and training by passing several amendments to STCW code in order stay abreast and at times to outpace the advancement of technology. The spirit with which the code is compiled is vested with those people who are in the capacity of implementing the code and monitoring the changes it is bringing into effect. The ways to enhance the quality of the maritime education and training is existing as a constitution in the STCW code but the key to implement it lies with individual seafarer.

References

[1] International Convention on Standards of Training Certification and watch keeping for seafarers