

### INTERNATIONAL COOPERATION FOR MARITIME EDUCATION AND TRAINING

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**Abstract** - This paper gives a background of TUDEV (Turkish Maritime Education Foundation), Istanbul and its contributions to the development of MET (Maritime Education and Training) programmes and practices and its role in bringing other parties for international cooperation to achieve a common goal. The impact of several EU funded projects is also reviewed for the achievement of such goal.

The shipping requirements are significantly increasing in the rapidly growing world economy. The world merchant fleet is improving both in quality and quantity to meet the demands and requirements of the shipping industry. The growing numbers of the ships transiting throughout the waterways and in open seas are increasing. As a consequence the level and the extent of automation and human element in the use of automation has also increased for both economic and efficient use of well qualified and competent manpower. Sensitivity of the world's marine environment enforces all concerned parties to take necessary measures for marine pollution. It is now clearly understood that to ensure safety at sea, in addition to technical measures, the studies on human element are also deemed necessary. The world is still facing shortage of qualified and efficient officers that likely to severely affect the future of shipping. The International Maritime Organization (IMO) in cooperation with maritime community has started 'Go to Sea' initiative to overcome the lack of the qualified seafarers' problem.

IMO has revised the standard of education and training for officers and ratings (STCW) to improve the quality of maritime education and training (MET). The MET institutions need to implement the new requirements stated in the STCW 78 (10). Many countries have initiated studies to implement the revised standards. Not only governments but all interested parties in the maritime community are also very keen to incorporate recent changes made by IMO in the STCW to establish an effective MET system. This new changes in the STCW have triggered the international cooperation in MET research and development. MET associations such as IMLA and IAMU are supporting the implementation of these recent changes through their conference programmes and in disseminating the implications for MET institutions. Many organizations such as MarEdu, GlobalMET are also very active and engaged in consolidated cooperation in supporting the revision of MET practices through review of existing arrangements. The international cooperation has provided mutual support, information sharing and has led to the development of several new courses and novel tools.

European Union supported projects such as: SOS (Safety at Sea), E-GMDSS and GMDSS VET (e-learning GMDSS), TRAIN 4Cs I and II (Mobility and Certification), MarTEL (Maritime English Standards), MarEng Plus (Maritime English content). All these projects

proved the benefits, and the importance of international cooperation and provided fruitful results. SURPASS (counter acting automation failures); M'Aider (avoiding and preparing for emergency situations) and EBDIG (Boat Design innovations) are making good progress too. The success of these projects had led to new projects such as UniMET (Consolidated MET); MarTEL Plus (development of Maritime English Standards for Ratings), CAPTAINS (developing innovative tools for Maritime English) and Sail Ahead (To provide an opportunity for seafarers' to find jobs on shore) are expected to make a major impact. The new initiative, MariFuture by MarEdu, has led to the establishment of a network of innovative MET centres in Europe.

**Key Words:** STCW, Maritime Education and Training, European Maritime projects

## 1. INTRODUCTION

Globalism is not just about the economic relations, it also covers all aspects of the life, social relations, technology, education, art and science etc. Nowadays, it is clearly understood that cooperation provides benefit for all and the exchange of knowledge among nations and improves quality of work in different fields. Establishment of European Union (EU) has led a new manner of cooperation. The EU projects became a fruitful tool to reinforce collaboration among member states for transfer of experiences to improve new solutions. Enhanced number of participants elicited better results rather than limited augments.

Improved communication techniques and low cost air transportation facilitated meeting of experts and eliminated distance between the countries. The easy transfer of knowledge which has been created in different cultures opened new horizons for researchers. A clever solution in a developing country has been learned by the technicians in a highly developed country and incorporated a highly sophisticated system for a better application and created butterfly effects in science and technology throughout the world.

The BIMCO/ISF Manpower Update at 2005 in particular, drew the attention of maritime industry on seafarer's shortage for officers. International Maritime Organization (IMO) report prepared in cooperation with maritime community concerning shortage of manpower has started 'Go to Sea' initiative to overcome lack of the qualified seafarers' problem. BIMCO/ISF Manpower 2010 Update stating that 'the current estimate of worldwide demand for seafarers in 2010 is **637,000 officers and 747,000 rating**' again given an alert to all concerned parties about the critical manpower shortage for the next decade.

Regarding maritime education and training, previous researches have been very helpful. The IMO report (MSC, 2006) identified three major deficiencies:

- that the STCW is the minimum requirement and not the desirable criteria
- there are failures due to automation on board vessels and
- there is a compelling evidence that deficiencies in English language competence are a cause for concern (Ziarati, 2006).

The STCW has been revised in 2010 and it will be effective on 1<sup>st</sup> of January 2011. The changes on the STCW significantly affect the MET. The MET communities have already

started to redesign their education programmes and systems to meet the new requirements. These efforts together with multinational cooperation are supported in different parts of the world. For instance, Global-MET is working on the subject in Asia-Pacific Area when the MET community in Europe is working on UniMET projects to achieve the same goal.

## **2. WHY WE NEED INTERNATIONAL COOPERATION?**

Sea transportation is an international activity, so the crew should be educated on the basis of international rules. Transportation cannot be supported only with national education methods and all parties may improve their MET with mutual support from others.

The manning of multinational crew in ships is a reality and this application is gradually wide spreading. We can solve these problems by providing standardization at MET. The best way to achieve standardization and to succeed is by coordination and cooperation among training institutes.

Main pillar of the safety at sea is proper education and training. We have not achieved standardization of MET as yet. The number of the flags is increasing in the world sea trade. Unfortunately, there are some nations who do not have sufficient experience on MET. The best way to ensure a qualified MET is to provide assistance to those nations by sharing experiences. International cooperation may help us to create a standardized system of maritime education to ensure safety at sea.

The cooperation will also help every party to reduce cost of the research and development expenses. Use of the standard teaching material may also reduce the cost of education and training.

Internet facilitates application of distance learning and this allows a large number of learners to gain knowledge in different parts of the world at their own convenience. The distance learning has a significant tool to meet increasing education and training requirements when STCW 78(10) will be effective.

The standardization of Maritime English, Simulator training and training aids and teaching material has priority to meet the new STCW requirements. It is certainly understood that all the STCW signatories need to start their cooperation on these issues to ensure the full application of new rules.

## **3. CONCEPTUAL APPROACH**

Innovative concepts of marine education, a shift from knowledge-based to a competency-based training, and the need for constant professional updating and recertification have brought maritime training institutions out from under the shadows of the maritime administration and industry; now they must assume an equal partnership rather than simply reacting to the others' demands (Ziarati, 2006). MET planners should meet the STCW's requirements rather than trying to meet different and sometimes conflicting requests from maritime administrations, industry and academics. To achieve that goal all MET experts in the different parts of the world should establish cooperation and coordination links to get benefit from the other colleagues this will facilitate the works and eliminate the probable mistakes and misunderstandings.

The posture of the merchant fleet has been changed in the past decade with the introduction of sophisticated ships design techniques on board the ships. This improvement caused additional education and training requirements to support highly special maritime operations. The development of advanced navigational technologies specialised and professional transportation technologies, pollution prevention technologies and regulations were considered important for inclusion into the seafarers' competency standards. To meet these requirements maritime community needed to review competences (skills, training, selection, instruction and supervision) of seafarers at all level (CHSS, 2006). This approach led the change of the STCW 78 at Manila Conference in 2010.

MET planners generally work on the programmes (syllabi) rather than other essential elements of the MET system such as standards of teaching staff, facilities and equipment which have a strong influence for the success and sake of the programmes. Although the STCW covers these issues to a degree, it is not satisfactory and needs more study.

Although the STCW is the bible of MET, SOLAS, MARPOL where the ILO regulations are the key elements which regulate most of the changes to seafarers' qualification requirements. The SOLAS and MARPOL regulations change more rapidly and frequently rather than the STCW. Inclusion of these requirements in the STCW takes time and this situation causes delay for reflecting current requirements into qualification standards. To overcome this delay establishment of a link between the STCW and SOLAS, MARPOL, ILO study groups is deemed necessary. As far as the study groups are concerned, not only the IMO but other significant organizations such as EMSA (European Maritime Safety Agency) works should also be taken into account.

The STCW covers the general requirements for competence but not in details. So, further works require defining skills, training, selection, instruction and supervision principles and detailed programmes for each level to meet required standards. It is a huge work and needs long duration studies and excessive man power. Best way to achieve such a mission and to achieve the feasible solution is to create the cooperation and coordination with other nations and related organizations. The improved communication systems and low cost international flights facilitate cooperation and coordination among system developers and reduce the cost and times spend. Nowadays international projects become a suitable tool to provide mutual support for researchers in different parts of the world.

#### **4. INTERNATIONAL MET PROJECTS**

Having a common goal and compatible acquis, European Union has an advantage to encourage and initiate union-wide projects with the participation of member and adjacent countries lay in a definite geographic area.

EU Commission has submitted and supported many EU projects in support of vocational education and training including MET. Not only the member countries but also the countries at participation process could get benefit from these projects.

Our institution, TUDEV (Turkish Maritime Education Foundation) which has been established *to improve Turkish Maritime Shipping in the level of advanced countries in this regard to access and our country's economic strength, prosperity and improve the*

*efficiency of maritime policies and the creation of the necessary work'* participated many EU projects and got benefit of it.

TUDEV initiated several major EU funded vocational training courses leading to the recognised international certificates. A list of these projects and purposes are given later in this proposal. These projects are;

**SOS** - To improve to provide an internationally recognized MET in EU

**E-GMDSS (SRC)** - To develop e-learning system for GMDSS SRC (Short Range Communication) operators

**MarTEL** – To provide Maritime English Tests in line with STCW requirements

**TRAIN 4C I and II**- To provide mobility for cadets in support of SOS project.

**SURPASS**- To improve training programmes to reduce casualties due to automated system on board the ships

**M'AIDER**- To improve accident scenarios for training programmes to reduce casualties

**EBDIG**- To adopt innovations in automotive industry in small boat design

The focus of the project have been primarily on staff development through seeking support from the EU to develop consortia for joint programme and resource developments either to underpin or to support a given programme and/or its delivery. The staff development programmes so far have involved over 185 visits to other partner centres and attendance at major maritime conferences and scholarly events.

There are several new EU projects for 2010-2013 initiated or participated by TUDEV. These and the existing projects were secured through hard work against tough competition. The TUDEV partners are willing to continue their good work and have proposed several proposals within the newly formed MariFuture platform to realise the intended Future map. The network is expected to be involved in a continuous programme of research.

Newly approved EU funded projects are:

**SAIL AHEAD** - To provide opportunities for captains to find job onshore. Value 385,000 EUR.

**CAPTAINS** - To develop content and scenarios for **MarTEL plus** Maritime English Standards – [www.captains.pro](http://www.captains.pro). Value 390,000 EUR.

**MarTEL Plus** – To develop Maritime Standards for Ratings, [www.martel.pro](http://www.martel.pro). Value 400,000 EUR.

**UniMET** - To build on the success of SOS and TRAIN 4Cs Projects to reduce variability in MET, Value 400,000 [www.unimet.pro](http://www.unimet.pro) (Under construction).

EU Maritime Projects also creates a perfect cooperation platform and networking for maritime community including shipping companies and training centres and other relevant educational establishments. Such an effective cooperation between European maritime and MET institutions for upgrading seafarers' competences and adapting requirements to the prerequisites of today's shipping industry. Wider collaboration in the form of exchange of students and developing and sharing courses as well as establishing joint facilities is the key element to such fruitful collaboration. E-learning/virtual learning including video conferencing is the ideal ways to facilitate the access to such courses and knowledge enhancing activities (MariFuture, 2010). E-learning is a very useful tool for the learners who

are not able to reach education facilities due to working conditions, especially for the people working at sea.

Partnership of training institutions and the industry partners towards establishing 'maritime certificates of excellence' (European maritime postgraduate courses), may well go further than the STCW requirements, this cooperation will create good collaboration as well as cost savings. This will provide the environment that companies can follow good practices from each other. (Mari Future, 2010).

It is strongly believed that partnership of the maritime industry into European Union projects in support of maritime education and training will help to achieve the aim and objectives of all concerned bodies for qualified manpower. If the same practise can be achieved in the other parts of the world, the maritime community may get a huge benefit of it and finally this development may support our efforts to improve 'Safety at Sea'.

## **5. HOW WE CAN HANDLE INTERNATIONAL PROJECTS**

The first requirement of international cooperation and collaboration is the determination of the topic clearly and determination of how to manage co-operation. Normally, this process may be achieved by the establishment of a project and identifying the project management system to handle it.

### **a. Identification of the Project:**

Firstly, the name, aim, objectives and tasks of the project should be identified.

Secondly, participants should be determined.

Thirdly, the direct and indirect relations with existing and projects/programmes should be clarified and the opportunities to establish links with these studies must be carefully examined and defined.

### **b. Project Management:**

The project coordinator/manager and project teams/working groups to ensure that all objectives are covered and well defined. The tasks of the each team/group and the deadlines of each group must be clearly identified. To achieve a satisfactory coordination between the project management team and groups all communication arrangements are to be established. Normally, establishment of a steering group will secure the operation of the system. The Ad-Hoc working groups/parties may be defined at the beginning or steering group may be authorized to establish such groups when required.

### **c. Identification of Requirements:**

The identification of the requirements to complete the project is one of the key issues and should be decided after establishment of the project management. To achieve that opinion of the participants and other related institutions should be obtained. This can be achieved by meetings, communications and submission of the questionnaires. The requirements to support project which will be determined using several methods will obtain the progress of the project on the right track and will obtain reliable results.

d. Requirement for Innovation:

A well prepared project is expected to lead new innovations. A project is also a tool to Test and evaluate the results of new innovations. The projects may lead to better results if the participants are able to get maximum benefit from the related innovations. The planners should carefully consider innovation requirements before initiating a project. The perfect identification of the innovation requirements and tools to be used for innovations will ensure the results of a project.

e. Provision of a Network in support of the project:

In order to achieve coordination and cooperation, a network should be established. This network will create harmonization and synergy. The information exchange can be actualized through this network as well as serving a search machine for all users.

f. Dissemination of Information:

The dissemination of results of projects at each step and at the completion of the project has utmost importance to share the results of the studies. MET projects carry a significant value not only for participants but also for all maritime community and the results of all intellectual property should be protected.

## **5. CONCLUSION:**

The common aim is to improve better education systems for the World maritime community. Taking advantage of the opportunities offered to us by technology and using advanced coordination techniques we can achieve it. Joint projects developed so far will be a good example and beneficial for the future activities.

IAMU and IMLA meetings which held with the participation of large number of the MET experts create a favourable environment to initiate or launch international projects. Inclusion of 'Cooperation for International MET projects' in the agenda items of MET related meetings and conferences are considered in this regard.

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