

Organizing International Cooperation For Maritime Education And Training To Improve The Quality

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ABSTRACT

A significant mission of the education and training is to support the industry and business in particular for providing qualified manpower. The world merchant fleet is improving both in quality and quantity to meet the shipping industry's requirements as well as all related economic activities. The requirements of shipping industry are significantly increasing to fully support rapidly growing world economy. The growing numbers of the ships transiting throughout the waterways, and in open seas are increasing and marine pollution is becoming / (has become) a sensitive issue. Not only technical measures but also studies on human element are deemed necessary to ensure safety at sea. The world is still facing a shortage of officers in quality and quantity which may severely affect the future of shipping.

The IMO, the international regulating organization has revised the standard of education and training for officers and ratings (STCW) to improve the quality of maritime education and training (MET) to meet the existing and future requirements. These new changes to STCW have accelerated international cooperation for research and development in MET, which has provided mutual support and information sharing, and led to the development of several new course and novel tools.

The projects supported by the European Union, 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), UniMET (Consolidated MET) have proved the benefits and importance of international cooperation and produced very beneficial results for international MET providers for whom there now is a new initiative to establish a worldwide network (platform).

This study gives a background to existing studies for the development of the MET programmes and practices and its role in bringing other parties for international cooperation to achieve a common goal. In the light of the impact of several MET projects, some findings for hint points for organizing international cooperation are also discussed.

Keywords: International cooperation for MET, STCW, Maritime Education and Training Organization for international projects

INTRODUCTION

Technological improvements have caused rapid dissemination of knowledge. Today, every nation is trying to make innovations and also getting benefit from the transfer of innovation in their area of interest. There are sufficient platforms to facilitate cooperation and enhanced use of the internet provides online communications between all respective parties. The global and regional cooperation organizations meet the innovators and provide mutual support for participants. The 20th century was an era of inventions, but the 21st century will be an era of innovations.

Globalism is beyond economic relations, it also covers all aspects of life, social relations, technology, education, art, science, and so on. Nowadays, it is clearly understood that cooperation provides benefit for all and exchange of knowledge among nations improves the quality of work in different fields. The establishment of the European Union (EU) has brought about a new manner of cooperation. The EU projects have become a productive tool to reinforce

collaboration among member and candidate states for transfer of experiences to improve new solutions. Enhanced number of participants elicited better results rather than limited augments. (Ziarati & Demirel, 2011)

The high cost of communication and transportation used to be the main obstacles to cooperation among researchers living in different geographic areas. The allocated budgets were not sufficient to support research studies. But gradually increasing competition requirements forced the business sector to allocate more sources for research studies to meet the new conditions of challenging economies. The developing countries realized that there are many opportunities in the field of research and development. This situation has enhanced the number of qualified researchers stationed in different parts of the world. Improved communications and low cost air transportation facilitate meeting of experts and eliminate the long distances between countries. The easy transfer of knowledge which has been created in different cultures has opened new horizons for researchers. A clever solution in a developing country may be learned of by the technicians in a highly developed country and incorporated into a highly sophisticated system for better application. Thus a butterfly effect in science and technology has started throughout the world (Ziarati & Demirel, 2011).

The main mission of shipping is to promote economic growth. The shipping industry is supporting the rapidly developing global economy and **modifying** itself to benefit from technological improvements. Adoption of new technologies in marine systems in particular in the field of automation introduces new problems and modifies the education and training requirements. The condense ship traffic and increasing environmental pollution force the maritime community to rearrange the codes and regulations for safety at sea and protection of the maritime environment. To ensure safety at sea, technical measures are key, but improvement of the human element is also essential.

The shipping industry has still the problem of finding qualified seafarers, in particular seafaring officers, to handle modernized ships. The International Maritime Organization (IMO) report prepared in cooperation with the maritime community concerning the shortage of manpower has launched the 'Go to Sea' initiative to overcome the lack of **qualified** seafarers'. The BIMCO/ISF Manpower 2010 Update that states 'the current estimate of worldwide demand for seafarers in 2010 is **637,000 officers** and **747,000 rating**' has again alerted all concerned parties to the critical manpower shortage for the next decade.

The education and training requirements for seafarers are regulated by an internationally recognized convention by the name of Standards for Training, Certification and Watchkeeping (STCW) which was introduced in 1978. All seafarers are required to receive an education and training to work on board ocean-going ships. The STCW was revised in 1998 and 2010 to meet changing and **uprising** new safety and environmental requirements. These changes significantly affect the MET (Maritime Education and Training) systems. It is inevitable to apply these regulations for all the nations and, maritime administrations and MET providers should review and revise their education programmes including major changes in their systems to meet the newly appeared requirements. Because of the nature of the work, multinational cooperation is deemed necessary and many cooperative organizations have been established on an ad hoc or permanent basis in different parts of the world. As good examples the Global-MET initiative is working on this subject in the Asia-Pacific area and the European MET community initiative UniMET is trying to achieve the same goal.

2. RESEARCH METHOD

The research is conducted in three phases. In the first phase it is intended to investigate the problems encountered during planning, coordination and execution phases of the international projects which have been participated. In order to cover all aspects of the projects all communication papers between partners, midterm, final and financial reports are checked.

In the second phase the problems are categorised, grouped and associated if possible. This phase also covers conceptual approaches management. The problems which are mostly encountered are assumed priority items and studied.

The final phase covered a deep study to formulate possible/probable solutions to overcome the problems which directly affect the safe handling of projects. In these phase proposals to solve these high priority problem areas are clearly defined and summarized.

3. THE NEED FOR INTERNATIONAL COOPERATION

Sea transportation is an international activity; therefore, maritime personnel should be educated in accordance / compliance with international rules. Transportation cannot be supported only with national education methods and all parties may improve their MET having mutual support from the others. Ships manned with multinational crew are a

reality and this is becoming common practice. We can solve these problems providing standardization at MET. The best way to materialize standardization is through coordination and cooperation among training institutes (Ziarati & Demirel, 2011).

The human element is crucial for ensuring safety and productivity, and well-structured and effective education and training is the only way to have a qualified, skilled workforce. Beyond that the standardization of the modus operandi at the seaways is necessary to reduce confusion and facilitate coordination among the seafarers from different cultures. There is still a significant difference between the MET systems of different nations due to varying economic and cultural situations in their countries. Unfortunately, there are some nations that do not have sufficient experience on the MET. Because we share the same waters, we should have a qualified, standard MET for all so as to ensure safety. To achieve that developed countries are to provide assistance to developing nations by sharing their experience. International cooperation is now a critical issue to achieve a standardized and qualified education and training system for all concerned parties.

The sharing of new developments and existing information by cooperation will also help all concerned parties to reduce the cost of research and development expenses. The education and training material in the MET is still not sufficient and even the transfer of these material will solve many problems in the developing countries. The standardization of Maritime English, simulator training and training aids and teaching material have priority to meet the new STCW requirements. The common efforts will also reduce the cost of research and development.

4. CONCEPTUAL APPROACH

The establishment of an effective management system needs a suitable organization (Kocel, 1998). The degree of formalization processes in an organization refers to the weight given to certain principles and methods for monitoring (Dessler, 2001). In many countries and organizations research and innovation studies are conducted not in the formal but in informal organization framework, in particular on an ad hoc basis. Working in an informal organization may create many problems during the work process. To overcome the difficulties arising from the nature of project management; the aims, objectives, goals and the principles should be clearly defined at the initial stage and the project management organization structure should be compatible with formal structure as much as possible. Also deviation from the institutional aims and objectives may hamper the project at the future stages and it should be avoided.

For developing innovation we need to differ from the existing methods and diversify the methods to provide us with the freedom of action. Nowadays innovative concepts of marine education, a shift from knowledge-based to 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 requirements rather than trying to meet different and sometimes conflicting requests from maritime administrations, industry and academics. To achieve that MET experts in different parts of the world should establish cooperation and coordination links to benefit from their colleagues. This will facilitate the work and eliminate probable mistakes and misunderstandings.

The posture of the merchant fleet changed in the past decade with the introduction of sophisticated ship design techniques on board 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 and pollution prevention technologies and regulations were considered important for inclusion into the seafarers' competency standards. To meet these requirements maritime community needed to review competence (skills, training, selection, instruction and supervision) of seafarers at all levels (CHSS, 2006).

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 on the success and sake of the programmes. Actually these elements are the areas which need innovation rather than the programmes.

Any innovations in these fields will already affect the programmes.

The best way to achieve such a mission the feasible solution is 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 time spending. Nowadays international projects become a suitable tool to provide mutual support for researchers in different parts of the world (Ziarati & Demirel, 2011).

4. INTERNATIONAL MET PROJECTS

Having a common goal and compatible acquis, the 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. The details of the EU projects can be reached via the internet and detailed information can be provided.

The 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 benefit from these projects.

Our institution initiated several major EU funded vocational training courses leading to recognised international certificates. A list of these projects and the purpose 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 an 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

UniMET - To build on the success of SOS and TRAIN 4Cs Projects to reduce variability in MET (www.unimet.pro)

SAIL AHEAD - To provide opportunities for captains to find job onshore (www.sailahead.eu)

CAPTAINS - To develop content and scenarios for **MarTEL Plus** Maritime English Standards (www.captains.pro.)

MarTEL Plus – To develop Maritime Standards for Ratings (www.martel.pro)

The focus of the project has been primarily on the programme and teaching 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 (Demirel&Ziarati).

There are several new EU projects for 2010-2013 initiated or participated by different European countries. These and the existing ones are real projects all secured through hard work against tough competition. The 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 (www.marifuture.org).

The EU Maritime Projects also create 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 key element to such fruitful collaboration. E-learning/virtual learning including video conferencing is an ideal way to facilitate the access to such courses and knowledge enhancing activities (MariFuture, 2010). E-learning is a very useful tool for learners who are not able to reach educational facilities due to working conditions, especially for people working at sea.

Partnership of training institutions and the industry including between industry partners towards establishing 'maritime certificates of excellence' (European maritime postgraduate courses) that may well go further than STCW requirements will create good collaboration as well as cost savings. This will provide the environment that companies can pick good practices from each other or at least make realise that in certain areas there are better practices than theirs (MariFuture, 2010).

The partnership of not only MET institution but also overall maritime industry into the 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'. This kind of cooperation is also advised for other business sectors.

5. FINDINGS

The studies covered the SOS, TRAIN4C-I-II-III, UniMET, SAILAHEAD, SURPASS and MARTEL projects which the author participated as project officer or local coordinator. As a nature of international projects, dissimilar problems in different partner countries and organizations are encountered. These problems are detected mainly in the planning, controlling, coordination and execution phases and mostly related to the organization and management issues.

The significant findings related to the organization and management topics are as follows;

- The area of interest of the partner institutions should be directly related to the intended project subject. Any inconsistency on this issue may create inconveniences during the completion of the project.
- The partner institutions should have qualified and sufficient number of the staff to support the project. The formal job definition of the project staff should match the aim and objectives of the intended project.
- The phases and action plan of the project should be carefully designed and sufficient number of staff and time period should be allocated.
- The position of the project coordinators in the institution hierarchy must be suitable for controlling in house distribution of the works and conducting external and coordination. He/she should also have the project management experiment.
- The time spent for administrative and financial report are highly time consuming in particular for the projects conducted under the support formal internal or international bodies. The sufficient number of qualified staff should be provided to achieve this type of activities.
- The external support should be available in case of lack of experts in-house to complete a specific task assigned to institute.

There are many other findings related to the project management. But if the crucial findings above are solved, the negative impacts of the other facts may be easily solved.

6. CREATING OR PARTICIPATION IN INTERNATIONAL PROJECTS

The first step to handle an international project needs a detailed study on the existing related projects and probable partners. This study will help you to define your topic clearly and select suitable partners. You can also benefit from the experiments of the others and establish communication with the project participants to receive further information. Based on this study you can define the content of your project which meets your requirements.

Once you define the content of the project you can create an action plan which covers the steps of the project. The initial document should cover the aim, objectives; project management structure, financial details, action plan and related tasks based on a time schedule, the direct and indirect relations with existing and projects/programmes. Then you can start to find suitable partners sending this document to interested parties. It is also important to receive national and international funds which may support your projects. The beginners are advised to participate in an existing project rather than to start a new one.

Having the sufficient number of partners and suitable funds you can start the projects.

The following steps are advised for initiating and organizing international projects:

a. Identification of the Project:

The name, aim, objectives, goals and tasks of the project should be identified clearly. The role and tasks of the participants should be determined. The links with the other international projects should be defined and if necessary, initial contact with the coordinators of such projects should be established.

b. 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.

c. 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 better results if the participants are able to get maximum benefit from 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.

d. 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. Nowadays many professions have already established common communication platforms and get benefit for international cooperation.

e. Project Management:

The institution which submits the projects will assume the overall control and

coordination of the project. In order to secure the project management permanent project staff and Ad hoc project groups should clearly define including their Terms of Responsibilities (TOR). Permanent staff should contain project coordinator and sufficient number of staff who will act as project officers, technical and administrative staff (UKOLN, 2013). The staff working hours and working schedule (if possible) should be submitted all respective parties to avoid any possible interferences with formal departments.

The achievement of the organization is closely related to the links between the own goals of the employees and the aims of the organization and, that also achieve organizational commitment of the workers (Bozkurt & Yurt , 2013). For a project to be successful, the people in charge of the project should be selected from the departments consistent with the objectives of the project. During the initial negotiations with other partners, they are also advised to do so. This will facilitate handling the project and also strengthen the links between project officers in different countries and organizations.

For external organization, the project coordinators/managers should be agreed upon, defined and submitted for the cooperating institution. The project teams/working groups should be defined in coordination with the other institution to ensure that all objectives are covered by project teams. The tasks of the each team/group and deadlines of the each group works must be clearly identified. To achieve a satisfactory coordination between project management team and groups including meetings, 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. All these information should be submitted to all concerned parties in the main project document.

f. Dissemination of the Information gathered / collected:

The dissemination of results of projects at each step and at the completion of the project has an utmost importance to share the results of the studies. We should keep in mind that each project is possibly related to a previous project or may be a start for a new project. MET projects carry a significant value not only for participants but also for all maritime community and the results should be shared by intellectual property is protected.

6. CONCLUSION:

World maritime community has a great advantage having an internationally organized and recognized MET system for seafarers. This situation facilitates cooperation through common understanding. The common aim is to create better education systems for the world maritime community. Taking advantage of the opportunities offered to us by technology and using advanced coordination and cooperation techniques we can achieve it.

It is approved that the international projects are more feasible than in house studies. These projects create synergy and a platform for transfer of knowledge and innovations. A project which creates an innovative approach will be valuable not only for participants but also for all MET community. The joint projects developed so far will be good examples for the future activities from which we will benefit greatly.

A well-established organization is the key issue to achieve the aim and objectives of a project. It is fairly / quite important for the international projects which are handled by researchers from different cultures and environments.

Nowadays the number of international conferences and meetings in different fields are gradually increasing. This kind of forum is the best platform for introducing or initializing new projects. The IAMU and IMLA meetings which are held with the participation of large number of the MET experts have been used as perfect platforms to create a favourable environment to initiate or launch international projects. The inclusion of 'International Cooperation Proposals' in the agenda items of related meetings and conferences is considered very suitable in this regard.

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