

PIRI REIS MARITIME UNIVERSITY PERSPECTIVE OF MET IN TURKEY

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ABSTRACT

The author intends, in this paper, to present the details of the innovations brought to MET in Turkey by Piri Reis Maritime University ranging from On Board Training to Crew Management Office system; from correct streamlining/recruitment of cadets to English as Language of Instruction; from proper utilisation of simulators to optimum interpretation of STCW Manila Amendments in curriculum design; from internationalisation/globalisation as Black Sea Seafaring Officer 19.8% capacity to R&D in MET utilising the very first Green Campus of Turkey inaugurating in October 2013 at Tuzla, Istanbul.

Keywords: *Innovation, MET, Piri Reis Maritime University, Turkey, Black Sea Countries.*

1. INTRODUCTION

The 2010 BIMCO/ISF Update [1] presents various global supply/demand balance scenarios for the next decade. "COLD" scenario indicates a shortage of 2% in 2015, and a surplus of 2% in 2020 for officers. The "CENTRAL" or "BENCHMARK" scenario indicates a shortage of 5% in 2015 and 1% in 2020, whereas the "HOT" scenario denotes a shortage of 11% in 2015 and 9% in 2020 for officers. Thus, the 2010 Update highlights that the industry is likely to face a challenging future for crewing. Unless measures are taken to ensure a continued rapid growth in qualified seafarer numbers, especially for the officers, existing shortages are likely to intensify over the next decade. Also, it is most important to stress that the industry requires well qualified and high calibre seafarers capable of adapting to change and handling the wide range of tasks now required of them. Thus, any training programme provided must ensure quality is not compromised in the quest for increasing quantity.

The Black Sea Countries supply the 19.34% (120,658) of the seafaring officer capacity of the globe of total 192 seafaring countries (624,062) Turkey with 36,734(5.9%), Ukraine with 27,172 (4.4%), Russia with 25,000 (4.0%), Romania with 18,575 (3.0%), Bulgaria with 10,890 (1.7%), Georgia with 1378 (0.2%), and Moldova with 909 (0.15%) seafaring officers [1].

The total number of Active Turkish Seafaring Officers according to the Turkish Ministry of Transportation, Maritime Affairs and Communications during the period of 1993-2012 is quoted as 42,918, where as this number decreases to 38,765 for the period of 2002-2012 and to 30,593 for the period of 2006-2012 [2].

The total number of all MET Institutions in Turkey, namely Universities, Faculties, Departments, 2-year Polytechnics/Vocational Training Schools (Junior Colleges) and Vocational High Schools increased from 24 to 57 in the past few years (2010-2013), and the number of cadets recruited per year increased from 2,942 to 5,296, denoting an 80% increase [3].

Straightforward estimations simply denote that the 30,593 Active Turkish Seafaring Officers of the period

2006-2012 (when total annual cadet recruitment was 2,942) will increase to 42,830 during 2015; and to 55,068 during 2020 (with total annual cadet recruitment of 5,296). This is with the assumption that the annual intake of cadets to MET institutions will stay constant till the year 2020; and approximately 50%, 100% of the new annual intake will graduate by 2015, and 2020 respectively, all serving on board vessels [3].

Realising that the total 17,201 million DWT of the Turkish Merchant Fleet comprising 560 Turkish Flag and 665 Flag of Convenience Vessels over 1000 Gross Tons, ranking 15th among 192 countries [4] with an average age of 18.1 [4] will more or less (10% plus or minus) stay the same in the next decade, Turkey, with almost the same number of active seafaring officers as Philippines (57,688), Peoples Republic of China (51,511) and India (46,497), and a surplus number for the national market, will be among the few nations dominating the international seafaring officer market of the Globe.

The Important Question here is: "Will this theoretical extrapolation on facts, figures and numbers reflect the practical situation in the Active Seafaring Officer Market of the years 2015 and 2020 as far as Turkish Seafaring Officers are concerned?"

It is important to grasp the existing General Structure of Turkish Education System and the Maritime Education and Training (MET) in Turkey before dealing with a healthy answer to the above question.

2. GENERAL STRUCTURE OF TURKISH EDUCATIONAL SYSTEM [5]

The basic structure of the Turkish National Education System is outlined in Basic Law on National Education (Law No 1739) as follows:

Pre-school education, which is optional, aims at contributing to the physical, mental and emotional development of the children, to help them acquire good habits and to prepare them for basic education. Pre-school education institutions include independent kinder gardens, nursery classes in primary schools and preparation classes. Basic Education provides children with basic knowledge and ensures their physical, mental,

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and moral development in accordance with national objectives. It generally comprises the education of children in the 6-14 year age group. Eight years of basic education is compulsory for all Turkish citizens who have reached the age of six. This level of education is free of charge in public schools. There are also private schools with tuition fees under state control.

Secondary education encompasses two categories of education institutions, namely General High Schools, and Vocational/Technical High Schools where a minimum of four years of schooling is implemented after basic education. General High Schools are educational institutions that prepare students for institutions of higher learning. They implement a four year program over and above basic education and include students in the 15-18 year age group. Vocational and Technical High Schools provide special instruction with the aim of training qualified personnel for industry. The duration of instruction in these schools is also four years.

Higher Education: the purpose of higher education is to train manpower within a system of contemporary educational and training principles to meet the needs of the country. It provides high level specialised education in various fields for students who have completed secondary education. The Higher Education Law (Law No 2547) covers all higher education institutions and regulates their organisation and functions. Universities consisting of several units are established by the state and by Law as public corporations having autonomy in teaching and research. Furthermore, institutions of higher education, under the supervision and the control of the state, can also be established by private foundations as in the case of Piri Reis Maritime University, in accordance with procedures and principles set forth in the same Law provided that they are non-profit in nature.

The University is the main higher education institution. It possesses academic autonomy and a public legal personality. It is responsible for carrying out high level educational activities, scientific research and publications. It is made up of Faculties, Graduate Schools, Schools of Higher Education (colleges), conservatories, 2-year vocational training schools (junior colleges) and centers for applied work and research.

There is at present a total of 166 Universities in Turkey; 102 Government and 64 Foundation and Private Universities.

All institutions of Higher Education in Turkey have each year since 1974 accepted students in accordance with the results of the examinations organised by the Student Selection and Placement Center of Turkey.

A four test-battery is used, comprising a General Ability Test, a Mathematics and Natural Sciences Test, a Turkish Language, Literature and Social Sciences Test, and a Foreign Languages Test. In their Application Forms candidates normally rank a maximum of 30 Higher Education Programs in order of their personal preferences. The Test Scores are transformed into Standard Scores and four types of composite scores are calculated: Natural Sciences, Social Sciences, Natural and Social Sciences and Foreign Languages. Candidates are placed according to their composite scores, the list of

their preferences and the number of places available in each higher education program.

3. MARITIME EDUCATION AND TRAINING IN TURKEY [6], [7]

Maritime Education and Training in Turkey is Degree/Nondegree, Monovalent, One Step at Extensions/Enrichments/Elevations Level. This is followed by 12 months Seetime (On Board Training), and CoC Exams implemented by the Ministry of Transportation, Maritime Affairs and Communications, the Administration in Turkey, Party to IMO.

The 4/5-Year MET Institutions granting University Undergraduate Degrees (University, Faculty, Department, College) lead to Unlimited Licenses in both Engine and Deck Departments. There are 24 such MET Institutions in Turkey at present, Istanbul Technical University – Maritime Faculty (A Government University) being the oldest and Piri Reis University being the sole Maritime University of Turkey, and a Foundation University sponsored by Turkish Chamber of Shipping.

Two Year Vocational Training Schools (Junior Colleges) granting HND Equivalencies lead to Limited Licenses in both Engine/Deck/Electro Technical Officer Departments. At present, there are 8 such institutions, and the number is likely to raise to 14 by the end of 2013.

Four Year Vocational Maritime High Schools granting Secondary High School Diplomas lead to Near Coastal Voyage/Limited Licenses in Deck/Engine/Electrical Officer Options. There are at present 62 Vocational High Schools in Turkey, 25 specialised in Maritime disciplines/options. Quality Standards System of MET in Turkey has been found to fully comply with the STCW Convention and the EU recognition of Turkish Maritime Education, Training and Certification System is consequently extended in accordance with the provisions of Directive 106/2008/EC.

4. PIRI REIS MARITIME UNIVERSITY OF ISTANBUL – TURKEY [8], [9], [10]

Piri Reis Maritime University was founded in 2008 by the support and sponsorship of the whole Turkish Maritime Sector comprising approximately 8,400 maritime-related Turkish Companies, namely Turkish Chamber of Shipping through Turkish Maritime Education Foundation, TUDEV.

Piri Reis Maritime University is named after the very famous Ottoman–Turkish Admiral and Cartographer who lived in the 16th Century, best known for his Map of the World and the Book of Navigation (Kitab-ı Bahriye), also enholding techniques of navigation and navigation-related information on

Astronomy. The Year 2013, the 500th Anniversary of the Map of Piri Reis is declared by UNESCO as the Piri Reis YEAR.

Piri Reis Maritime University (PRMU) is financed by 50% of Annual Budget of Turkish Chamber of Shipping and is situated on five different Campuses in

Tuzla, among which the sole internationally accredited Green Campus of Turkey inaugurating in October 2013 at the Marmara Sea Coast to further serve a number of newly founded Maritime related disciplines.

The language of instruction at Piri Reis Maritime University is 100% English, with Cadets wearing uniforms through a Regimental System. Attractive grants, loans and guaranteed job opportunities upon graduation are made available by shipowners for the cadets.

Existing undergraduate disciplines at PRMU are Nautical Engineering and Marine Engineering at Maritime Faculty; Naval Architecture and Small Craft Design at Faculty of Engineering and existing Postgraduate disciplines are Nautical/Marine Engineering and Naval Architecture/Small Craft Design (M.Eng/PhD.Levels) at Postgraduate School.

With the inauguration of the new Green Campus in October 2013, further maritime related Undergraduate/Postgraduate disciplines will commence like International Maritime Business Management and Trade, Maritime Economics and Finance in Maritime Administrative Sciences Faculty; Maritime Law, Maritime History, Maritime Environmental Engineering, Oceanography, Marine Biology, Fishing Technology in other related Faculties.

Two Year Vocational Training Schools/Junior Colleges granting HND, namely Deck, Engine, Naval Architecture, Port and Marina Management, Small Craft, Yacht Management, Insurance, Transportation, Computer Programming, Automation and Control, Logistics, Brokerage will also commence in 2013, and 2014, next two consecutive years.

The intended target of the total number of students by 2015 is 3,000 and 6,000 by 2020, with 300 Academicians.

The Vision of PRMU is the inauguration and development of Maritime University Education complying in full effect with the highest standards of the Globe.

The Mission of PRMU is to create synergy between vocational professional training and academic education. At present, an excellent platform is available in Turkey to initiate a very strong and sustainable cooperation between the Maritime Sector capabilities and the Academical milieu of the University yielding in an optimum synergy of theory and practice.

The Strategic plan of PRMU can be summarized as follows:

- International academic cooperation with the best Maritime Universities of the World, as well as leading respectability at maritime platforms like IMO and related NGO's.
- Emphasis on innovation and entrepreneurship in Maritime related disciplines.
- Academic cooperation with the Turkish Maritime Sector, as well as other National Maritime Institutions.
- Emphasis on International/National public relations and yielding in increasing the efficiency of PRMU in serving the MET Globe.
- Student, Academical, Administrative Staff satisfaction, thus yielding in recruiting top quality

national/international students, academicians and administrative personnel.

5. A NEW, UNIQUE APPROACH TOWARDS INCREASING THE QUALITY AND EFFICIENCY OF MET IN TURKEY BY PRMU AND TURKISH CHAMBER OF SHIPPING

5.1. Recruitment of correct cadets to Piri Reis Maritime University

It is observed that through annual Entrance Examination for Universities, government universities with MET institutions recruit students from standard high schools. Statistics denote that the big majority of these students upon graduation opt for shore based jobs rather than employment on board vessels, which yields in a continuous waste of human resources and a shortage of sea personnel as officers.

On the other hand, graduates of Maritime Vocational High Schools, though they very much wish on board employment, can not make it successfully to the Maritime related universities, scoring comparatively lower grades as they spend more time on vocational courses compared with Maths, Physics, Chemistry of the Entrance exam during their four years at the High School. Also, coming comparatively from rather modest income families, they also cannot afford paying tuition fees to Foundation Universities, having to be engaged with other disciplines, which is again yielding in another extreme group of waste of human resources.

Thus, the Answer to the "Important Question" in the "Introduction part" of this presentation will be "A STRAIGHT FORWARD NO" with existing recruitment system.

However, PRMU is in the process of designing a brand new, special recruitment system, under the same higher education Law, to enable all Maritime Vocational High School graduates who have guaranteed working on board vessels upon graduation with a contract of the Crew Management Company of the University to enter to four or two year MET courses at PRMU with also the flexibility of transfer from junior college to faculty for successful cadets, enabling them to upgrade their limited licenses to unlimited CoC's. This unique process can only be achieved with Turkish Chamber of Shipping providing most attractive grants and loans to these students, as well as job guarantees upon graduation, and PRMU serving very special curriculum to the new entrants.

Thus, the ANSWER of the "Important Question" in the "Introduction part" of this presentation can now hopefully be "A MOST PROMISING YES" in the very near years to come with the innovative precautions taken

by PRMU starting this year.

5.2. Traditional Turkish MET discipline

Piri Reis Maritime University will provide a mandatory boarding, regimental MET system to the cadets wearing uniforms to simulate the discipline and

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the psychology of the closed, indoors, sharing facilities atmosphere of seaborne vessels to get better efficiency from cadets upon graduation. At present, though cadets in most MET institutions wear uniforms, very few live the experience of the discipline of mandatory boarding regimental MET system, and upon joining a vessel, yielding in fast transfer to shore based jobs after facing the real life on board vessels, with unexpected, broken down psychology.

5.3. On-board training system

The 12 months compulsory On Board Training of STCW is carried out in periods of three months between First and Second Years; another three months between Second and Third years; and a final six months during the Spring term of the third year in majority on different Merchant Vessels of the Turkish Fleet. There are queries if especially the first two- three month trainings are feasible and productive for the cadet and the shipowner, and there are observations that the training provided for the cadet varies in quality from ship to ship, thus yielding in a non homogeneous approach for the whole party concerned. Also there is huge pressure on the Operational/Management Level Curriculum having to be dealt within 7 semesters instead of full 8 semesters due to the six months On Board Training of the 6th semester/third year.

Piri Reis Maritime University is in the process of proposing the extension of the On Board Training to the English Preparatory Class (extra year before the classical four years of University Undergraduate Curriculum) to the Administration to consider, which requires a change in the related Legislation and Directives. This approach is believed to increase the quality and the efficiency of MET in Turkey.

5.4. On-board training vessel

Turkish MET Institutions at present do not have On Board Training Vessels except M/V AKDENIZ of ITU Maritime Faculty, which is not operational due to shortages in the budget allocated by the Government. Both ITU Maritime Faculty and Piri Reis University are members of the Executive Committee of IMO Global On Board Training Center (GOBTC) doing their best to serve On Board Training, not only nationally, but also worldwide, with support from IMO. Piri Reis Maritime University and Turkish Chamber of Shipping very much believe that three to six months homogeneously implemented On Board Training on the Vessel of the University, prior to another six months on board training on a commercial vessel will yield in vast advantages for both the cadet and the shipowner.

Thus, Turkish Chamber of Shipping is in the process of allocating the Ferry passenger vessel M/V ANKARA to Piri Reis Maritime University later this year with the intention of serving IMO-GOBTC in Mediterranean not only to all Turkish Cadets, but also to the cadets from different nationalities with the cooperation of ICS and other Universities like ONMA/Ukraine, also with IMO support.

5.5. Emphasis on English Language

Piri Reis Maritime University gives extreme importance to MET in English Language. Thus, the language of instruction at PRMU is 100% English, where as in majority of other MET institutions, the curriculum is either entirely in Turkish, or partially in English. PRMU further believes that 100% instruction in English is not sufficient since the cadet speaks in native Turkish language outside the classroom. Thus, through EU/ERASMUS cadet exchange programs and dual MoU's signed with other MET Universities from the Region and the Globe; PRMU intends to have MIXED CADET ARRANGEMENT at University education so that cadets invited/recruited from different countries will have to practise communication with each other in English language, also outside the classroom, yielding in mastering the language much better in daily life. This also requires an amendment of MET Legislation and Directive in Turkey since at present all MET cadets are required to have Turkish Citizenship by law. This national bureaucratic obstacle can also be overcome through signing of "STCW I/10 Mutual Recognition of Certificates" between Turkey and other related Parties.

This will be a very good exercise for the MIXED CREW ARRANGEMENT on board vessels upon graduation.

5.6. Distance/E - learning on board vessels

At present, MET in Turkey is carried out classically in MET institutions. PRMU very much believes that MET can also be very efficiently carried out when the officer is serving on board the vessel without having to come back to shore-based MET to upgrade his License/CoC, thus yielding in avoiding unnecessary loss of manpower on board vessels. PRMU intends to commence the Distance Learning/E-Learning Department of the Maritime Faculty next Academical Year to serve officers on board vessels and make MET available to them without having to come back to shore to acquire it. This also needs an amendment of the related Turkish MET Legislation and the Directive by the Administration.

5.7. MET Center of Excellence

The facilities of simulation, laboratories, on board training vary in Turkey from one MET Institution to the other, though all satisfy the minimum STCW requirements. Some, like in ITU Maritime Faculty and the Green Campus of PRMU, have State of the Art

Facilities, where as some have more modest facilities. Thus, to improve the general quality and the efficiency of MET in Turkey, PRMU very much believes that Turkey needs a MET CENTER OF EXCELLENCE run by the Administration, where all MET institutions can make use of it throughout the year. A good example of this application is in Japan, namely On Board Training Institute of the Country, which all

MET institutions use efficiently and homogeneously throughout the year.

5.8. Women in development of MET

PRMU fully supports the IMO Motto of “Women in Development of MET” and gives utmost importance to recruiting as much women cadet as possible for MET. Observations denote that, in general, women are more hard working and studious compared with their male colleagues, and they will make very good Officers especially in Deck Department.

5.9. Turkish Chamber of Shipping and better facilities on board vessels for future PRMU graduates

Turkish Chamber of Shipping gives utmost importance to providing better living standards on board vessels for future PRMU graduates, to increase the quality and efficiency of the Officers graduating from PRMU, encouraging them to serve on board vessels longer periods than disappointingly experienced at present.

6. CONCLUSIONS

In this presentation the author concentrates on summarizing the strengths and weaknesses of the existing MET System implementation in Turkey by MET institutions, giving utmost emphasis to a number of international and national statistical values concerning the Turkish Officer in general. The presentation also highlights the new approach towards increasing the quality and the efficiency of MET in Turkey by Piri Reis Maritime University and Turkish Chamber of Shipping. The Author very much hopes that the issues raised by PRMU in this paper will yield positively in any training program provided to ensure quality is not compromised in the quest for increasing quantity. Emphasizing the fact that The SEVEN Black Sea Countries supply 19.34% of the total seafaring officer capacity (624,062) of the Globe out of 192 seafaring countries [1], the author very much believes that cooperation between Black Sea Maritime Universities Association (BSUN) an NGO at Black Sea Economical Cooperation recently, mixed cadet arrangement further yielding in mixed crew arrangement will definitely contribute towards increasing the quality and the efficiency of the seafaring officer capacity of this very strategic region yielding in fruitful and tangible results for all parties concerned. A similar version of this paper is recently presented at

“International Forum on Seafarers, Education, Training and Crewing”, Odessa, Ukraine [11].

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PIRI REIS MARITIME UNIVERSITY NEW GREEN CAMPUS

