

Maritime Education as the Development Locomotive of Maritime Transport and the Aspired Role of Maritime Academies

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Abstract: The maritime community, headed by the International Maritime Organization "IMO", traditionally considers maritime education institutions, whatever their size, as noble destinations located in the heart of this community and the heart of its organizations and entities that are interested in the affairs of this community, in general. As repositories of knowledge that play a pivotal role in human societies, the function of these institutions is thus expected to be the promotion of the numerous fundamental functions and tasks that are indispensable for the development of this community and the achievement of its progress at all levels.

The question that should be posed is: What is the final product that is desired from maritime education and learning? In other words, what is the target pursued by States, maritime communities, families and individuals behind their expenditure on maritime education and learning, and the demand to increase its financial allocations? If there is no specific goal, eligible benefit, or tangible outcome, such expenditures on this type of maritime education and learning would simply be a waste. However, if the State, society, families or individuals have a rational goal of this educational and learning process, then it is necessary to increase the allocated expenditure on this process and to work on achieving this.

The final product of this educational process incorporates what it is expected to be acquired by individuals within the different stages of this type of education such as ideas, behavior, skills and practices that contribute to improving the quality of maritime transport, including all its related issues and affairs, as well as the standard of progress aspired by the maritime community.

We, in this association - here and now - want the young people and men who work on board ships and in the maritime field to be capable of understanding and recognizing differences well; of making sensible decisions and good choices; of expressing themselves well, participating and taking initiative; of innovating and easily adopting to other settings; of taking on self-criticism and autonomous learning; and of maintaining continuous communication and respecting diversity in the maritime community.

Keywords: Maritime community, Maritime education institution, Final product.

1. INTRODUCTION

Quality education is an education that empowers states and communities to boost their progress status from the developing circle to the developed one. Therefore, an interest in education remains the essence of moving a community forward since it helps in forming future generations and is capable of endorsing a change to its fabric on different levels and dimensions and by complex visions that ultimately lead to prosperity and progress of life. Maritime education has, thus, become one of the main productive factors in the development of maritime transport and one of the main contributors to any state's economy based on knowledge, research and development; a reality that is understood by the maritime communities nowadays.

The goal of a good quality maritime education is not merely learning but also raising the awareness and educating in order to create a global maritime community that converge on the value of intellect, ethics and culture as well as on solidarity. As is the case within all other communities, in the maritime community, which includes the maritime transport system, the prosperity or degradation of maritime education institutions is related to their ability to respond to community needs and requirements for its development, and to the extent of grasping all of its variables. The openness of these institutions to the maritime community has become a necessity implied by the current circumstances and changes to the present world, which have witnessed rapid changes in the field of information and communication. This openness has spurred a change to the classic role played by concerned institutions. They have adopted new roles and innovative means by which they could produce scientific knowledge and apply it in reality whether to itself or to the maritime community in general.

2. EDUCATION AND LEARNING

There are significant differences between education and learning. First, education is a systematic institutional process that a person undergoes at a certain stage; usually at the beginning of his life, whereas learning is a process that continues for a lifetime. Second, the initiative in education is in the hand of the instructor who is the one to give and the student is the one to receive. However, learning is the ability of a human being to obtain information by looking for the data and making sense of it himself. Third, education is related to certain curricula or to certain specialization, whereas learning is related to all aspects of life.

Education refines the capabilities of the human brain by enabling it to access different sources of knowledge and to apply different research methods, in addition to enriching it with specific information. Therefore, a truly educated man is one who realizes that science is infinite and that knowledge is an inexhaustible wealth awaiting him to heap up from it throughout his life. Hence, the ability to learn is connected to the extent education can succeed in forming a mature mind that desires to know. A human being does not only learn from what he reads or hears but his personality is also shaped by what is going on around him. A systematic process of educating is the process that develops the talent of learning and making choice; thus, a human being becomes what he has learned and what he knows from his surroundings.

Education is a mind blossoming, liberating, and horizons exploring process; a quantum leap in the human life that elevates man to the highest levels of progress, culture

and civilization. Learning, on the other hand, is the key to science, power, knowledge, progress and prosperity. Nowadays, the power of a nation is measured by its creative minds, innovative ideas and up-to-date methods. Education must be regarded as the sole key to present and future success and the best means to achieve social progress. It is a responsibility to be held by everyone, not only by schools or universities on their own. Everyone must participate in education as a national duty; a duty in which the wide array of institutions and companies is involved. Does this apply and correspond to the process of maritime teaching and learning? Positively, it does. At this point, we must not forget the close augmenting relationship between education and competitiveness.

3. EDUCATION AS A DEVELOPMENT LOCOMOTIVE

Education is the locomotive of transformation in societies that aspire to progress. There are many unique scientific experiments in which education and training have been considered one of the pillars of progress and transformation, such as that of the World Maritime University; an experiment that impacted maritime communities in developing countries and was reflected on the whole world later on.

Maritime education is directly linked to the future of the maritime community in general and to the maritime transport in the whole world in particular. This is not only because it is a cognitive process through which the student receives organized knowledge, required skills and techniques but also because of its growing role in the preparation of generations that are capable of effective participation, of conscious planning for the future, and of being equipped with worthwhile values, technical skills and correct orientations, all of which would lead to the development of maritime transport in general. There is consensus among those concerned with maritime issues on the importance of this type of education and its increasing role in the modernization and development of maritime transport. Consequently, a lot of discussions about the importance of developing maritime education are going on and many conferences have been held or are to be held in this regard; not to mention quality assurance entities which pay great attention to this issue as well.

The question that should be posed is: What is the final product desired from maritime education and learning? The exact specification of the desired final product of the educational process is the basis upon which we shall determine the components of this process, such as the curriculum, the instructor, the buildings, the equipment and the educational/ tutorial methods...etc. Therefore, we need to determine which type of instructor we shall admit to the classroom, what curriculum our students shall hold in their hands and minds, which institutional components shall help them release their energy and interact with the reality in which they live. In addition, our youth needs to acquire technical credentials through the educational process that would qualify them to get access to the labor market with competitive skills and good competence, as well as enable them to initiate innovative projects in which they appreciate the significance of work and maintain honesty in performance.

To this end, the pivotal question persists: what final product is desired of the educational process in maritime education institutions? If we, in this association, are seeking to achieve this product, it is logical then to ask: Are our instructors at the moment in our maritime academies qualified enough to help our students become this desired product? Are the form and content of taught courses in our institutions right now qualified

enough to equip our students with the required skills and work systems? Do our maritime educational institutions provide its members with the effective means to express themselves, to exercise critical thinking and to consolidate the culture of marine safety, maritime security and marine environmental protection?

There are a number of complex interrelated elements that control the educational process in maritime institutions: instructors, students, educational curricula, buildings, equipment and others; all of which must be treated with the same degree of attention and consciousness. However, the unavoidable perfect starting point, as long as the quality of education is assured, is to generously finance the education process. Such expenditure is imperative to improve the quality of education. By increasing the financial budget of the educational process, we would be able to generally improve instructors' conditions, to qualify them and to keep his good social status, all of which would not make him run away from the educational process. The same principal applies to students who currently need to develop their skills to pursue the requirements upgrade within the local and global job market.

Increased expenditure on education is an imperative necessity to expand, to improve the quality of services in maritime education institutions and to develop the quality of education. There is no doubt that education and scientific research in general are two of the most important means by which progress and industrial, economic, cultural and civilian growth are to be achieved. This statement is also applicable to the maritime domain. The administration of maritime education and training and scientific research in the maritime domain is closely related to quality management systems and standards. Being an unusual business that cannot afford making mistakes, there is a dire need for this administration to show precision and skillfulness in extracting, analysing and interpreting the results.

Envisioning education through the participatory approach as one of the key elements in the development of personality of the learner, there are interactive means by which a creative and innovative generation can be built. In this approach, education aims at:

1. Providing learners with knowledge and information relevant to their scientific and cultural needs.
2. Enabling learners to acquire different skills in order to discover those talented, to sponsor them and to develop their creative thinking abilities.
3. Raising learners' awareness and interest by applying their knowledge to reality.

4. QUALITY ASSURANCE AS A CURRENT DEMAND

It seems that the concept of "quality" is quite ambiguous; an ambiguity that is relative to it being part of a modern culture; therefore, the time has come for such a concept to be dealt with more seriously. Quality assurance should originate from a reading of the situation these educational institutions are experiencing themselves. This mission is to be carried out via the self-study and the self-assessment of the performance of these institutions which requires putting into action the culture of objective and transparent self-examination and critique. This process starts off from not surrendering to following classic curricula, drifting behind the stagnation of thought, absence of instructors, student negligence of attending conferences, and non-activation of office hours to other forms of negligence which cannot be monitored except through self-censorship.

The real challenge that persists when we demand quality assurance is generating new sources of finance, starting from the community partnership of businessmen who are interested in maritime issues and maritime transport to the civil community institutions and the maritime community, to maintain supporting scholarships and scientific research in order to enrich the academic arena. This highlights the importance of the role to be played by the sectors of both the civil community and the maritime community.

Consequently, quality assurance has become a demand of the current phase; a demand that is governed by competitiveness, accumulation of knowledge, successive scientific revolutions, the widening gap between underdevelopment and development, and meeting market needs of required skills and qualifications. Quality assurance of education has become a global culture to an extent that no nation should lag behind; it is a strategic choice not an option.

5. DEVELOPMENT OF EDUCATION IN THE GLOBALIZATION ERA

By the beginning of this century and in face of the enormous scientific and technological revolutions, it is necessary to counter such challenges with an educational system that assures quality and provides the opportunity to obtain educational experiences that meet the immediate and future development demands of shipping and maritime transport on all levels. Therefore, maritime education has become the essence of the development process, as well as the foundation upon which maritime transport is based. It is no longer enough for education to depend upon transferring experience from instructors to future generations since the future holds many challenges. Hence, it is necessary to arm our youth with capacities that enable them to deal with problems and scenarios that we have not faced or even the possibility of their occurrence.

The concept of education, in general, and of maritime education, in particular, has dramatically and comprehensively changed in this era of globalization – an era that is controlled by the technological revolution and the potency of the electronic pod "herd" – where total knowledge replaced stenograph and education is no longer limited to educational institutions and formal study phases but rather a continuous process of learning. Education has become the main drive behind the development matrix, in general, and the development of maritime transport, in particular. It is the effective means to equip humans with experiences and capacities in order to hunt employment opportunities, which is the pillar of development.

6. MARITIME EDUCATION

Maritime education is the process that provides seafarers at both the operational and management levels of the shipping industry with knowledge, attitudes and skills necessary to perform the various duties in the sector of maritime transport. Maritime education can be defined as a series of interdependent processes of teaching, learning, researching and investing in resources including the human element, material and information that interact harmoniously to carry out chosen educational objectives. The influence of the human element is paramount. The human element is a very important factor in the process of carrying out the various functions within shipping companies. The human element plays

the most crucial role in almost all operations at sea and ashore. The significant task of the entities providing this human element with maritime education should be highlighted. These human elements should be highly qualified, well motivated and stimulated, and offered later on a work environment and suitable compensation that consider their high qualifications and support them in their professional responsibility.

The constant development of the shipping industry requires the development of maritime education. The development of maritime education should thus keep pace with the development of the shipping industry which includes both developments in technology and in the science of maritime management. Under the tutelage of educational maritime institutions of developed maritime nations in the 21st century, the new mission of education is to endorse educated personnel who are of a quality that is far beyond the minimum requirements set by IMO, and to encourage them to have an international perspective that would enable them to contribute to all aspects of maritime transport management. The accelerating development of shipping industry necessitates the evolvement of maritime education and confronts it with many new requirements, such as the requirements of further fostering seafarers' practical skills and proficiency.

6.1 Maritime education and development issues

Any developing project cannot be carried out without the availability of high efficient manpower; in addition, the level of preparation and qualification of that manpower matches level of the maritime education system in which they studied. Thus, maritime education systems are responsible for the development of manpower as well as handling the issues related to the development of the maritime community and shipping. Some of these development issues are:

1. Attending to environmental issues, in general, and the development and saving of the marine environment, in particular.
2. Keeping up with scientific and technological progress since we live in a revolutionary exception.
3. Keeping pace with changes to the labor market, imposed by the economics of globalization and the revolution of knowledge via the preparation of qualified cadres.
4. Attending to unemployment issues in the maritime domain; a serious issue that is resulting in social and economic crises in many countries of the world.
5. Financing issues related to provision of expenditure and to finding alternative financing sources so as not to lose the important role of maritime education.
6. Marketing of maritime education since it is possible to develop education via international marketing.

7. SHIPPING AND MARITIME TRANSPORT

The purpose of shipping is to provide a profitable service. Maritime transport is a global industry and will always respond to radical political, economic, technological as well as educational changes. Shipping is a service that economists prefer to think of as "Capital intensive". This is not due to the tremendous costs of the developed equipment used but due to all of that its personnel and workers extraordinarily endure to handle and manage this equipment safely and productively in the inimical environment that never changes. The provision of skilled and experienced personnel and workers for such a context along the

long-term requirements of the global industry is a difficult issue that encounters owners in every shipping center all over the world. Since antiquity, the spirit of man could not be confined to a country's borders. It has been noticed that shipping has continually served humanity in trading and in exporting civilization along with goods. It has been observed in the field of the shipping industry that technical innovation develops very quickly. In fact, the progress of the shipping industry and related issues has been affected by the improvement of maritime education. The principle for maritime education is to guarantee the quality of seafarers who are to face the future demands of this global industry. In fact, the progress in shipping industry and the related issues (maritime transport) have been followed by the improvement of maritime education.

Shipping industry and maritime transport are among the most multifarious and global services in the world; it is a truly global market. The shipping industry so far is characterized by an infinite set of rules and regulations that have taken away the selection process of crucial personnel from employers and handed it over to regulators. There is very little to show that these changes have so improved the industry's personnel that can be content with the progress made.

The navigator of the future will become the manager of the system. He may also be required to undertake certain manipulative tasks simply because it is less costly and equally efficient to use a human under certain circumstances. It seems that innovation and automation will in any case call for a different set of skills from those traditionally learnt by seafarers. The essence of and the objective on which all maritime education experts approve is seen as serving the shipping industry and maritime transport and as improving the efficiency of the operation of shipping, on one hand, and developing employability of maritime academy graduates that propounds avocation in the maritime field and industry as a whole on board ship and on shore, on the other hand.

8. MARITIME EDUCATION AND MARITIME TRANSPORT

Good maritime education is peremptory to the success of maritime transport. Thus, its job is to educate and train candidates to approved levels of that industry. Eventually, it is expected that people in the field will update their knowledge regularly. Due to its nature, the maritime industry is subject to a global concession. In spite of this, global compatibility of maritime education standards have become a challenge. The prosperity of the maritime industry is bounded by the harmony among its people who belong to different nationalities, different cultures and different backgrounds, yet they show evidence of excellent team work and efficient cooperation.

8.1 The Importance of Maritime English as the Language of Maritime Industry

With regard to SOLAS Convention, Chapter V, Regulation 14 "*Ships' manning*", Paragraph 3 and Paragraph 4:

Paragraph 3: "On all ships, to ensure effective crew performance in safety matters, a working language shall be established and recorded in the ship's log-book...etc."

Paragraph 4: "On ships which chapter 1 applies, English shall be used on the bridge as working Language for bridge-to-bridge and bridge-to-shore safety communications ...etc."

Maritime English, the language of the sea, is required in today's shipping industry. It is very important for the future development of both maritime education and maritime transport. Once we ensure it is effectively taught to our students, whether on

the undergraduate or the graduate levels, we would thus fulfill the new provisions of STCW and SOLAS Conventions and accordingly the requirements of maritime industry and maritime transport. This successively affects the structure of maritime English courses, curricula and all related issues. MET institutions should excel in designing the syllabi for teaching maritime English, and maritime English course designers should find the most operative ways to teach the said language.

9. THE ASPIRED ROLE OF MARITIME INSTITUTIONS

The identity of maritime education institutions has seen light many decades ago in order to meet the educational, scientific, economic, and research needs of the maritime transport industry; an industry that is as ancient as human civilization exhibited in the development of ships, their types, ships tonnage, and kinds of cargo...etc. These educational institutions embody the processes of change where its role in the maritime community is to innovate, perceive the new, transfer and formulate knowledge, achieve harmony and adaptation between knowledge, on one hand, and the means to obtain it and use it in the present time and in the future, on the other hand. Maritime education institutions are not merely established for education and training. They play a central and crucial role in identifying the maritime community and developing the sector of maritime transport, providing suggestions and solutions and contributing to the development of the marine environment. Maritime education institutions with all its sectors, educational, research and training, enable all members of maritime communities or maritime transport to achieve the maximum possible benefits, using means and methods of modern technology. Maritime education institutions have the responsibility to hand over efficacy courses that meet the needs of the individuals, of the shipping industry as well as of the maritime transport. Maritime education institutions, which are responsible for tutoring, should connect educational procedures to the shipping industry in order to ultimately attain a constructive practice that avoids problems resulting from new technologies, changes to international conventions or new trends in international transport. The role of maritime education institutions is important in the delivery of higher education. They have an active and crucial role in diversifying and forming graduates' attitudes, professionalism and effectual performance. In these days, the discussion in all maritime education institutions revolves around originating a new maritime education program that puts into action effectual teaching tools that meet global standards as well as the demands of the shipping industry and maritime transport, and that provides its applicants with vision, care and professional mobility founded on developed high technology. Some of these institutions apparently desired to provide national and international shipping industry with well educated personnel. It is clear that not every maritime education institution can be the most splendid but that every maritime education institutions can yearn to realize the properties of quality maritime education. Institutions of higher education trigger change processes in any community since their role in the society – in addition to the educational and training role – is to innovate and implement innovations, and to transfer knowledge by providing the means to gaining it in the first place and then to making use of it in both the present and the future, in addition to initiating and supporting research and providing assistance to all activities in the surrounding community. Everywhere, universities – as well as maritime education institutions – try to meet and carry out some objectives, namely welfare, social systems, intent, and truism. Thus, these objectives combined represent the reason behind

the presence of these educational institutions. First, these institutions focus on the welfare of the community by preparing its students for constructive integration within the labor market through the acquisition of knowledge and skills which are the means to achieve progress and development, and through developing fields of research and innovation in these communities to enhance the economic force of a particular nation.

As for the social system, these educational institutions help the community to be a "harmonious society" in which different groups exchange references, and also make science, knowledge and technical skills relevant and appropriate. With regard to intent, these academic institutions study life assumptions as defined by the community, looking at it from the different world views, old and new, and reorganize data according to the new and different standards. Consequently, these institutions have the ability to indicate possible reforms in the society, which is considered the basis for any ushering carried out by nations through their universities and academies to serve their communities. In addressing truism, these institutions will explore the unknown as it is the ordinary system of which humanity is an indispensable part.

9.1 What is the role of a maritime institution in the maritime industry?

One might succinctly express the role of a maritime institution in the maritime industry as to provide students from all levels with the essential material and experiences they need to become "Safe, well-trained seafarers, and good educated employers". The maritime education process is concerned with the educational innovations, particularly those aimed at communicating abstract academic knowledge in a way that is helpful and meaningful to pragmatically oriented professionals and prospective seafarers and employers in maritime affair issues. The dominate innovation tradition learning approaches including internship, and almost a yearlong sea duty.

9.2 The role of World Maritime University

The WMU in Malmo, Sweden was established in 1983 as the center of excellence for maritime education to develop the highest practicable standards in all maritime affairs such as MET, Port Management, Shipping Management...etc, and to provide a mechanism for international exchange and transfer of knowledge and application. Thus, to developing countries, WMU is a development locomotive for maritime transport.

9.3 The aspired role of maritime institutions for working, openness and services

In this modern era, maritime education institutions play a pivotal role in human societies, in general, and in maritime communities, in particular. In the field of maritime industry in many countries, the experiences of some maritime institutions are interrelated with maritime industry institutions. This can establish the former as expertise houses that meet the needs of specialists in the fields of marine engineering, ship construction, marine environmental protection, port management, and shipping management...etc. Moreover, encouraging making research and publishing the results of this research are very crucial to maritime educational institutions. This can be carried out via three means:

1. Exchanging experiences through joint research among maritime educational institutions and leaderships, as well as exchanging visit of academic specialists and staff. This sort of cooperation is vital to attain the scientific progress.
2. Maximizing the benefits of educational scholarship missions and bodies that have received education abroad.

3. Encouraging different civil community bodies, maritime community, and maritime institutions which are interrelated via international, scientific and practical relations to cooperate with the maritime educational institution in these fields.

9.4 Privacy of Maritime Institutions

We can say that academies and universities are generally based on two axes: one moves from a focus on direct presence (the needs of welfare) to a focus on new reality (the call to search for the truth), and the other axe moves from the opposition (the critical side) to the approval (the commitment and contribution of institutions in social productivity). Exerted efforts in achieving the consistency among these functions always lead to searching for unity of purpose as is revealed in the word “uni-versitan” itself. The evaluation of the performance of maritime education institutions, which could lead to development, depends on several points:

1. The independence of the institution and its principal system.
2. Number of courses and grades awarded by the institutions.
3. Life span of the institution.
4. Quality standard of the academic staff, diversity of their experiences, their research achievements, and their intellectual leadership.
5. Quality standard of students and scholars of scientific degrees
6. Institution's entry requirements
7. The content and development of the curricula
8. Quality standard of teaching, instructors and their assistants
9. Quality standard of the administration of the institution, colleges and subsidiary institutes.
10. The range of job opportunities opened for graduates and the extent of support provided to the development of their educational and applied capabilities
11. Quality standards of infrastructure (buildings, parks and services)
12. Quality standards of the financial system, the budget and investment plans, and the available back-up to the institution from all relevant bodies.
13. Quality standard of libraries
14. The equipment and upgrading of computer systems
15. Financing the means for scientific research, equipment and infrastructure
16. Number of academic staff and the available research base on competitiveness
17. Interaction and balance between academic education and sports education.

These standards are primarily based on the concept of commitment to quality, the collective sum of which gives a general indication on the quality of a maritime education institution. These standards compromise all the required influential factors which strongly interweave the advanced and independent academic thinking and the maritime community, and which are key contributors in supporting the educational environment and scientific research inside such an institution.

10. CONCLUSION: VISION TO ACTIVATING MARITIME EDUCATION IN THE SERVICE AND DEVELOPMENT OF MARITIME TRANSPORT

The relationship of maritime education institutions with the maritime industry and with the maritime transport system, and the role maritime education plays in serving and developing the said community constitutes a large part of the strategic pivots of maritime education in the world. A look at the strategic vision of maritime education in many countries, we find that it confirms that the maritime education institutions are cultural and educative foundations whose function is to tutor and qualify as well as to guide and educate. Such a vision stresses the necessity for these institutions to achieve operational coordination as well as the need to interact and engage in participation with and other production and services foundations (represented in the maritime transport foundation).

There are four important and essential issues that must be taken into consideration when discussing the future of maritime education systems in light of globalization and the progress of science and technology. The first of these is the ability of maritime education systems to become a major factor in the development and evolution of maritime transport by exercising the triple economic, scientific and culturing function. The second issue is the ability of maritime education systems to adapt to new trends in maritime transport. The third issue is the relationship between the system of maritime education and the State – represented in the maritime transport sector – and the balance between State maritime education and private maritime education, existing in some countries. The fourth issue is the ability of maritime education systems to spread the values of openness and mutual understanding with others.

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