Learning opportunities for further career development and enhancement of seagoing professionals: A South African perspective

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ABSTRACT

Maritime education and training (MET) institutions have experienced major changes in their structure, and provision of services over the past four decades. These changes have come about partly due to national and international requirements concerning the seafarers' standards of competence and partly due to financial regimes under which these institutions are funded, forcing them to diversify into other areas and activities, such as consultancy, research, shore-based training programmes and mergers with larger Institutions.

Today's seafarer is also markedly different to those who went to sea some 30 years ago. The differences in seafarers' attitude and approach to a seafaring career manifest in a desire to spend less time at sea and treat this as a steppingstone in their working life career. This is true for developed nations, and is more and more becoming the norm, even for the developing countries.

With above in mind, one can argue that MET institutions have an excellent opportunity to provide a range of programmes and bitesize courses that can be undertaken by seafarers to prepare them for the next stage of their career.

Distance learning and web-based programmes are now commonplace in many institutions, including MET institutions, especially after the recent pandemic and long periods of lockdown. This paper will discuss some of the issues involved in web-based and distance learning, and use a leading global provider of distance learning education to highlight some of the possible opportunities for South Africa as a case study.

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I INTRODUCTION

The training of seafarers (officers) has traditionally been a matter of national pride, and has evolved and matured differently in seafaring countries due to local (national) requirements and circumstances. Until the mid-1970s, training and education of seafarers in these countries were provided under a varied set of standards that had developed over the years. These variations included both the content and structure of the training and educational programmes provided, which eventually led to the development of the International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers (STCW) in 1978, with major revisions in 1995 and 2010 (Manila amendments). It is also worth noting here at the outset that up until that time most developed countries manned their ships with nationals from their own countries, as well as providing qualified officers for the international fleet.

In terms of structure, some countries, mainly Common-wealth members, followed the United Kingdom (UK) model, where candidates entered the programme following completion of their high school, at the age of 16 or 17. The programmes were of a 'sandwich' nature, where the training programmes were enhanced by periods of sea service sandwiched in between college periods, at the end which candidates were qualified to sit for examinations conducted by the various maritime administrations.

Other models that were practised included the 'front loaded' model, where a candidate entered the programme after graduating from school, and spent three or four years in a college, without any periods of sea service. In most cases, these systems did not require seafarers to return to college for examination for higher certificates of competency. Some courtiers also had a 'dual purpose' or 'polyvalent' certification system, where candidates would go through a programme at the end of which they would qualify to sail as either deck or engineering officers. In France, for example, this is taken to the extreme and successful individuals would be qualified to serve as masters or chief engineers.

There is an emerging need for MET institutions to effectively respond to the increasing demands of international trade and transformation of the maritime sector, mostly related to technological advancements. Seafarers are at the forefront of implementing the standards developed by maritime institutions in a rapidly changing context. A series of events, some of which will be highlighted in this paper, caused these arrangements to be changed and forced a global, harmonised system of education and training to come into effect. These changes have had a significant impact on the operation and running of MET systems, as well as on seafarers' attitude and approach to working at sea.

II CHANGES IN THE GLOBAL MANNING REGIME

Flagging Out

The most remarkable change in the ship-owning and management sector over the past fifty years is the way that shipowners and operators have changed their approach to registry (nationality) and flag of their vessels. The flag that ships fly has always been important because ships, like people, are required by law to belong to a country and to have their port of registration identified. There is nothing new about shipowners using flags that suit their specific requirements. Looking back in history to a few centuries ago, one can note instances where shipowners changed their flags at times when their ships were in some sort of danger, or when trading in parts of the world where certain flags were not welcomed.

In recent times, and around the period immediately following the Second World War, a mass migration of ship registries from the country of ownership to other flags took place. The main purpose for this revolved around commercial gains. Reputable owners have used the flag of convenience (FoC) or open registers for a variety of reasons. They may well appreciate the freedom from bureaucracy in their own country or wish to avoid paying heavy corporation taxes. They might wish to have more freedom over who they employ on ships, perhaps preferring crews of a certain nationality, or wish to avoid trade embargoes that apply to ships of their country. This has had major implications for countries such as the United Kingdom, Germany, and the Netherlands. These countries have traditionally been major ship-owning countries and suppliers of

officers, not only for their own ships, but also for the international fleet. The popular and major owning countries are now Panama, Liberia and Singapore.[1]

South Africa aspires to be a major ship-owning country but, to date, its ship registry is unable to compete with the benefits offered by other ship registries. These benefits include competitive incentive schemes offered to ship owners, preferential treatment, discounted fees for use of ports and tax benefits. Other deterrent factors relate to the inefficiency in the ship registration process and uncompetitive ship registration costs. By the end of 2022, there were only 29 ships registered under the South African Ship Register[2] Subsequently, most South Africa-trained seafarers work in international shipping. Therefore, continuously upskilling seafarers' competences aids is increasing their employability.

Changes in sources of manpower

Seafaring as a profession was an attractive career for nationals of most developed countries as it provided a relatively high level of income, the possibility of travelling and visiting foreign countries, and respect in the society. These primary reasons for choosing a seagoing career are no longer valid. The differential salary levels between shore-based and seagoing professions have eroded over the years. The attraction of visiting foreign countries is also no longer valid because transportation systems have become so widely and cheaply available that most school leavers do not consider this as an important issue, as well as the fact that port stays are much shorter than what they used to be. The life onboard has also changed, from small communities of 40 or 50 persons to a very small number of crew, perhaps less than 15, which does not allow for social interactions, gatherings and other activities. The respect in the society has also been eroded over

the years, as the media highlighted the major maritime disasters, giving the shipping industry a poor image in society.

FoC, described earlier in this paper, is another catalyst for number of seafarers from nationals of developed countries dropping dramatically in recent years. Until early 1990s, this was an observation that was made by most developed nations, without realising the full impact of the situation on the shore-based maritime sectors. The same is applicable to South Africa, even though it is a developing country. A series of studies that highlighted the global manning problem for international shipping were sponsored by the Baltic and International Maritime Council/International Chamber of Shipping (BIMCO/ICS) and have been reported to the community since 1990,[3] and then updated every five years. The last report was published in 2021. These reports are analysed by national governments, and it appears that most developed nations do not seem to be concerned about the nationality of seafarers supporting their shipboard requirements because they have accepted the hard fact that there are not enough nationals for these jobs. What seems to be the main cause of anxiety in these countries is the realisation that, in the near future, some of the sensitive shore-based jobs (such maritime administrations, classification societies, pilotage etc), which have traditionally been filled by former seafarers from these countries, will now either remain unfilled or that foreign nationals will be considered for these posts. These regular reports have highlighted the potential shortage of skilled labour in the maritime industry and advised an increase in training in order to offset the losses due to retirement and wastage.

The 2021 BIMCO/ICS report[4] noted that the worldwide supply of seafarers was estimated at 1.89 million

1   L Grimett 'Understanding the Plight and Challenges facing South African Seafarers' *American Journal of Industrial and Business Management* (2023) 13(6) (available at <https://www.scirp.org/journal/paperinformation.aspx?paperid=126131> accessed 20 July 2023).
2   South African Maritime Safety Authority (SAMSA), *SAMSA Annual Report 2021/2022* (Pretoria: Department of Transport 2022) (available at <https://nationalgovernment.co.za/entity_annual/3196/2022-south-african-maritime-safety-authority-(samsa)-annual-report.pdf> accessed on 20 July 2023).
3   Baltic and International Maritime Council (BIMCO) *The Worldwide Demand for and Supply of Seafarers* (Coventry: Institute for Employment Research University of Warwick 1990).
4   Baltic and International Maritime Council (BIMCO) and International Chamber of Shipping (ICO) *Seafarer Workforce Report: The Global Supply and Demand for Seafarers* (Livingstone: Witherby Publishing Group 2021).

seafarers operating over 74 000 vessels in the global merchant fleet. The report also noted that the shipping industry was already struggling with crew shortages due to Covid-19. The Delta variant of the coronavirus had hit parts of Asia with a significant force and this had led to many nations stopping land access to sailors, which left captains unable to rotate crews. About 100 000 seafarers were stranded at sea beyond the expiration of their contracts. The 2015 report[5] predicted that an additional 89 510 officers would be needed by 2026, based on projections for growth in shipping trade. It said that there was a shortfall of about 26 240 certified officers at the time. Growth in demand for seafarers outpaced any growth in supply in 2021. Although there has been a 10.8% increase in the supply of officers since 2015, the current shortfall could be due to a reported increase in the number of officers needed on board vessels, with an average of 1.4 officers required per berth. There was a particular shortage of officers with technical experience, especially at management level, and in the tanker and offshore sectors, there was a reported shortage of management-level deck officers.

Taking the UK as an example, Tarver and Pourzanjani[6] reported their findings and analysis of the measures taken by the UK government to deal with this issue. These measures included the introduction of a 'tonnage tax' in 1997, which replaced the normal corporation tax for UK ship owners. The UK's register of shipping increased in size by 20% in tonnage terms in the months following the announcement of the tonnage tax. This system, based upon a Netherlands scheme, has shown positive results in levelling the playing field for ship owners that register their flag in the UK and, in turn, increasing UK ship registrations. Although not intended to be a panacea for all the industry's ills, the UK government intended that the tonnage tax would also have a positive effect on the recruitment levels of cadets. It was thought that an increase in ship registrations would provide greater opportunities for

officers, increase the number of cadet officers being recruited and make more training berths available on registered ships. It therefore made it a condition of an individual shipowner's re-registration that, for every 15 officers employed on their UK vessels, there must be a minimum of one trainee officer. South Africa has adopted a similar approach since 2014, with positive results being recorded, such as an increase in ship registrations.[7] Unfortunately, South Africa does not own a national merchant fleet and therefore it relies on foreign vessels operating within its waters to provide training berths. However, due to the global scarcity of training berths, South Africa competes with the international community.[8]

The industry, shipowners, shore-based institutions, unions and some philanthropic bodies have also put into place their own initiatives to boost the training of officer cadets. These efforts have led to some success. Recruitment of cadets has increased, but is still half the number that is required to sustain numbers into the future. In South Africa, the South African Marine Safety Authority (SAMSA) plays a crucial role in accrediting seafarer training authorities, verifying result, and enforcing training compliance with the latest International Maritime Organization (IMO) requirements. SAMSA also collaborates with various stakeholders to place cadets for their one-year practical training experience. Cadets who apply for placement through the national cadetship programme do not have to pay for this training as the government covers their placement costs.[9]

At a regional level, the European Commission (EC) considered the issue of the declining number of European Union seafarers, in particular the shortage of well-qualified officers, in its Communication to the Council of Ministers and the European Parliament, adopted in April 2001 (COM (2001)188 final). This report provided an update on the shortage of seafarers

5   Baltic and International Maritime Council (BIMCO) and International Chamber of Shipping (ICS) *Manpower Report 2015* (Bagsværd: BIMCO 2016).
6   S Tarver & M Pourzanjani 'Measuring and Sustaining the UK Maritime Skill Base: A Review' (2003) 2(1) *World Maritime University Journal of Maritime Affairs*.
7   SAMSA op cit note 2.
8   Grimett op cit note 1.
9   Ibid.

on the basis of the 1998 joint study by the Federation of Transport Workers' Unions (FST) and European Community Shipowners' Association (ECSA).[10] The general interest in the dramatic decline in EU seafarer numbers is also reflected in a number of other studies, research projects and network of experts, including some funded by the EC, such as the Harmonization of European Maritime Education and Training Schemes (METHAR), a research project funded by the EC, and Maritime Education and Training Network (METNET). In its conclusions for improving the image of EU shipping and attracting people to the seafaring profession, adopted on 5 June 2003, the Council of Ministers invited the EC to continue monitoring the evolution of the training and recruitment of seafarers based on data provided by the member states.

II INTRODUCTION OF GLOBAL STANDARDS

Until 1978 the standards for MET, certification and watchkeeping of officers and ratings were established by governments, without much reference to what was happening in other countries. As a result, standards and procedures varied widely, even though shipping is a truly global and international industry. The IMO convention, STCW 1978, was to establish basic requirements for training, certification and watchkeeping for seafarers at an international level. The convention prescribed minimum standards relating to training, certification and watchkeeping for seafarers that countries are obliged to meet or exceed.

One important feature of the convention is that it applies to ships of non-party states when visiting ports of states that are parties to the convention. Article X of the convention requires parties to apply the control measures to ships of all flags to the extent necessary to ensure that no more favourable treatment is given to ships entitled to fly the flag of a state that is not a party to the convention than is given to ships entitled to fly the flag of a state that is a party to the convention.

The difficulties that could arise for ships of states that are not parties to the convention is one reason why the convention has received such wide acceptance. By December 2000, the STCW Convention had 135 parties that ratified the convention, representing 97.53% of world shipping tonnage.

The 1995 amendments, adopted at a conference, represented a major revision of the convention in response to a recognised need to bring the convention up-to-date and to respond to critics who pointed out the many vague phrases, such as 'to the satisfaction of the Administration', which resulted in different interpretations being made. Others complained that the convention was never uniformly applied and did not impose any strict obligations on parties regarding implementation. The 1995 amendments entered into force on 1 February 1997. However, until 1 February 2002, parties were able to continue to issue, recognise and endorse certificates that applied before that date in respect of seafarers who began training or seagoing service before 1 August 1998.

The 2010 Manila amendments to the STCW Convention and Code were adopted in June 2010, marking a major revision of the convention and code. These entered into force on 1 January 2012 under the tacit acceptance procedure and were aimed to bring the convention and code up-to-date with developments since they were initially adopted, and to enable them to address issues that are anticipated to emerge in the foreseeable future.

Among the amendments adopted, there are several important changes to each chapter of the convention and code, including:

- measures to prevent fraudulent practices associated with certificates of competency and strengthen the evaluation process
- requirements on hours of work and rest and new requirements for the prevention of drug and alcohol abuse, as well as updated standards relating to medical fitness standards.

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[10] Federation of Transport Workers' Unions in the European Union (FST) and the European Community Shipowners' Association (ECSA) *Improving the Employment Opportunities for EU Seafarers: An Investigation to Identify Seafarers Training and Education Priorities* a Joint Study (1998).

- certification requirements for ratings
- requirements relating to training in modern technology such as ECDIS
- requirements for ME awareness training and training in leadership and teamwork
- training and certification requirements for electrotechnical officers
- updating of competence requirements for personnel serving on board all types of tankers, including new requirements for personnel serving on liquefied gas tankers
- requirements for security training and provisions to ensure that seafarers are properly trained to cope if their ship comes under attack by pirates
- use of modern training methodology including distance and web-based learning
- training guidance for personnel serving on board ships operating in polar waters
- training guidance for personnel operating dynamic positioning systems.

Ensuring compliance with the convention

Parties to the convention are required to provide detailed information to the IMO concerning administrative measures taken to ensure compliance with the convention. This represented the first time that the IMO had acted in relation to compliance and implementation; generally, implementation is down to the flag states, while port state control also acts to ensure compliance. Under chapter I, regulation I/7, parties are required to provide detailed information to the IMO concerning administrative measures taken to ensure compliance with the convention, education and training courses, certification procedures and other factors relevant to implementation.

The information is reviewed by panels of competent persons nominated by parties to the STCW Convention, who report on their findings to the IMO Secretary-General, who, in turn, reports to the Maritime Safety Committee (MSC) on the parties that fully comply. The MSC then produces a list of parties in compliance with the 1995 amendments.

The first list of countries was approved by the MSC at its 73rd session held from 27 November to 6 December 2000, which included 71 countries and one associate member of IMO.

Port state control

The revised chapter I (1995 and 2010) includes enhanced procedures concerning the exercise of the port state to allow intervention in the case of deficiencies deemed to pose a danger to persons, property or the environment. This can take place if certificates are not in order, or if the ship is involved in a collision or grounding, and in instances where there is an illegal discharge of substances.

At intervals of five years, masters, officers and radio operators are required to meet the fitness standards and the levels of professional competence contained in section A-I/11 of the code.

III CURRENT ISSUES

Impact on MET institutions

As indicated in the previous section, the changes in learning opportunities for further career development of seafarers should consider the STCW convention amendments, which, according to the IMO (IMO, 2021), emphasises the importance of continuing professional development for seafarers, encouraging them to undergo refresher training and update their technical and non-technical skills regularly. This approach has resulted in better-prepared seafarers, contributing to safer navigation and reducing the risk of maritime incidents (IMO, 2021).

Additionally, the revised convention has strengthened the requirements for the training and certification of maritime instructors, ensuring the delivery of high-quality training programmes. Therefore the STCW convention amendments have modernised and improved MET programmes, making them more relevant to the evolving needs of the maritime industry. The changes have had a reported impact on the seafarer as a professional.

MET institutions have traditionally been established to address the needs of the industry and are funded by regional or central government funding mechanisms. Programmes provided by these institutions had to have the approval of their country's ministry of transport, the organisation are responsible for issuing certificates of competence (CoC) and, in addition, in some countries, that country's ministry of education, if these programmes also led to an educational qualification, for example, a diploma or bachelor's degree. The introduction of the STCW had no significant impact on this arrangement. Events mentioned in previous sections, however, have had a major impact in some countries, where the demand for national seafarers has dropped dramatically, causing some of these institutions to close their doors. In the UK, for example, by the late 1960s and early 1970s, there were more than 20 nautical colleges, each having three or four cohort intakes per year. This was reduced to three main colleges in the 1980s, which has now increased to four.

In recent years, we have observed that in most countries a move from the old state-funded regimes to more privatised and independent institutional regimes, where institutes must compete to get enough students to make them viable. In some countries, the state funding continues but more accountability is required from the institutions, where they need to demonstrate that they are providing a service that meets a minimum set of training and education standards. The introduction of quality assurance and quality evaluation requirements, which is also part of the STCW 1995, is an example of how institutions are required to demonstrate that they achieve set standards and what systems they have in place to enhance the quality of their education or training provision. The STCW mandates that seafarers receive approved education and training, which includes the integration of virtual learning, considering the rapid technological developments and advancements in the maritime sector. This assertion is confirmed in paragraph 14 of chapter II, section B-II/1 of the STCW Manila amendments, which provides that competence is not just about practical skills but also includes knowledge, theory, principles and cognitive skills. These are integrated at all levels of competence and inform what to do, how and when to do it, and why it needs to be done. Applied correctly, this knowledge ensures that seafarers can successfully operate on a diverse number of ships and in diverse situations, handling emergencies and can adapt to evolving requirements and environments. Significantly, the latest amendments to the STCW strongly advocate for the use of modern training methodologies, which include distance learning, for the enhancement and updating of seafarers' knowledge. Furthermore, a system that seems to be limited to the UK and very few other countries, and has had excellent results, is the participation of the shipping companies themselves in education and training of seafarers. Potential candidates are interviewed and assessed by shipping companies, and introduced to colleges who will provide the educational element. As part of this collaborative effort, shipping companies provide the opportunity for sea service and cover some of the costs incurred by the colleges. It is surprising that other countries have not adopted similar practices, which have resulted in almost zero dropout rates.

The main issues that need to be addressed and are frequently asked about by those who are funding these institutions are:

- Is there demand for services provided?
- Is the institution financially viable?
- Is the subject area 'academic' or 'vocational'?

In responding to the first issue, some institutions have diversified into other non-maritime subject areas, such as management and engineering, and other activities, such as research, consultancy and short courses.

In raising the second issue, and what makes it difficult, particularly for MET institutions that are part of a bigger organisation, for example faculty as part of a university, is that a comparison is made between maritime subject areas and other disciplines. Maritime departments are intrinsically expensive to run and manage. They are different from humanities departments, where there is a high demand, and most teaching is classroom-based, in large groups.

The last issue, that of 'maritime' being an academic or vocational subject, is also an important one and should be defended strongly because, if this subject area is classified as a purely vocational subject area, there is a danger of high-level work not being funded.

A South African perspective: The role of the South African International Maritime Institute

South Africa is a developing nation. So far, we have established some facts that need further considering in respect of the opportunities that they provide for the South African International Maritime Institute (SAIMI) and its stakeholders.

The most important issue is the period of sea service. It is now accepted that most seafarers from developed countries have a short span of service at sea. METNET and METHAR findings indicate that, for the European Union, seafarers this is about seven years. Other studies from the seafarer supply countries, such as the Philippines and China, also indicate that, for different reasons, nationals from these countries also do not have a lifetime ambition of working at sea, and their length of service is around 12 years.

What happens to this population of workforce when they finish their seagoing careers? The answer is simple; they come ashore and get shore-based jobs. The challenge and opportunity for SAIMI and South African member universities is to redefine services that are more in line with the needs of current seafarers.

The EC-funded network of experts on MET, METNET, made a series of recommendations to the EC, some of which are equally applicable to International Association of Maritime Universities membership. These included:

- Making the seagoing profession more attractive by improving the image of shipping industry; developing a career path in the maritime industry where sea service is an element.
- Enhancement of the current courses leading to seagoing certification by identifying and providing subject areas that would benefit the seafarers, both at sea and ashore.
- Provision of postgraduate courses specifically designed for ex-seafarers to work in the shore-based maritime industries (maritime cluster).

Identifying the maritime cluster

Various sectors of the maritime industry that, put together, form what is known in some countries as the maritime cluster, are probably the most divers and varied within transportation systems. Most of the sectors within the cluster benefited in the past from an inflow of well-educated and disciplined practitioners who, after serving at sea for a number of years, would take up shore-based positions. Previous studies[11] have identified the shore-based maritime sectors that traditionally used to benefit from an inflow of ex-seafarers as follows:

- ports sector: port authorities; terminal operators; stevedore companies; contract labour suppliers; ferry companies; pilotage organizations; vessel traffic service
- marine equipment supplies and manufacturers
- commercial maritime and insurance; loss adjusters
- regulatory authorities; maritime administrations
- education and training
- ship management
- ports and related services
- dredging and hydrographic services
- surveying, classification societies
- shipbuilding
- maritime law
- offshore (oil and gas)
- yachting and recreational craft
- fishing and aquaculture.

In addition to the technical subjects that employers identified as essential for their sector, they also identified several core skills that they regarded as important for their staff:

- organisational/analytical skills
- marketing and public relations skills
- customer awareness

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[11]   M Pourzanjani 'Maritime Career Path Map' Presentation to the European Maritime Industries Forum Plenary Session, Naples, Italy, 2002; M Pourzanjani, S Tarver, A Graveson, R Raposo, Odd-Magne Skei & J Haavisto *Issues Related to the Mobility of Seafarers in the EU* Special METNET Report to the European Commission, 2002; M Pourzanjani, S Tarver & Dodds *A Review of the United Kingdom's Marine Industries Skills Needs and Supply* METNET Special Report to the European Commission, March 2003.

- communication and interpersonal skills
- human resource expertise
- environmental awareness
- safety
- leadership and teamwork
- communications (written and oral)
- numeracy and problem-solving
- advanced information and technology and e-commerce skills
- engineering skills.

IV DEVELOPMENTS IN DISTANCE AND WEB-BASED LEARNING

The education sector has witnessed an explosion of new ideas and approaches to learning, following the global acceptance of 'lifelong learning' as a concept. The techno-logical advances in information and communications technologies are providing new routes and tools for the delivery and management of learning, and the recent pandemic and periods of lockdown forced academic institutions to consider alternative modes of delivery.

Distance learning is defined by the UK former Quality Assurance Agency for Higher Education as:

provision of higher education that involves the transfer to the student's location of the materials that form the main basis of study, rather than the student moving to the location of the resource provider

This agency also outlines four dimensions of distance learning as follows:

Materials-based learning. *This dimension of a system of distance learning refers to all the learning resource materials made available by the programme provider to students studying at a distance.*

Programme components delivered by travelling teachers. *This dimension refers to staff of the providing institution travelling on a periodic basis to the location of the student to deliver components of the programme.*

Learning supported locally. *This dimension involves the providing institution employing persons specifically to undertake certain defined functions for the local support of students following the programme.*

Learning supported by the providing institution remotely for the student. *This dimension refers to defined support and specified components of teaching provided remotely for individual distant students by a tutor from the providing institution.*

Distance learning has been increasingly considered by institutions as an economical way of expanding their activities, widening opportunities for students around the world and making effective use of the new technologies that are rapidly emerging. What is most important in making such provision is an assurance that rigorous quality systems are in place, along with well-founded reasoning and justification that the usual ways of 'on-campus' provision are not necessarily appropriate or possible in the current geo-economic context. These are particularly important and relevant, when considering provision of courses for shore-based destinations, where at least part the programme can be delivered via distance learning, either due to a lack of on-campus resources, or availability of seafarers to attend courses.

Prof. John Chudley, Rector of MLA College made a presentation during the recent SAIMI maritime leadership conference in Gqeberha (former Port Elizabeth), outlining the range of programmes on offer at MLA and its approach to supporting marine professionals who seek higher/different qualifications to further their careers, some of whom are active seafarers. This is achieved by using modern training methodologies, which include distance learning for the enhancement and updating of seafarers' knowledge.

The College has a range of postgraduate programmes, including postgraduate diplomas, a Master of Science degree and a Master of Business Administration degree, all focused on the maritime discipline and the United Nations Sustainable Development Goals. An interesting aspect of entry to the college is the recognition given to candidates' prior learning and work experience. For example, for a master mariner or chief engineer to gain entry into the Master of Science and/or the Master of Business Administration programmes, they only have to do the dissertation part of the degree programme and will be exempt from the taught modules of the programmes.

All learning material is provided via a total learning platform and, although they can study off-line, the learning material has an on-line feel about it. Each student is assigned to a tutor, who will meet with them regularly on the MS Teams or Zoom platform and respond to their needs.

Successful candidates will receive their qualifications from the University of Plymouth, which is the awarding partner institution with MLA College. Further details about the college can be found on their website https://www.mla.ac.uk/programmes/. SAIMI and other stakeholders have an opportunity to develop a similar approach and foster meaningful partnerships with institutions, such as MLA, to enhance seafarers' training.

V SUMMARY AND CONCLUSIONS

This paper examined the underlying reasons for changes in supply and demand of human resources in the shipping industry. In doing so several issues were discussed and some fundamental facts established. These include:

- There continues to be a shortage in the number of officers for the international fleet.
- Regardless of their nationality, there is a desire by almost all seafarers to spend less time at sea.
- MET institutions are under pressure to diversify into new training and education activities.
- Current MET courses based on STCW do not equip the seafarers for shore-based positions.
- There is a lack of postgraduate courses, specifically designed for ex-seafarers.

Changes in MET institutions were also discussed, indicating that most MET institutions should prepare themselves to diversify into other areas of activity in order to remain viable.

What can be concluded from the above is the opportunity that this gives SAIMI and its partner institutions to provide better undergraduate programmes, along with new postgraduate opportunities to satisfy the shore-based industries' human resources needs and those of current and future seafarers.

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