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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**THE ROLE OF MARITIME EDUCATION
AND TRAINING IN MARITIME
DEVELOPMENT IN ANGOLA**

By

**DOMINGOS ALBANO JONES
ANGOLA**

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the award of the degree of

**MASTER OF SCIENCE
In
MARITIME AFFAIRS**

(MARITIME EDUCATION AND TRAINING)

2022


Declaration

I certify that all the material in this dissertation that is not my own work has been identified and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views and are not necessarily endorsed by the University.

(Signature):

(Date):


20/09/2022

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Abstract

Title of Dissertation: **The Role of Maritime Education and Training in Maritime Development in Angola**

Degree: **Master of Science**

The purpose of this study is to provide valuable insight into maritime education and training for maritime development in Angola. The maritime industry faces myriad challenges and changes in the 21st century. These issues include increasing costs and freight, changes in logistical structures and supply chains, the level of integration in the global transport and trade networks, technological advancements, automation, and digitalisation led by the fourth industrial revolution or Industry 4.0 and cybersecurity as well as the need for capacity-building and reskilling at different levels of the industry. In addition, it faces constant challenges relating to, for example, global climate change, energy efficiency, waste management, worker safety, security, ocean and coastal health, and local community benefits in specific jurisdictions governed by adequate maritime transport policy for good governance. Furthermore, adequate maritime policy enables collaboration with all stakeholders in the industry whilst creating high levels of awareness among the population and promoting appropriate education and training for maritime personnel. According to de Água et al. (2020), competent and trained maritime professionals are essential and necessary for developing the maritime industry (itself a crucial component of international trade), despite being identified as costly and challenging.

The study employed an exploratory mixed method design attracting a total of 43 respondents from different positions in the maritime industry in Angola. The qualitative exploratory part consisted of 9 interviews with senior maritime experts representing different stakeholders in Angola. At the same time, 34

responses to a questionnaire were used to inform the quantitative dimension of the mixed method approach.

This study found that maritime education and training has significant ability to improve maritime development in Angola with a mediation of adequate national maritime policies and stakeholders' engagement and collaboration. However, it also found that the current national policies in general are fragmented and inadequate to inform Angola's maritime development. Furthermore, there is very little engagement and collaboration among the stakeholders and a highly superficial level of awareness. These findings, therefore, show gaps between the extant situation in Angola and what could be termed as the ideal situation required for maritime development in any jurisdiction.

The study encountered several limitations, one of which was a low response rate from the intended respondents. In addition, the research was conducted during school holidays and a presidential election campaign period in Angola. Internet connectivity was also a big challenge worth mentioning. However, the main stakeholders in different positions and educational backgrounds were well represented. In addition, the interviews were conducted with the stakeholders' senior personnel allowing for a broader and mature analysis of the industry concerning the role of MET in maritime development in Angola.

KEYWORDS: Maritime Education and Training, Maritime Development, National Policies, Awareness

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List of Abbreviations

AMN	- National Maritime Agency
BIMCO/ICS	- Baltic and International Maritime Council
COCs	- Certificates of Compliance
EEZ	- Exclusive Economic Zone
EMSA	- European Maritime Safety Agency
ENMA	- Estratégia National Marítima de Angola (National Strategy for the Sea of Angola)
EU	- European Union
GDP	- Gross domestic product
HTW	- Human Element, Training and Watchkeeping
IAMU-GMP	- International Association of Maritime Universities - Global Maritime Professional
IMO	- International Maritime Organization
MARPOL	- The International Convention for the Prevention of Pollution from Ships
MET	- Maritime Education and Training
METIs	- Maritime Education and Training Institutions
MLC	- Maritime Labour Convention
NMTP	- National Maritime Transport Policy
SOLAS	- The International Convention on Safety of Life at Sea
STCW	- The International Convention on Standards of Training, Certification and Watchkeeping 1978, as amended
WMU	- World Maritime University

Chapter 1 Introduction

The maritime industry is a crucial sector worldwide. Human survival and the current global economy depend on the movement of goods - transportation, transshipment - and associated logistics services. The reason behind this position is first, the creation of a sustainable economy; second, to contribute to the economy; third, the maritime sector's future relevance in an industrial policy context; and lastly, the fact that employment policies are essential even beyond single coastal regions. For instance, the International Maritime Organization (IMO) and the EU maritime policy are continuously concerned about the human element's driving force for maritime development (Podgorica, 2012). Therefore, maritime education and training (MET) (in a broader sense as opposed to the notion of seafarers' education and training only) can be vital to developing the industry effectively and efficiently. A developed maritime industry can be achieved when practical strategies and policies consider the human element. Therefore, maritime education and training in the industry are pragmatic approaches worth analysing.

Today, maritime education and training has broadened its scope and has become more inclusive; as mentioned above and ascertained by Manuel (2013) and IAMU (2019), it goes beyond life at sea and with a more comprehensive academic component leading to academic qualifications Manuel (2017) to serve the maritime clusters at any given jurisdiction to develop the maritime industry. According to the European Union Commission Report (2008), seafarers are no longer the only ones who need maritime education and training of the industry; training has been expanded to meet the needs of various positions, both at sea and on land. The broader scope of the maritime industry includes all enterprises that design, construct, manufacture, acquire, operate, supply, repair, or maintain vessels or pieces thereof; including shipping lines, customs brokerage services, shipyards, dry docks, port (administration and development) which implies a broader scope of maritime education and training to support clean ocean shipping on a global scale by ensuring safe, secure, efficient, and environmentally sound shipping on a global scale.

1.1 Background

International trade relies on shipping; shipping is estimated to be responsible for transporting 80% of global trade by volume and higher percentages for most developing countries (UNCTAD, 2021). International trade depends on shipping because it is a low-cost transport option, in particular for the carriage of goods in bulk (UNCTAD, 2021). However, the maritime industry faces workforce and skill shortages, both at sea and on land (Global Maritime Forum et al., 2019). For instance, the most recent BIMCO and ICS (2021), reports that seafarers (maritime professionals) were in short supply in 2021 due to a shortage of 26,240 STCW certified officers. In addition, the BIMCO and ICS (2016) predicted that nearly 150,000 officers may be out of work by 2025. As a result, a severe shortage of seafarers is predicted for the future, amounting to 16,500 officers (2.1%). Therefore, to service the world's merchant fleet by 2025, there will be a need for 147,500 more officers.

Maritime professionals operate the industry to ensure safety and security at sea and on land. However, as shipping complexity increases and world trade becomes increasingly dependent on shipping, their competence is increasingly recognized as a *sine qua non*. According to reports, there is a high correlation between the number of accidents and the "human element", which may be argued to be related to the lack of maritime professionals, both in number and quality.

In this study, the term “maritime education and training” is used to refer to educational and training activities that produce qualified maritime professionals for ship operation and for other human-related activities associated with the maritime industry. As well as addressing the acquisition of skills and knowledge related to subjects that enhance competence in maritime contexts, maritime education and training also refers to acquiring knowledge related to maritime fields (European Commission on Maritime industries & Heirs & Manuel, 2021). According to Erdogan & Demirel (2017) and Heirs & Manuel (2021), MET becomes not only the

promoter of capacity building for maritime development and attraction of qualified long-term, competent professionals to ensure sustainability in a more comprehensive maritime cluster but also should allow for development of the capacity to continuously create strategies to meet the demands of the industry. Therefore, maritime professionals must be trained in IMO Member States' MET Institutions for a more efficient and effective working environment in such a complicated and diverse environment; IMO requirements must be followed. In the specific case of onboard ship operation, it is the member state's ratification and implementation of the IMO's International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW-78 as amended) that is vital to establish uniform global competence standards and ensure ship and environmental safety and protection at sea (IMO, 2017).

The Republic of Angola is located between Namibia and the Republic of the Congo on the western Atlantic Coast of Southern Africa. It shares an eastern border with the Democratic Republic of the Congo and Zambia. In addition to the country's 1,600 km (990 mi) of coastline, it has a barren coastal plain that extends inland between 50 and 160 km (31 to 99 mi). A belt of hills and mountains runs parallel to the coast with a large plateau behind them. The country covers 1,246,700 km² (481,400 sq mi) of land. Currently, the country has a population of 34,077,425 people, with a median age of 16.7 years and an Exclusive Economic Zone of 518,433 km² (200,168 sq mi) (Governo de Angola, 2021).

Angola's political and economic development has been significant since the civil war ended in 2002. Yet the country remains vulnerable to significant challenges, including heavy reliance on oil, widespread poverty and inadequate access to essential social services, macroeconomic instability, and gender inequality. As a result of a new government with a reform-oriented focus, Angola now has a window of opportunity to begin a period of more inclusive, sustainable growth that is geared towards achieving more equitable outcomes in agriculture, forestry, fishing, transportation and others (WFP, 2022).

The Angolan government is concerned with maritime transportation reforms because of its contribution to the country's economy. It is estimated that more than 90% of Angola's exports and imports are carried via sea, with the ports of Luanda, Cabinda, Lobito, Soyo, and Namibe accounting for approximately 69% of the country's GDP, according to Essential Business (2020).

1.2 Problem Statement

The current estimates on exports and import dependence on sea transportation may pose challenges that can determine stakeholders' groups' points of view. These challenges may include a lack of METIs, a lack of awareness, adequate policies for the maritime industry, a lack of knowledge of the different maritime professions, a lack of influence on career decisions and, consequently, stagnation of the industry. Moreover, the enhancement of METIs in the jurisdictions such as Angola can be presented as a possible solution with outstanding capability for its maritime development. Moreover, the maritime industry within the jurisdiction is mainly unknown, and career opportunities within the industry remain unexplored

Furthermore, a lack of qualified human resources, succession planning, and sustainable planning for the industry's future may cripple or stagnate the Angola maritime industry. For Angola's shipping industry to develop in the future, maritime education and training must be present, available, feasible and adequate. Considering the several global changes that have occurred in the maritime industry, MET should consider these changes. Several industries have been affected by globalization, including climate change, career expansion, technology advancements, thoughtful communication, and multi-national crewing.

1.3 Purpose of the study

The purpose of this study is to provide valuable insight into Maritime Education and Training for Maritime Development in Angola. This study focuses on identifying the potential impact of MET on the current and future development of the industry. Therefore, the researcher believes it is worth investigating the role that Maritime Education and Training plays in Maritime Development in Angola. Furthermore, the findings of this study may contribute to discussions about MET optimization among stakeholders and policymaking for the development of Angola's maritime industry.

1.4 Objectives

1. To analyse the national policies that inform Angola's maritime development.
2. To identify the stakeholders and their needs for capacity building for maritime development in Angola.
3. To interrogate the relevance of maritime education and training in developing the maritime industry in Angola.

1.5 Research Questions

1. What are the national policies that inform Angola's maritime development?
2. Who are the stakeholders in Angola's maritime development, and what are their needs for capacity building?
3. How can maritime education and training assist the development of the maritime industry in Angola?

1.6 Research Methodology

A mixed-method approach was used in the research, combining qualitative (interviews) and quantitative (questionnaires) approaches to allow diverse viewpoints and cast light on the studied topic (Creswell, 2014). The qualitative approach was

chosen to examine how national policies inform maritime development, to identify the stakeholders and evaluate their collaboration for needs assessment and to assess how MET assist maritime development in Angola. The qualitative approach in this study centred mainly on semi-structured interviews, which allowed for a collection of data from 9 participants from 4 maritime stakeholder groups.

While the quantitative approach centred on questionnaire which, allowed to collect numerical data from 34 participants from 4 different maritime stakeholder groups operating in Angola.

1.7 Scope/Delimitation

Maritime Education and Training for Maritime Development in Angola was the focus of this study. Stakeholder perspectives were collected to obtain a broad cross-section of perspectives. A study focusing only on one or two maritime clusters would not provide sufficient evidence. The need for sufficient evidence led to examining several maritime clusters and stakeholders. Considering the possibility of impacting maritime development and Angola's economy in the future, clusters with potent maritime activities and respondents with high responsibilities were prioritized. The National Maritime Transportation Policy of Angola and Maritime Education and Training were also examined for relevance to the research.

Chapter 2 Literature Review

2.1 Introduction

This chapter examined literature concerning maritime development and maritime education and training. Discussions focused on maritime development, national maritime transportation policy, stakeholder theory, the human element of Maritime Education and Training, and the purpose of MET institutions. In the end, a summary concludes the chapter.

2.2 Maritime Development

Maritime development presupposes robust maritime activities. Therefore, the industry needs to have prospects for growth and can benefit from the expected global expansion in the region. In addition, it presupposes an increasing demand on maritime, marine, and coastal areas, use of maritime, marine resources and growth in the tourist industry resulting in pressure on the seas and coastal areas. Therefore, the government's vision and policy for maritime development is crucial and presumes environmentally, economically, and socially sustainable growth and rests on three equal pillars: a balanced marine environment, competitive maritime industries, and attractive coastal areas (Government Offices of Sweden, 2015). Furthermore, maritime development presumes that conditions should be in place to safeguard the ecosystem services needed for the continued growth of the maritime industry. At the same time, market opportunities shall be utilised, and the development of maritime sectors needs to progress sustainably. Furthermore, the country's coastal areas must remain attractive to those who would like to visit and those who live and work there. For instance, the government of Sweden prioritizes actions to ensure maritime development, including a healthy and safe marine environment, knowledge and innovation, functional rules for maritime spatial planning, efficient permit processes, international cooperation, and transport (Government Offices of Sweden, 2015).

A competitive, innovative, sustainable, and developing maritime industry can present several opportunities to a country, such as increasing employment, reducing the environmental impact, and providing an attractive living environment (Government Offices of Sweden, 2015). In addition, it can support the smooth trade between countries in the export and importation of goods and, lastly, develop the surrounding area through maritime corporate social responsibility (Coady et al., 2013). According to Viederyte (2013), because of maritime transportation, which facilitates international trade through purchases in the value chain, a well-developed maritime industry has always been a crucial factor in facilitating the functioning of the entire economy—enhancing efficiency, competitiveness, business formations, research, and innovation, as well as optimizing activities and varieties of initiatives. Additionally, a sustainable blue economy and global economy will need maritime transport. Environmentally friendly, energy-efficient, and pollution-free, it is the most efficient form of mass transportation.

In recent years, international maritime transport has undergone several developments and trends that affect trade in developing countries (UNCTAD, 2021). Many Governments are partnering with the private sector to fund, build, and operate transport infrastructure and operations to develop the maritime industry. This has led to privatising terminal operations in almost all the country's ports to improve performance (Country Profile Report Agency, 2020).

The international maritime transport and trade sector is experiencing a variety of trends, including changes in costs, prices, logistical structures, supply chains, and comparative advantages. On the other hand, greater integration into global transport and trade networks and trade competitiveness (UNCTAD, 2013). Therefore, maritime development is considered necessary in the environmental, social, and economic dimensions.

2.3 National Maritime Policy

Investments, subsidies, and taxes that affect different modes of transportation are part of a transportation policy. Therefore, good governance and a solid maritime transport policy are essential for the maritime industry, a complex system that must adapt quickly to changing conditions. According to the International Maritime Organization (IMO), a National Maritime Transport Policy (NMTP) is “a statement of principles and objectives that guide decisions in the maritime transport sector so that the country can achieve its maritime vision and ensure the industry is run safely, efficiently, sustainably, and environmentally soundly” (IMO, 2019). Following the IMO's reasoning, a well-structured and implemented NMTP can provide a country with the tools to participate effectively in the maritime sector and harness the potential of the blue economy.

In addition to reducing the sector's high dependence on oil, reducing contact with high transport costs, limiting environmental degradation, and leapfrogging to a low-carbon development path, transparent and objective national transport policies and strategies benefit developing countries by assisting them in establishing and implementing sustainable freight transportation systems. Moreover, UNCTAD (2013) points out that freight transportation planning, design, and implementation help developing countries overcome persistent challenges associated with insufficient freight transportation infrastructure and inadequate transport services, often preventing them from successfully integrating into global trade and transportation networks.

An NMTP provides the country with a Maritime Transport System suited to development objectives and competitively inserted the national to the international market, facilitating economic development and enhancing territorial and population-based policies (Bilbao-ubillos et al., 2021).

Access to international markets is primarily provided by maritime transport. As a vital link between sea and land transport, shipping supports economic activity in the

hinterland. The maritime industry also contributes to the economic and social well-being of the nation by providing jobs.

2.4 Public Policy of Maritime Development

In an ecologically intact and healthy sea, food, employment, and development can be long-term resources. The field of Public Policy for Maritime Development has grown significantly in the last 35 years and is considered a significant area of development and innovation in the EU. The development of multimodal transportation systems is primarily influenced by the economic importance of sea transportation to the EU. According to Podgorica (2012), the EU estimates that 90% of world trade is carried out through seaports; 50% is handled within the country, and 5% is transhipped. Over 1000 seaports or industries related to maritime trade employ 350,000 Europeans, generating over 20 billion euros in value.

The EU is in the spotlight when creating national policy and regulating the maritime sector. In addition, the EU has successfully achieved maritime development goals through the liberation of seaports, the abolition of national monopolies, and the maintenance of safety standards (Podgorica, 2012).

EU maritime policy consists of six main components to improve the management of the maritime industry. This includes market access and conditions for the provision of maritime transport services, including rules on state aid and anti-competitive behaviour, as well as security, pollution control, infrastructure, development, and integration of the transport system, including seaports, training, and working conditions for maritime personnel, and external relations (Podgorica, 2012).

A "Maritime Development Plan - Strategy for an integrated German maritime policy" was developed by the Federal Government of Germany following the EU Policy of Maritime Development. Accordingly, the policy aims to treat complex seas and oceans holistically. Furthermore, knowledge and control are essential for human survival and the planet. Additionally, the knowledge assists in strengthening maritime science and research on the other hand, promote sustainable use of the seas, protection of the marine environment, addresses climate change, ensures maritime

safety and security, protects coastal areas and infrastructure, improving coastal quality of life, and raising awareness of the importance of the seas for climate, environment, and prosperity (Sea, 2011).

An integrated maritime policy allows these elements to interact reciprocally as a holistic and inclusive approach to economic growth, environmental protection, and social capital. Future measures and projects will need to be continuously developed and updated, and they will need to be evaluated periodically.

In addition, the sea has high emotional value for the inhabitants of the coastal areas of a country. Therefore, it becomes an attachment to developing nations' historical heritage in those areas. That makes developments about the use of the sea compassionate and creates a reasonable basis for public, societal, economic and stakeholder related interests, calling for a maritime development policy that can influence maritime activities' future development (Branten & Purju, 2014).

2.5 Maritime Sector Stakeholders

The maritime industry stakeholders are those interested in or concerned with the shipping industry ports academia. Geographically, it refers to the concentration of maritime industries in a region and a network of firms and institutions supporting the industry's development (Branten and Purju 2014).

Those stakeholders who have a primary business activity directly related to the shipping industry and who are influential in that industry are considered critical stakeholders (ship owners, charterers, operators, maritime sector associations, shipbuilders, port terminals and seaways, sustainable shipping coalitions and customers, including retailers, manufacturers, cargo owners).

As a second category, the shipping industry indirectly involves classification societies, suppliers and business partners, investors, banks, insurers, local and indigenous communities, NGOs & academia, media, the Public, Governments and regulators, Unions, and Employees. This interconnected maritime community generates quite a large amount of GDP for a given jurisdiction (Branten & Purju, 2014).

For the industry to meet its constant demands, a lot of work must be accomplished by jurisdictions. They include demands related to global climate change, energy efficiency, waste management, worker safety, security, ocean and coastal health, and local community benefits. Managing sustainability risks and performance in the international shipping sector is also challenging because of its global nature. In addition to fragmentation and lack of collaboration within stakeholders in the industry, there is a lack of coordination across international, regional, and national policy levels (Coady et al., 2013). However, Oksavik et al. (2020) stated that the collaboration of clusters and stakeholders has impacted people and communities worldwide and is a major driving force for change and, consequently, the development of the industry and, ultimately, the entire society.

In this context, the stakeholders' needs, opinions, and concerns will be taken into account (although not limited to any) in the MET curriculum determination, design, implementation, and evaluation and define the ideal maritime professional education for the future without compromising their freedom in terms of exploitation, marginalisation, manipulation and control (Manuel, 2017).

2.6 Human Element

To improve the individual, team, and maritime industry performance and rate of goal accomplishment, the human element offers a complete approach for improving how people work together. According to Gregory and Shanahan (2010), the major issue affecting the shipping industry today is the human element.

A resolution adopted by IMO in 1997 outlined its vision, principles, and goals for the human element. Human activity, as performed by ships' crews, shore-based management, regulatory bodies, and others, affects maritime safety, security, and marine environmental protection in a multifaceted manner. To address human element issues effectively, all parties must co-operate. As much as possible, IMO aims to reduce the possibility of human error when it comes to human element matters; therefore, issues such as individual capabilities and limitation, fatigue and

stress, communication and teamwork, work environment, human-technology interaction, training and competence, and safety culture are examined (Tang, 2021).

According to Tang (2021), the term first appears in Moresby's book entitled *The Human Element in Shipping*, which focuses on the recruitment, retention, satisfaction, and commitment of seafarers in the UK compared to technological advancements in a volatile market. However, the term and its use in the maritime domain have changed and gained popularity since the 1990s, when it became evident that human error was an essential contributor to maritime accidents. Human error causes approximately 80% of sea-related accidents and incidents, (Human Element 2014). According to Tang (2021); Bhattacharya and Tang (2013); Sampson (2002); Aspers and Sandberg (2019) and Walters and Bailey (2013), labour concerns and employment significantly influence issues such as safety culture, training, communication, and fatigue, which are considered human resource issues today.

As early as the beginning of the shipping industry, humans played a crucial role in its success. Gregory and Shanahan (2010), notes that the shipping industry is run by people, for people. Ships are designed, built, owned, crewed, maintained, repaired, and salvaged by people. The government regulates, surveys, underwrites, and investigates them when things go wrong. The pillars of the shipping industry are people, the secret to its success and demise. Both the routine tasks of a ship's rating and the IMO's policy decisions are influenced by human nature.

Consequently, the Maritime Safety Committee at its seventy-seventh session and the Marine Environment Protection Committee at its forty-ninth session recommended adopting the human element vision, principles, and goals. To significantly reduce maritime casualties, the IMO held the stated sessions to recognise the need for increased attention to human-related activities in the safe operation of ships and to achieve and maintain high standards of safety, security, and environmental protection. The Organization's work programme has also acknowledged the importance of human element issues since the human element plays a significant role in preventing maritime losses (IMO, 2004).

Human element issues must be addressed comprehensively and appropriately to improve performance and maritime safety, security, and the quality of the marine environment. According to Principal a) of A 23/Res.947, the human element affects maritime safety, security, and marine environmental protection in a multi-dimensional manner. In addition to ship crews, shore-based management, regulatory bodies, recognised organizations, shipyards, legislators, and other stakeholders, it includes the entire spectrum of human activities. Managing human element issues effectively requires co-operation among all of them. For that reason, it is essential to address the fundamental aspects of human nature so that people can play to their strengths. In addition, Gregory and Shanahan (2010), suggests that humans are active in making sense of things, taking risks, making decisions, making mistakes, getting tired and stressed, learning, developing and adapting, living and working together, and communicating with others, to not only avoid disaster but to maximize its business potential. They are part of the entire maritime industry and contribute to its success.

As part of its mandate, the Sub-Committee on Human Element, Training and Watchkeeping (HTW) is responsible for certain standards, reviewing, updating, and revising the IMO model courses; and addressing fatigue issues under the IMO. During the meeting held between 7-11 February 2022, psychological safety, mental health, and well-being were among other fundamental aspects of human nature discussed. The Subcommittee reviewed a proposal to prioritize revising the IMO model course 1.21 on Personal Safety and Social Responsibilities (IMO, 2022) to incorporate specific content to establish behavioural norms in maritime workplaces, as well as essential psychological elements. Furthermore, the Subcommittee identified psychological safety, mental health, and wellbeing (including sexual assaults and sexual harassment) as severe concerns and issues affecting the maritime industry that required coordinated action by relevant organizations like the International Labour Organization (ILO) and the International Maritime Organization (IMO). As a result, the Subcommittee realized that appropriate steps ought to be taken to address this matter, such as the creation of relevant requirements

for the International Convention on Standards of Training, Certification, and Watchkeeping Seafarers (STCW) and the revision of model courses.

A new specific strategic direction for the human component of the current Strategic Plan for the Organization has been included in the 32nd session of the IMO Assembly in recognition of the critical role humans play both ashore and aboard in maritime safety, security, and the quality of the marine environment. The organization reviewed all human element aspects of the maritime and transport sectors to enhance sustainable shipping operations where human actions play a fundamental role. As a result, a holistic approach has been recommended to the human element as a way forward.

A country that disregards its human resources' education, training and development puts itself at risk; Knowledge and skills acquired through education can be utilised economically and socially. If this necessity is ignored, the economy may be adversely affected. An educated and well-trained personnel is essential to ensure a stable and prosperous industry (Efanga & Oleforo 2012). Therefore, educating and training the human element in the METIs for vocational and academic qualifications is vital for developing the maritime industry.

2.7 Maritime Education and Training

A fundamental element of the global maritime industry is Maritime Education and Training (MET), a system that plays an essential role in ensuring the sector is continuously supplied with skilled personnel for its development following MET frameworks, such as the STCW convention. Education and training in the maritime context will be discussed in this section, as well as their differences from a single unit.

First, it is essential to distinguish “education” from “training”. Education usually means preparing for careers and life, which involves learning concepts, principles, and problem-solving methods. In contrast, training means preparing for specific jobs or sets of tasks. Therefore, the content of a training course is more specialised than

an educational programme. Some training courses contain supportive elements, which many would describe as educational. The term education is often applied to long courses. The basic premise is that training involves learning designed to change people's performance doing jobs. The four words above – learning, performance, people, jobs – form substantial elements of the notion of “training”. A strong relationship between the terms is characteristic of the nature of training. Training courses are often aimed at skill development, implying that they are not knowledge-based. However, training usually requires knowledge in specific areas (IMO, 2017). Education is defined by many theorists, (Aristotle, 384-322 Socrates 469–399 B.C.E, Dewey 1859 -1952, Yunus 1940, and Langeveld 1985) as a process of training people to fulfil their goals in which the interaction between an adult (teacher) and a child (learner) happens, to deliver the child to the highest goals, knowledge, physical skills, and morals must be improved. According to Nelson Mandela (1918-2013), “Education is the most powerful weapon you can use to change the world.” As defined by Good (1973), education is the process of developing a person's abilities, attitudes, and other forms of behaviour based on practical values in the society in which s/he lives; it is a social process that allows individuals to achieve social competence and optimum individual development by being subjected to selected and controlled environments."

These definitions were based on their perspectives and at a given time. However, common ground is straightforward, such as acquiring knowledge and skills for better reasoning to understand future global issues and development.

Maritime education and training have the vocational and academic dimensions as discussed above. In addition, it is designed to offer life-long learning for stated dimensions in various domains such as practical, innovative knowledge, skills, attitudes, and behaviour to develop the industry according to the stakeholders' views while maintaining the minimum standards and internationally accepted requirements (Manuel, 2017). The METIs offer a broad education emphasising critical readings and discussions, cultivating cognitive and analytical skills, and leaving it to vocational training centres to solve specific problems (De Água, 2020).

When looking at ancient times, teaching and learning methods, on-the-job training, mentorship, and experience-sharing were crucial for transmitting cognitive, psychomotor, and affective skills to maritime professionals (Manuel & Baumler, 2020). Maritime professionals must have more than professional experience or technical knowledge to meet the demands and needs of the 21st century, including the integration of maritime transports into complex supply chains and technological developments. Managing, cultivating interpersonal relationships, leading, influencing, and making decisions is crucial for today's managers. Therefore, learning process improvement is enhanced by identifying innovative teaching methodologies (De Água, 2020).

The concept of Maritime Education and Training discussed in this paper goes beyond seafarers' education and training only as described by (IAMU, 2019). Maritime education and training prepare individuals to become maritime professionals.

This position possesses all the technical competencies relevant to its operational role in the industry. Internationally recognized standards must be followed when developing competencies. Furthermore, MET prepares students for academic skills, such as logical and critical thinking. The candidates also exhibit high professionalism, ethical behaviour, human relations skills, emotional intelligence, cultural awareness, and diversity sensitivity. Those who meet this criterion exhibit practical leadership skills, work well with people, and have a strong sense of initiative. Furthermore, they possess excellent knowledge of contemporary maritime issues and a high sense of environmental consciousness and sustainability (IAMU, 2019).

However, maritime education also has challenges due to rapid technological advancements. In most cases, the relationship between technological advancement's

speed and time to prepare and administer the training is not linear (Aboul-Dahab, 2021). Furthermore, maritime education requires openness and a flexible approach to learning that is both lifelong and life wide.

2.8 Purpose of MET Institutions

As the maritime industry progresses toward a more sustainable future, the traditional STCW convention initially drives international and national standards (Rowihil & Farag 2021). Maritime Education and Training Institutions (METIs) have three significant tasks (based on the IMO perspective) to produce qualified maritime professionals for this constant progressing industry. For achieving desired educational and training objectives, it is essential to consider first the curriculum to be delivered, second the methods of delivery and assessment, and finally the resources (not least the human resource).

Moreover, METIs are interested in maritime vocational training for Certificates of Competency acquisition of skills like those required in the industry such as shipyards and ports, naval architecture, and navigation.

Furthermore, the METIs are of late also concerned with developing inquiring minds via academic degrees that can be applied in the shipping industry. According to Manuel (2013), one of the advantages of this approach is that the graduates of MET Institutions are more prepared for careers beyond life at sea once that phase of their life is over, so long as the training received is with a different mindset, of quality and complies with the minimum standards.

Furthermore, to handle the 21st-century constant evolution and business demands in the maritime transport systems due to its integration into complex supply chains and technological developments, the METIs are expected to design and develop a resilient curriculum for vital competencies. The competencies expected are management, interpersonal relationships, leadership, organizational behaviour, and

decision-making skills (de Águas et al., 2020), despite time constraints and financial constraints.

METI's mission of developing maritime industry professionals will continue to be challenging due to globalization. In addition to multi-cultural skills, emerging technologies affecting society, the maritime industry, and people at the centre of this paradigm are needed. Therefore, new curricula must be developed to fill the gap between a proper situational analysis and a training needs assessment.

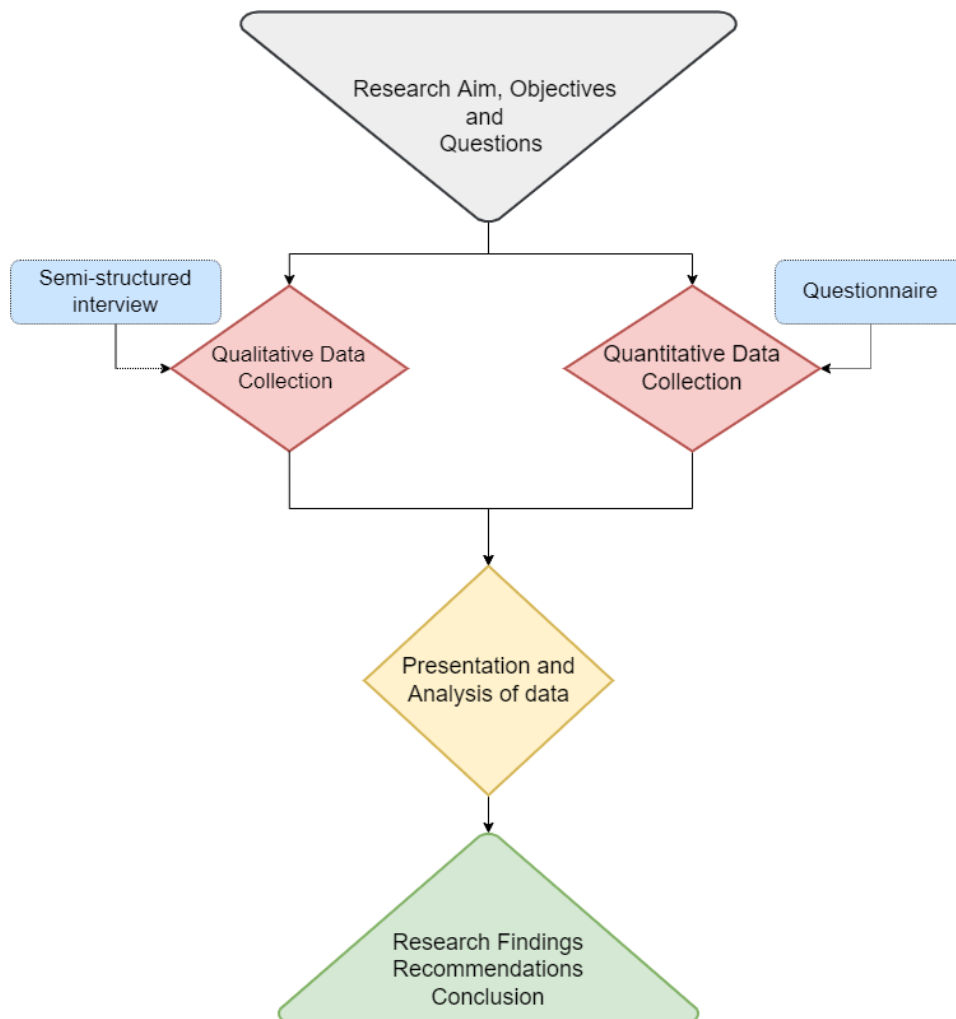
Chapter 3 Methodology

3.1 Introduction

Four sections are presented in this chapter. Section one includes the selection of participants; section two, instruments used; section three, data collection; and lastly, the chapter summary. The chapter provides a general synopsis of the research methods, from data collection and sample selection to data analysis.

The study adopted a mixed approach to answering the research questions. Mixed methods research is when qualitative and quantitative research methods are combined to allow diverse viewpoints and cast light on the studied topic (Creswell, 2014). The proposed method helps complement diverse viewpoints to cast more light on the topic under research (Cohen & Manion, as cited in Mishra & Rasundram, 2017). In addition, the mixed method approach enabled the researcher to evaluate the data using different techniques to validate and support the research results' soundness and produce innovation in conceptual framing Figure 1.

Figure 1 Representation of mixed methodology used in the study



3.2 Selected Participants

Due to the topic and research questions, research participants were selected based on purposive sampling and random survey methods. This method was chosen to foster representativeness and enhance credibility (Cohen & Crabtree, 2006). Initially and based on the researcher's background information, the following had been identified as participants Centro the Formação Marítima de Angola (CFMA), Universidade do de Pescas e Ciencias do Mar do Namibe, Agencia Marítima e Nacional (AMN)- (Maritime Administration), Luanda Port Authority, Lobito Port Authority, Namibe

Port Authority, Three Shipping Companies: DP WORLD LUANDA, OREY SHIPPING, LOGISTICS & MARINE SAFETY and Maersk Angola Lda. However, from the initial responses and interviews and through the snowballing approach, the researcher identified other stakeholders such as UNICARGAS, Bakes Hughes, MEBARC, CMA CGM Angola and BOLOREE and invited them to participate in the survey. A broad cross-section of maritime professionals was targeted to obtain various perspectives, as shown in Table 1.

Table 1 Selected Participants

Subjects for analysis (Institutions)	Participants	Instruments	Nº of applications
Centro de Formação Marítima de Angola (CFMA)	Academic Dean	Interview (Zoom)	1
		Questionnaire	1
Universidade de Pescas e Ciencias do Mar do Namibe	Academic Dean	Interview (Zoom)	1
	Lecturers	Questionnaire	2
	Students	Questionnaire	1
Agencia Marítima e Nacional (AMN)	STCW - Head	Interview (Zoom)	1
		Questionnaire	1
	HR Director	Interview (Zoom)	1
	MET Chair	Interview (Zoom)	1
	Director	Questionnaire	1
Port Authorities:			
Empresa Portuária do Amboim E.P.	HR Deputy	Questionnaire	1
	MET Department	Questionnaire	1
	Workers	Questionnaire	14
Empresa Portuária do Amboim E.P.	Deputy CEO	Interview	1
		Questionnaire	1
Shipping agencies and forwarders			
Maersk Angola Lda	Senior Officer	Interview (Zoom)	1
		Questionnaire	1
UNICARGAS	HR Head	Interview (Zoom)	1
		Questionnaires	1
	Workers	Questionnaires	2
BOLOREE	Senior officer	Questionnaire	1
CMA CGM	HR Head	Interview (Zoom)	1
		Questionnaire	1
	Worker	Interview (Zoom)	1
		Questionnaire	1
MEBARC	Senior Officer	Interview (Zoom)	1
		Questionnaire	1
Bakes Hughes	Worker	Interview (Zoom)	1

3.3 Instrumentation

Research instruments allowed the researcher to collect valuable data efficiently and effectively. So, a questionnaire and semi-structured interview were developed and emailed to participants.

3.4 Data Collection

This research used primary data collected through two techniques, a questionnaire with 34 respondents and interview with 9 respondents from 4 different maritime stakeholder groups including maritime education and training institutions over approximately one month.

Questionnaires and semi-structured interviews were used to collect primary data from Centro the Formação Marítima de Angola (CFMA) (Angolan Maritime Training Centre), Universidade do de Pescas e Ciencias do Mar do Namibe (Namibe University for Fishing and Ocean Science), Agencia Marítima e Nacional (AMN) (Maritime Administration), Luanda Port Authority, Lobito Port Authority, Namibe Port Authority, Three Shipping Companies: DP WORLD LUANDA, OREY SHIPPING, LOGISTICS & MARINE SAFETY and Maersk Angola Lda and through the snowballing approach, the researcher collected from other stakeholders such as UNICARGAS, Bakes Hughes, MEBARC, CMA CGM Angola and BOLOREE.

3.5 Questionnaire Instrument

The quantitative data was collected through questionnaire which was administered electronically and consisted of twenty-nine mandatory questions, of which twenty (20) were closed and nine (9) open-ended questions. Since the questionnaires were administered electronically, the validity and reliability of the instrument were tested during a pilot test with 5 Maritime Education and Training students from World Maritime University (WMU).

The questionnaire constructed to assess the current situation of maritime education and training assisting maritime development in Angola. Furthermore, it explored the

opportunities and the challenges facing its adequacy and efficiency in capacity building. The questionnaire was structured to expound on the stakeholders' collaboration, the level of awareness and the current national policies in responding to maritime development in Angola (Taherdoost, 2016). The questionnaire was convenient, cost-effective, accurate, stress-free, and efficient as a data collection tool. (Wilson, 2010; Babbier, 2013). The process of data collection occurred in a brief period, between the 7th of July and the 7th of August 2022, to gather sufficient data to improve the value of the dissertation.

3.6 Interview Instrument

According to Lunenburg & Irby (2008), open-ended questions were used in semi-structured interviews which allowed 9 participants freely elaborate their perception on the questions asked.

3.6.1 Qualitative Method

A qualitative strategy for data collection included contacting people in advance via e-mail. In addition, an interview guide was developed to control the conduct of the interviews for the efficiency and the role of MET in maritime development in Angola. According to Turner (2010) there are three interview formats that can be used in research (a) in an informal conversation, (b) in a general interview guide format, and (c) in a standardized open-ended interview format. This study applied the standardized open-ended interview, which allowed the participants to provide as much detailed information as they wished. In addition, the researcher could ask probing questions to follow up on the findings. Furthermore, the technique provided insights into the experiences and opinions of participants on the role of MET, its efficiency and effectiveness in capacity development, and the national maritime policies for maritime development in Angola.

To proceed within the WMU's ethical requirements, the interview consent form was sent electronically to the participants before the interview took place. The researcher

used the ZOOM online platform to accomplish the interview process, which was recorded with the participants' consent and transcribed the (9) interviews.

3.7 Data Analysis

Typically, qualitative data tends to be open-ended without predetermined answers and comprehensive descriptions of a phenomenon (Creswell, 2014). On the other hand, the quantitative data usually consists of closed-ended answers, such as those found on questionnaires, and can be analyzed by group or relationship.

Using Excel generated from Google Forms, the researcher analysed the data collected from questionnaires. The results and the analysis were systematically presented in graphs and pie charts under chapter 4 of this study. In addition, interviews were coded, and the resulting themes and subthemes were presented in the form of a table.

3.7.1 Quantitative Analysis

The quantitative analyses involved the data from questionnaire responses in comparing the participants' institutional information, level of disagreement or agreement on the role of MET, the relationship among the stakeholders and the adequacy of the national policies in maritime development in Angola from different clusters' perspectives. Furthermore, the questionnaires were analysed to explore the impact of MET on maritime professionals' performance. Finally, the quantitative data analysis results were presented and analysed using descriptive statistics, generating pie charts, tables, and graphs.

3.7.2 Qualitative Analyses

Qualitative analyses involve an interpretative, naturalistic approach to the subject matter. Furthermore, it entails personal experience, life stories, interviews, and observational, interactional, and visual texts (Stake, 1999). In addition, qualitative analysis provides a broader scope, objectivity, and a deductive approach. Thus, open-ended questionnaire responses and interview responses were coded using Google

sheets. Based on the research questions, the data from interviews and open-ended questions from the questionnaire were transcribed and then coded based on the identified common themes. The process allowed the researcher to identify five common themes presented and analysed in a comparative perspective of the four categories representing the participant's clusters/organizations.

3.8 Summary

The selected methods aimed at validating answers to the role of Maritime Education and Training in Maritime Development in Angola using a purposive sample of respondents. Mixing qualitative and quantitative instruments in the form of questionnaires and interviews was considered suitable. Careful consideration was given to the data collection process, which was challenging due to the online data collection mode. The study captured a broad cross-section of maritime clusters. In the end, the data was analysed through selective coding according to themes and descriptive statistics. The findings and results are presented in Chapter 4.

3.9 Research Ethics

Since this research required human participation and ethical reasons before being administered to the participants, the research ethics committee at the university approved the instrument. Data were collected electronically, so the researcher could not meet the respondents in person. Instead, the consent letter was attached to the questionnaire. In addition, consent was signed as a mandatory requirement before proceeding. In the case of the interviews, to begin the research, participants were asked to agree to the use of the content of the interviews.

3.10 Limitations

An examination of the role of maritime education and training is presented, emphasising the stakeholders' perspectives, concerns, needs and priorities in capacity building for maritime development in Angola. This study's challenges included the amount of secondary Angolan-related data for the literature review, which

interrogates the role of MET in maritime development and the stakeholders' concerns and needs in capacity building. Secondly, the collection of primary data to answer chapter 3. The researcher used purposive sampling and survey methods to collect data from different maritime stakeholders' groups. However, the clusters and key personnel identified to provide vital information constituted an initial obstacle to responding and delivering the required data. Instead of personal data collected by the researcher, general inquiries were conducted through the internet, web-based questionnaires, and online interviews. Understanding the bureaucratic procedures of the stakeholders in Angola, the researcher approached these challenges pragmatically, such as getting clearance from the managing bodies before proceeding with the research which had some positive result in the organizations that participated.

The difficulties of collecting data via online did not allow the researcher to carry out the documentary analysis which, could have helped to achieve higher quality of this study.

Chapter 4. Presentation and analysis of the data

4.1 Introduction

Chapter 3 of the study suggested the methodology used for research. This chapter will present and discuss the results of the data analysis in two sections. Section one the qualitative and section two the quantitative results and the respective analysis of the role of maritime education and training in maritime development in Angola. The study aimed at answering the following questions:

1. What are the national policies that inform Angola's maritime development?
2. Who are the stakeholders in maritime development in Angola, and what are their needs for capacity building?
3. How can maritime education and training assist the development of the maritime industry in Angola?

Qualitative data was analysed through manual coding of the interviews with the support of excel sheets. Based on the research questions, the data from interviews and open-ended questions from the questionnaire were transcribed and then coded based on the identified common themes. The process allowed the researcher to identify five common themes, presented and analysed in 4 stakeholder groups selected and identified through snowballing approach representing the participant's clusters/organizations. The five generated themes are: National maritime policies, Stakeholders' needs for capacity building, MET assists maritime development, improving maritime awareness, and strategies to develop the maritime industry. Using the five significant themes as a guide, the qualitative data analysis results were presented and analysed in section one, followed by the quantitative data analysis results using descriptive statistics in section two and lastly, the conclusion of the chapter.

4.1.1 Presentation of the interviews results

Table 2 Theme 1: National Maritime Policies

Theme 1: National Maritime Policies				
Sub-themes	Stakeholder Groups			
	Maritime Administration (A)	METIs (B)	Port Authorities (C)	Shipping Agencies (D)
Ratification and implementation of International Conventions	The country has ratified three such as (SOLAS), (STCW), (and MARPOL) as the four main pillars of the international regulatory regime for quality shipping. However, the country needs greater strictness in the implementation for effectiveness.	Angola has ratified (STCW) but lacks concrete steps to implement it. These steps are given when there is a political will and understanding of the advantages for the jurisdiction in terms of qualified personnel to the society and the industry.	Some international conventions that could support work flaw MARPOL and port security ISPS Code (SOLAS) have been ratified. Still, there is a need for rigorous implementation and constant evaluation of the progression given by the ports.	Angola has not ratified the fourth pillar for quality shipping with the Maritime Labour Convention (MLC) 2006, which other jurisdictions understand to be important. Angola in this regard relies on domestic laws in most cases. However, for contemporary international maritime labour standards, Angola should ratify the MLC –

				2006 Convention or incorporate the missing aspect into the domestic legislation.
Current maritime policies	The maritime industry in Angola is governed by Law 27/12 of 28 August, titled (in English) “Law of Merchant Navy, Seaports, and related Activities”. This law regulates all activities developed in the maritime and seaport jurisdiction areas in the scope of the merchant, navy, recreational maritime sectors and nautical sports	Basic Law of the Education System (Lei 13/01 de 31 de Dezembro). Vocational Technical Secondary Education Subsystem. Presidential Decree n. 128/15 de two de Junho Organic Statute of the National Institute of Employment and Vocational Training (INEFOP) Basic Law for Higher	Under law 11/13, titled Basic Law for Public Sector Enterprise, the ports of Angola are formed as public enterprises, governed by their legislation, with patrimonial, administrative, and financial autonomy.	Presidential Decree n.º 50/14 de 27 de Fevereiro. STATUTE OF NAVIGATION AGENTS. Presidential Decree 44/16 approved changes to articles four e 18 of the decree 50/14. Regulation for port tariffs n. 323/08 de 16 de Dezembro. Lei 10/18 de 26 de Junho, private investment law.

	and of seaports, in connection and integrated with transport and logistics activities.	Education (Lei 32/20 de 12 de Agosto)		Presidential Decree 326/20 de 29 de Dezembro on the national network of logistics platforms.
	- Presidential Decree n.º 78/16, 14 April, approved the new Regulation on Sea Personnel. The diploma establishes the legal requirements for professional registration, certification of physical fitness, access to a career and the functions to be performed, rules on the embarkation and disembarkation of ships, certification, and recognition of qualifications			

	of maritime workers and other crew.			
Adequacy	There is a need to comply with international treaties and protocols regarding quality management, safety, security, and protection of the environment. In addition, the national policies should include a provision for maritime training assessment and certification focusing on industry trends.	There should be a more specific policy that looks at qualifying maritime personnel in line with STCW-78 as amended and IMO Model courses	Today's policies should be focused on significant changes and feasible plans and actions to support port investments and development.	Decree on port tariffs in force since 2009, needs updating... context of import boom, tariff not attractive today. The statute of the shipping agent needs more clarity regarding the shareholder structure and that it is in line with the private investment law. There is a need for constant updating on the policies, which should be pro-industry and pro-development and follow current trends, to support Angola's maritime

				development.
Training	The Jurisdiction requires qualified maritime personnel to interpret the International Conventions, and convince the decision makers of the value, need and advantages of adequate policies in terms of maritime development.	Skilled and experienced trainers. Substantial synergies and collaboration between METIs and the stakeholders.	Rapid changes in the industry require rapid and adequate responses, thus, skilled professionals.	Maritime international requirements versus national responses and lack of skilled personnel.

Table 3 Theme 2: Stakeholders' needs for capacity building

Theme 2: Stakeholders' needs for capacity building				
Sub-themes	Stakeholder groups			
	Maritime Administration (A)	METIs (B)	Port Authorities (C)	Shipping Agencies (D)
Training needs	Considering the diversity of the industry, and the responsibilities of the maritime administration, especially in supervision and assessing which requires a broader view of the industry both locally and internationally, the maritime administration, needs a wholistic and constant capacity building of its personnel.	Maritime-related courses. Pedagogy and andragogy skills. STCW, IMO Model courses. Trainers with (CoC). Language such as English.	Training port personnel for daily work such as ISPS code application and maintenance of port infrastructures, Ship Planning, Strategic Port Management, Port Logistics, Maritime Law, Port operations, and legislation constitute a significant need to better serve as a competent port, maritime and port security,	The shipping agencies are mainly after courses such as maritime safety, logistics, naval engineers, maritime inspection, and maritime law to serve the industry better. Other relevant courses tallying, tag master and crane operators, identification and assessment of environmental aspects,

			English	ISPS Code, mapping of environmental risks, and maritime safety. Understanding Customer Service. Logistics Integration and Supply Chains (Supply Chain) Compliance and ethics.
Unavailability of some courses	The administration does not have any training centre under its control.	The levels we train, cannot offer a (CoC) certificate to take advantage of those with sea experience to teach. Lack of qualified trainers in maritime affairs.	The available training institutions do not offer maritime the courses that we need. The present courses at the beginning of the year that in most cases do not respond to the needs.	Lack of maritime training institutions in the country therefore, our organization finds itself limited in relation to training despite being a provision under the Angolan General Labour Law (LTG).
Qualified personnel	Well performed tasks, better interpretation	The training institution will be in a better position to	Better implementation of the national and	More efficiency in performing the tasks

	implementation of the international and treats. In addition, elaboration of an adequate national policies.	produce qualified professionals for the industry.	international policies in relation to port management, reduce port turnovers and improve port performance which, will allow more ships calling your port.	expected and continuous growth of the industry.
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Table 4 Theme 3: MET assists maritime development

Theme 3: MET assists maritime development				
Sub-themes	Stakeholder groups			
	Maritime Administration (A)	METIs (B)	Port Authorities (C)	Shipping Agencies (D)
Existence	Namibe University for Fishing and Ocean Science Maritime and Fisheries Polytechnic Secondary Institute, Helder Neto, Namibe Luanda Port Academy Angolan Maritime Training Centre (CFMA)	Namibe University for Fishing and Ocean Science Maritime and Fisheries Polytechnic Secondary Institute, Helder Neto, Namibe Luanda Port Academy Angolan Maritime Training Centre (CFMA)	Namibe University for Fishing and Ocean Science Maritime and Fisheries Polytechnic Secondary Institute, Helder Neto, Namibe Luanda Port Academy	Namibe University for Fishing and Ocean Science Luanda Port Academy Angolan Maritime Training Centre (CFMA)

Relevance	All the international regulatory Conventions and treaties for quality shipping require qualified personnel. Therefore, as Angolan maritime administration we view maritime education and training as an important tool to respond to our tasks accordingly.	Having qualified teachers and trainers helps to achieve our main goal of preparing qualified and competent personnel for the industry.	The industry is having greater challenges specially with massive use of technology and ports are part of these chain. To deal with these challenges the ports need to have prepared and skilled workers. Educational institutions are the source of these qualified workers.	Shipping is a very specific mode of transportation and with specific skills and competences requirements to keep with today's global demands. To have our workers trained we rely on the local training institutions but in many cases send them out of the country despite de costs involved.
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Quality	Looking at the current and emerging needs of the industry, there is a need of investing to improving the quality of the training institutions under our jurisdiction in all dimensions to better comply with IMO instruments.	It is understood that the current offers quality wise are not the best for the stakeholders needs but the challenges are very well identified from our side. For example, the training institutions lack primarily qualified teachers, trainers for many offered courses, financial support, and simulators.	Our port has a training academy but highly rely on the international maritime institutions to take our workers. Many competences need in our port cannot be handled within due to reasons such as management, specific trainers for specific need and adequate equipment.	There is perception that little, or no investments are done to the local maritime educational institutions especially in terms of qualified trainers which, lowers the level of trust and reliably on them.
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Collaboration	The encounters with the training institutions under our judications are very limited. The limitations are because the institutions depend on either Ministry of Higher education, Ministry of education, Ministry of labour or private institutions.	Has a university we find difficulties to get our students get internships in the organizations that are part of the industry.	Before any training, there is one unique moment in which a contact is established with any training, that is when the training courses must be presented our organization or when our organization presents the training needs to a given training institution.	The branch of our organization based in Namibe, the only time that visited the University for Fisheries and Ocean Sciences founded in 2017, it was visible the needs the students were going through in terms of internet connectivity, the lack books in the library, simulators and other relevant tools that would facilitate the teaching and learning process.
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Table 5 Theme 4: Improving maritime awareness

Theme 4: Improving maritime awareness				
Sub-themes	Stakeholder groups			
	Maritime Administration (A)	METIs (B)	Port Authorities (C)	Shipping Agencies (D)
Local and national programs	Recently, the administration has been using some important dates to talk about the industry on national television.	The university is still building the website and needs to come out from the classroom activities.	Through social responsibilities, the port reaches out to the neighbouring communities for some planned donations.	To our customers, we talk about our services and how and where we limit our awareness.
Marketing and advertisement	Awareness is a responsibility that involves all stakeholders through various activities.	The course advertisement is made at the beginning of every academic year on national television.	We constantly train our workers on marketing matters, but the challenge is maritime training because we understand that combining the two will give a better result.	Job vacancies through the newspaper and international expo that takes place once a year in the country are the most extensive opportunities for the organization to sell itself out.
Seminars, and workshops	Apart from the television minutes, the administration is considering involving the	The youth in their schools and communities should be more involved in seminars,	The other ways our organization capitalizes that may trigger any level of	The organization fills the need o investing more in seminars which with

	stakeholders in seminars and workshops.	and workshops to the surroundings.	awareness is through a longing a new product or concession which is done in forms of workshop.	awareness purposes.
Advantages	The is a need for trained professionals to develop feasible programs.	Our institution needs to be more exposed to exchange scientific and technical experiences with other METIs, whether local or international	The youth of the country need to be trained at their tender age on maritime affairs to make informed decision career choices before they land at ports	Strengthening and disseminating METIs with quality education to train the younger generation for the industry.

Table 6 Theme 5: Strategies to develop the maritime industry

Theme 5: Strategies to develop the maritime industry				
Sub-themes	Stakeholder groups			
	Maritime Administration (A)	METIs (B)	Port Authorities (C)	Shipping Agencies (D)
Policies	Effective implementation of IMO instruments SOLAS 1974, MLC 2006, and STCW/78.	Define adequate national maritime policies for METIs.	Establish clear boundaries between political and operational management of the port, allowing maritime professionals in front of maritime affairs.	Relevant, adequate national laws and policies can benefit the sector in today's business demands.
Capacity building	Creation of educational and training institutes to empower people on maritime matters within the international quality standards.	Investments of all dimensions for continuous capacity building for METIs. This sector requires qualified national professionals.	The port needs to identify apparent gaps that can profitably be filled up by maritime education and training and then train the professionals for those specific needs.	Our organization needs to invest in the clerks' training.
Stakeholders'	Emphasis on the	More collaboration between	The single window system	Through government

collaboration	collaboration between public and private stakeholders operating in the jurisdiction	the government and the academia for policy matters and then with other stakeholders in Angola.	should be looked at closely for its advantages in trade facilitation, simplification, modernization and harmonization of export and import processes.	initiatives, there should be more synergies to enable all the entities' evolvement to develop beneficial strategies for the local industry.
Awareness	It is essential to create awareness because of its contribution to the country's income through each stakeholder's collaboration.	By nurturing more maritime professionals for the industry, our institution is creating awareness in a vocational and academic domain.	A port offers numerous job opportunities that should be put to the youth's awareness as they pursue their studies.	Our organization believes that to develop for its development, the country must be aware of its importance, benefits, and challenges.

Theme 1: National Maritime policies

This theme developed from the interviews examining the adequacy of the existing national maritime policies concerning Maritime Development in Angola. Four subthemes were extracted from this theme: *First, ratification and implementation of International Conventions; second, current maritime policies; third, adequacy, fourth, training.* The first subtheme presents the need to comply with the international maritime conventions that support national maritime policies in different jurisdictions.

Theme 2: Stakeholders' needs for capacity building

This theme involved three subthemes discussing who is and what are the stakeholders' needs for capacity building. The three subthemes are *first, Training needs; second, unavailability of some courses and third, qualified personnel.* The first subtheme gives an overview of the constant and priority needs of the four stakeholder groups.

Theme 3: MET assists maritime development

This theme developed from the interviews examining the respondents' level of agreement or disagreement on whether MET assists maritime development in Angola. Four subthemes were extracted from this theme: *First, existence; second, relevance; third, quality; fourth, collaboration with stakeholders.* The second subtheme points out the purpose of MET, and subtheme three brings the aspect of accepted standards concerning maritime development as perceived by the respondents.

Theme 4: Improving maritime awareness

This theme involved four subthemes discussing the level of maritime awareness in Angola. The four subthemes are: *first, Local and national programs; second, Marketing and advertisement; third, Seminars and workshops and fourth, advantages.* The fourth subtheme relates to how information about the industry can be crucial for its development in Angola.

Theme 5: Strategies to develop the maritime industry

This theme developed from the interviews assessing the possible solutions and strategies to develop the maritime industry in Angola. Four subthemes were extracted from this theme: *First, Policies; second, Capacity building; third, Stakeholders' collaboration; and fourth, Awareness.* The second subtheme was pointed out as an influential element in this research.

4.1.2 Questionnaire Data Analysis

Thirty-four (34) respondents from different maritime stakeholder groups in Angola participated in the survey and completed the questionnaire. The stakeholder groups are 4: One, Maritime Administration which will be referred to as sample (A) with four respondents, representing 12%. Two METIs (B) with four respondents, representing 12%. Three, Port Authorities (C), with 17 respondents, representing 50%. Four, Shipping Agencies (D) with nine respondents, representing 26% respectively.

Table 7 depicts the respondents' demography representing different stakeholder groups in a detailed form.

4.1.3 Quantitative data presentation and analysis

Table 7 Demographic Representation of the Participants

Stakeholder groups		Maritime Administration		METIs		Port Authorities		Shipping Agencies		Total	
		(A)		(B)		(C)		(D)		No	Percent
		No	Percent	No	Percent	No	Percent	No	Percent		
Number of respondents		4	12%	4	12%	17	50%	9	26%	34	100%
Gender	Female	2	50%	0	0%	7	41%	1	11%	10	29%
	Male	2	50%	4	100%	10	59%	8	89%	24	71%
Age	26 - 30	0	0%	1	25%	2	12%	0	0%	3	9%
	31 - 35	1	25%	2	50%	2	12%	1	11%	6	18%
	36 - 40	0	0%	0	0%	5	29%	1	11%	6	18%
	41 - 45	3	75%	1	25%	3	18%	4	44%	11	32%
	46 - 50	0	0%	0	0%	2	12%	1	11%	3	9%
	51 - 55	0	0%	0	0%	2	12%	2	22%	4	12%
	56 - 60	0	0%	0	0%	1	6%	0	0%	1	3%
Level of Education	Diploma	1	25%	0	0%	1	6%	0	0%	2	6%
	Secondary Education	0	0%	0	0%	0	0%	2	22%	2	6%
	Bachelor	1	25%	2	50%	15	88%	7	78%	25	74%
	Master	2	50%	2	50%	1	6%	0	0%	5	15%
Levels of Maritime education	Academic	3	75%	3	75%	2	12%	0	0%	8	24%
	Vocational	0	0%	0	0%	5	29%	4	44%	9	26%
	None	1	25%	1	25%	10	59%	5	56%	17	50%
Rank	Executive Director	0	0%	0	0%	1	6%	0	0%	1	3%
	Manager	1	25%	0	0%	0	0%	3	33%	4	12%
	Middle level Manager	1	25%	1	25%	3	18%	2	22%	7	21%
	Operational l. Manager	0	0%	0	0%	4	24%	0	0%	4	12%
	Ower	0	0%	0	0%	0	0%	1	11%	1	3%
	Teacher	0	0%	1	25%	0	0%	0	0%	1	3%
	Instrutor	0	0%	1	25%	0	0%	0	0%	1	3%
	Estudant	0	0%	1	25%	0	0%	0	0%	1	3%
	Cleark	1	25%	0	0%	9	53%	3	33%	13	38%
	Others	1	25%	0	0%	0	0%	0	0%	1	3%

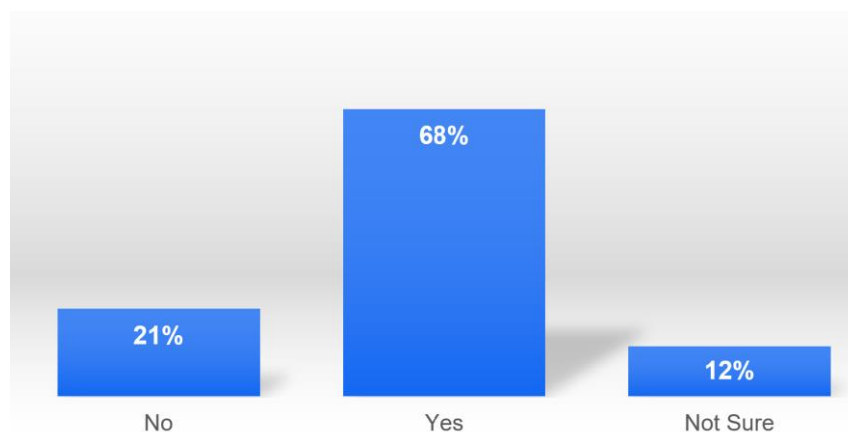
The demography representation of the study starts by showing the female gender, representing 29% of the respondents, out of which 50% are from sample (A) and 41% from the sample (C). The male respondents represent 71%, out of which 100% are from the sample (B), and 11% are from the sample (D). In addition, 50% of the respondents had maritime education and training distributed between academic education with 24% and vocational training with 26%. The academic education among the respondents is distributed with the following percentages: secondary education with 6%, bachelor's degree with 74% and master's degree with 15%.

Interestingly, academic education is highly distributed between sample (A) with 75% and sample (B) with 75%, while vocational training highly distributes between sample (C) with 29% and sample (D) with 44%. The other essential and relevant characteristic shown in the demography of the respondents is that 75% of the sample (A) and 44% of sample (D) are in the age range of 41-45, while the higher percentage for vocational training are distributed between sample (C) with 29% and sample (D) with 44%.

In summary, the distributions presented by the percentual distribution on levels of maritime education concerning age groups appear to appeal to equilibrium among the stakeholder groups for succession and good performance across the ranks, regardless of the core business of each other.

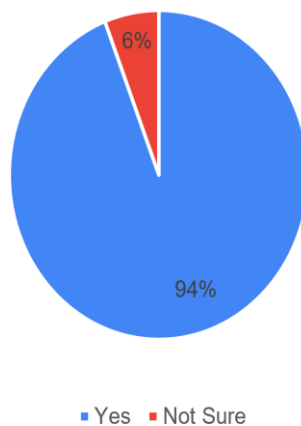
Question 6, assessed the awareness of the availability of maritime career options, and 68% of the respondents distributed have shown to be aware, and only 21% were not aware. The other 12% of the respondents are not sure. A high level of awareness might presuppose a step toward its achievement, Figure 2.

Figure 2 Awareness of maritime career options



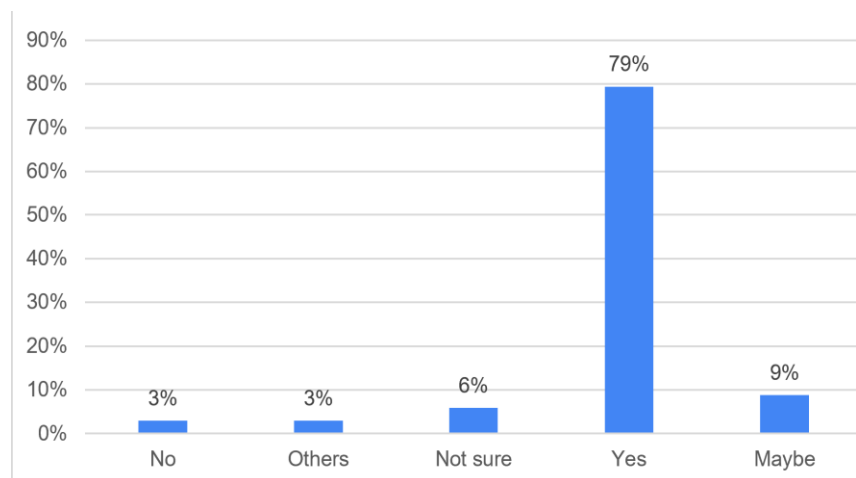
Question 7, evaluated whether the respondents in the stakeholder groups were interested in maritime careers. The survey results show that 94% have an interest regardless of the level of education, age, or rank in which they currently find themselves, Figure 3.

Figure 3 Interest in maritime careers



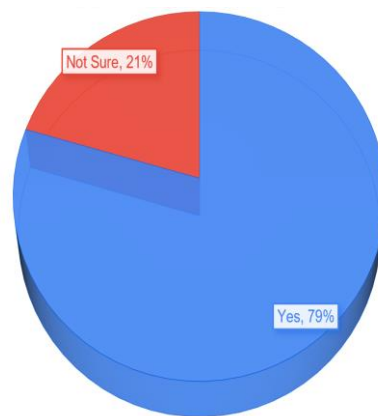
Question 14, assessed whether MET helps secure employment in Angola. The survey results show that 79% of the respondents stated that it does, Figure 4. This percentage may signal an alteration in maritime academic and vocational education and training across the stakeholder groups, as presented in Table 7.

Figure 4 MET help in securing employment



Question 15, evaluated the jobs available in Angola for people who have completed maritime education and training. The survey results show that 79% are aware of the availability, and only 21% said not to be aware, Figure 5. In addition, when asked about the kind of jobs, the respondents stated the following ones: Maritime lawyer, marine engineer, harbor master, junior officers, senior officers (Machines and harbour master), Fisheries Industry, Cargo agent, stevedore, broker, superintendent, inspector, and vessel crew. Logistic terminal operator, pilotage, towing, shipping agent, port administration or a lecture at the university of fisheries and ocean science of Namibe. The respondents' position is highly correlated with the results of question 14, Figure 3—a need for MET to secure their jobs.

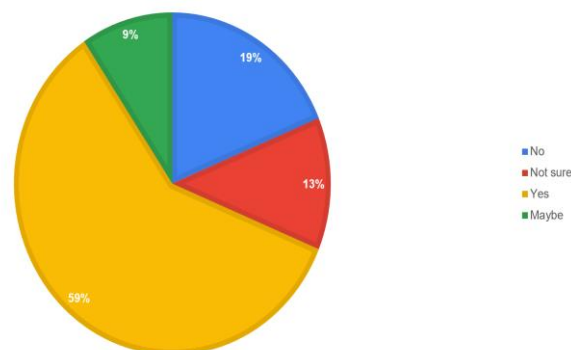
Figure 5 Availability of jobs for people who completed MET



Question 16, assessed the company's needs for capacity building for maritime development in Angola. The surveys result was presented in Table 2, in which four common subthemes, such as *Training needs*, *second unavailability of some courses* and *third qualified personnel*, were generated from the responses given by the stakeholder groups.

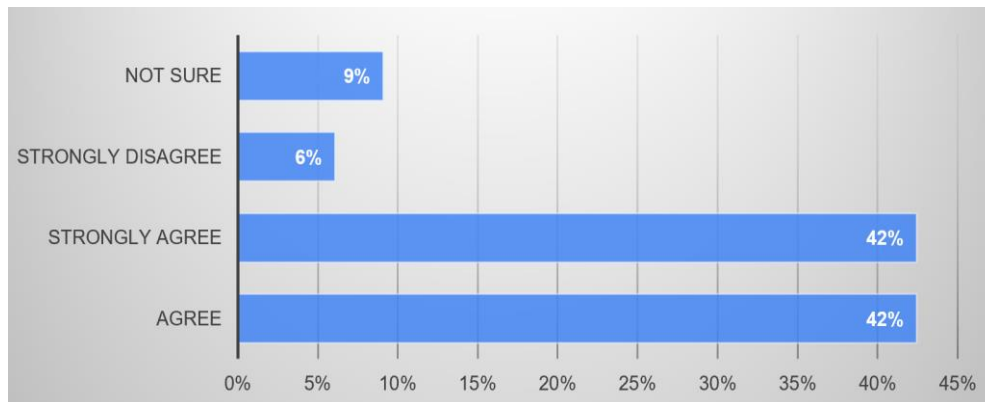
Question 17, evaluated the company's collaboration with METIs. The surveys result has shown that a total of 59% of the respondents are aware that there is a collaboration between their organization and the METIs. However, 19% are unaware, while the other 21% are unsure of collaboration between the two stakeholders, Figure 6. Interestingly when asked about the reasons that would prevent a collaboration, some respondents stated that, First, the lack of training institutions in the country does not allow collaboration in this sense. Second, competences such as pilots and crane operators are critical and require quality training.

Figure 6 Company collaboration with the METIs



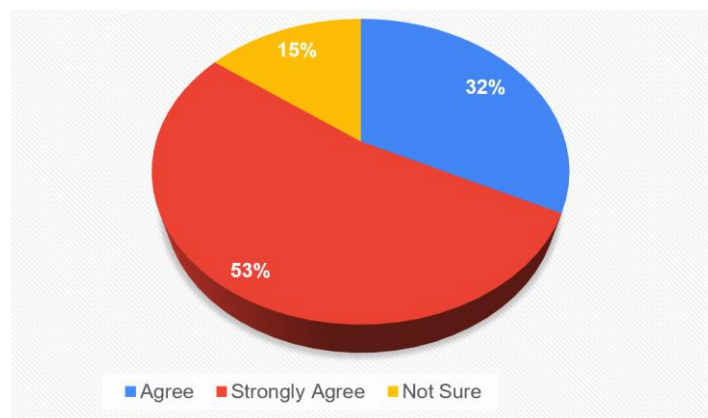
Question 21, assessed the level of agreement and disagreement on MET's positive impact on professional performance. The survey result shows that 42% strongly agreed, and the other 42% agreed that maritime education and training positively impact professional performance; 9% were unsure. The additional 6% strongly disagreed with the statement posed in Figure 7.

Figure 7 MET has a positive impact on maritime professionals' performance



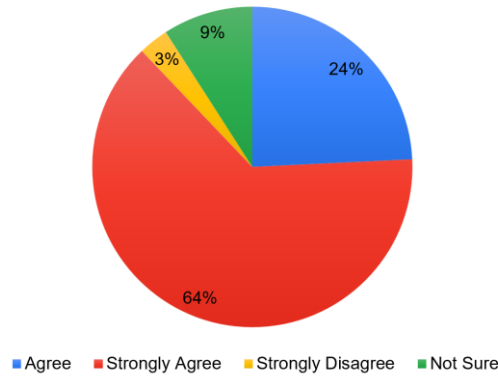
Question 22 assessed whether additional training would positively impact job performance in Angola's maritime industry. According to the respondent's perception, the survey result shows that 53% strongly agreed, 32% agreed, and only 5% were unsure of the impact of additional training on the industry's performance Figure 8.

Figure 8 Additional training would has a positive impact on job performance in Angola's maritime industry



Question 23, assessed the level of agreement or disagreement on whether MET will assist maritime development in Angola. The survey result shows that 64% of the respondents representing the stakeholder groups strongly agreed, and the other 24% agreed. In comparison, the other 3% strongly disagreed, and only 9% did not perceive it that way, Figure 9.

Figure 9 MET will assist maritime development in Angola



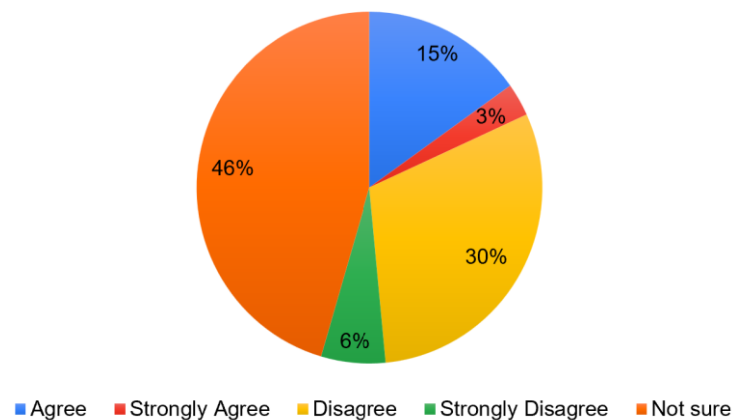
Question 24 evaluated the level of agreement or disagreement. The existing national policies are adequate in supporting Angola's maritime development. The survey results have shown that 13% agree, and 46% strongly agree. However, interestingly 30% of the respondents across the stakeholders' group disagree, 6% strongly disagree, and 3% are not sure, showing a considerable percentage on disagree end, Figure 10.

When asked for suggestions for improvement of the existing national maritime policies in general, some respondents stated that:

- *Angola must ratify the conventions it has not yet ratified and take concrete steps to implement them. First, several actions must be taken by the government and stakeholders, e.g., policy decision, national policy, strategy, and action plan (elaborate, enact, implement legislation, and effect institutional reform), implementation and monitoring and evaluation—the creation of academies in the sector to motivate the interest (Maritime Administration).*
- *Second, build university centres for more outstanding education—implementing an integrated system between all competent bodies in the maritime area (Port Authority)*

- *Third, national policies must be in line with the development perspectives of ports so that the interests of the port can be shaped in favour of the impact it will have on the country and the communities—a more significant investment in education and social sustainability (METIs)*
- *Fourth, create policies to boost the blue economy, which is a factor that will boost the maritime sector (Shipping agencies).*

Figure 10 The existing national policies are adequate in supporting Angola's maritime development.



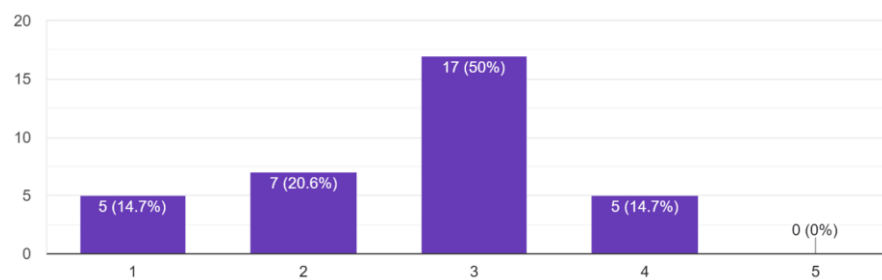
Question 26, assessed the level of maritime awareness in Angola on a scale of 1 to 5, when Poor (1), Fair (2), Good (3), Very good (4) and Exceptional (5). The stakeholder groups surveyed resulted in the following scores and percentages as shown in Figure 11: 1 – 14.7%; 2 – 20.6%; 3 – 50%; 4 – 14.7% only, and no score for 5.

When asked for a suggestion to improve the existing national maritime policies in general, some respondents stated,

- *Build professional training centres in the navigation area for the training of technical staff and, therefore, the further massification of nautical schools in all coastal provinces (Shipping Agencies)*
- *Create a national policy for implementing academies in the Maritime-Port sector—greater dissemination of maritime matters and creation of*

institutions that minister or train in maritime matters. Introduce maritime subjects at the secondary level into the school curriculum. My suggestion to improve knowledge is to strengthen and disseminate maritime education and training to the population (Port Authorities).

Figure 11 Level of maritime awareness



The survey result shows how the respondents from 4 stakeholder groups perceived the adequacy of current national policies in general, who are the stakeholders and, their needs for capacity building and finally, the relevance of maritime education and training in developing the maritime industry in Angola.

Chapter 5. Discussion of Findings

The data gathered was presented and examined in chapter four. This chapter includes an analysis, discussion of the results in connection to the research questions and overall objectives regarding the contribution of maritime education to the growth of the maritime industry.

Research question 1

What are the national policies that inform Angola's maritime development?

According to IMO, the existence of a national maritime policy suggests effective, sustainable, safe, and environmentally responsible governance of the maritime industry, including maritime education and training (IMO, 2019). In the case of Angola, the research determined that:

Angola has ratified three of the four main pillars of the international regulatory regime for quality shipping, SOLAS, STCW, and MARPOL, interestingly leaving out MLC 2006. The data presented and analysed under chapter 4.1.1 and Table 1 shows a level of imbalance between the international requirement and the current national policies, which are lacking some strictness in the implementation of those ratified conventions, as supported by the respondents:

- *The national maritime policies need to be alignment with IMO conventions for national and international purposes. (Maritime Administration)*
- *Greater rigour in the implementation of maritime conventions. (Port Authorities)*

The current national maritime policies were presented as in Table 1, are specific for each stakeholder group reflecting fragmented national maritime policies and at the same time a lack of adequacy in relation to the fast-developing industry due to the national and global demands as revealed by respondents:

- *Decree on port tariffs in force since 2009, needs updating... context of import boom, tariff not attractive today. Also, the statute of the shipping agent needs more clarity regarding the shareholder structure and that it is in line with the private investment law.*
- *There is a need for constant updating on the policies, which should be pro-industry and pro-development and follow current trends, to support Angola's maritime development.*

However, to promote and diversify the maritime economy, as well as optimize the means and adopt security and surveillance mechanisms in the Angola's seas, a multisectoral commission for maritime affairs was created through the Presidential Decree 147/19 of 12 August, presented for discussion, a proposal, and an Action Plan of a National Strategy for the Sea of Angola (ENMA) (Further Africa, 2022).

A common subtheme has pointed out the lack of maritime education and training to develop human resources with the knowledge and skills necessary to develop maritime policies as one of the main reasons for the current state of the existing national policies, as reported by the respondents.

- *The policymakers lack the necessary industry knowledge, depriving them of much influence on the policy (Shipping agencies).*
- *Continuous training of the sector's staff is needed to support policymakers (Maritime Administration)*
- *Elaboration of a national program to promote the (Maritime) capacity of the national maritime human capital (Maritime Administration).*

According to the literature, specifically from the Swedish government, on the relevance of national policies for maritime development,

vision and policy for maritime development are crucial and presume environmentally, economically, and socially sustainable growth and rest on three equal pillars: a balanced marine environment, competitive maritime

industries, and attractive coastal areas. Furthermore, maritime development presumes that conditions should be in place to safeguard the ecosystem services needed for the continued growth of the maritime industry. At the same time, market opportunities shall be utilised, and the development of maritime sectors needs to progress sustainably (Government Offices of Sweden, 2015).

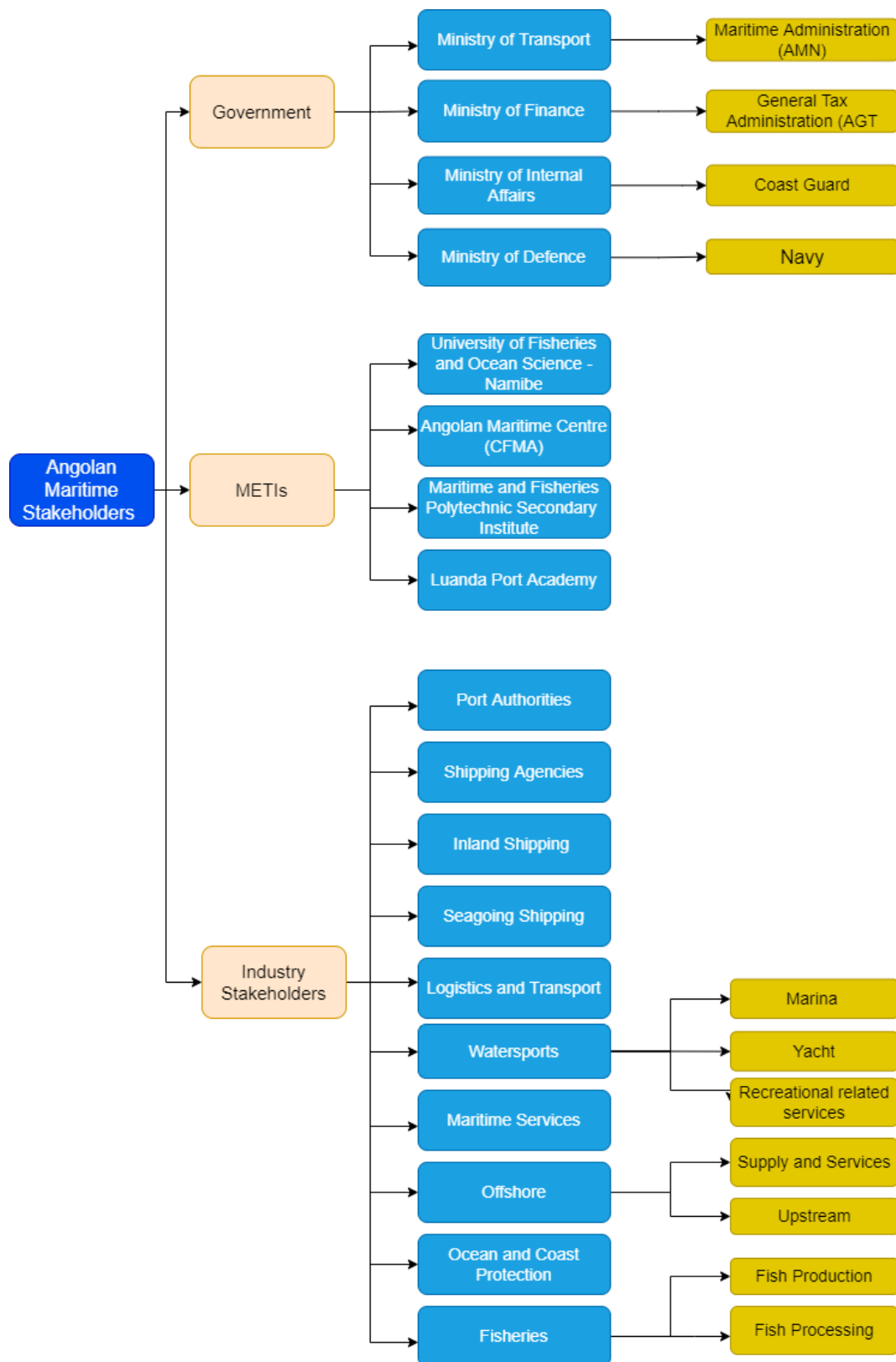
Therefore, the Angolan government's pursuit of maritime development must look ahead and profit from good practices for national policies as proposed by IMO and presented by the Swedish Government and supported by Viederyte (2013). The Swedish government believes that a competitive, innovative, sustainable, and developing maritime industry can present several opportunities and advantages to the country as stated in the literature. These maritime advantages can only be attained through visionary and sustainable maritime development policies, as Podgorica (2012) suggested on the successful EU achievement of maritime development: the liberation of seaports, abolition of national monopolies, the maintenance of safety standards and training and working conditions for maritime personnel.

The respondents, therefore, identified with respect to the national policy that there is a need for closer collaboration between stakeholders and government entities to design adequate national policies because the lack thereof is one of the fundamental obstacles to permitting MET to play its role in maritime development.

Research question 2

Who are the stakeholders in maritime development in Angola, and what are their needs for capacity building?

Figure 12 Angolan maritime stakeholders



The Angolan maritime stakeholders are vast and cover enormous sectors of the industry, from government agencies to private sectors, leisure, navy and education and training, as shown in Figure 12.

According to the literature Mackenzie et al., (2019), maritime development in has been observed to revolve around the involvement of stakeholders. It has been noted that maritime development in Angola can quickly become a reality if the stakeholders' needs for personnel development are considered after a close interaction.

However, it was found that stakeholders are not considered in training needs assessment. Instead, according to interviews, the organizations are presented with a list of that are available at the training institutions and choose from them. This can be considered a challenge to the METIs' role of making the stakeholders part of the teaching and learning process, such as a joint identification of the gaps between the ideal competences and the reality of skills required by the stakeholders. A deep exploration of educational solutions to address these gaps, and lastly outline a vision to advance the future of training for each stakeholder's core business is needed.

Concerning the lack of collaboration on the training needs assessment, respondents have stated the following:

- *That is the only time our organization meets any maritime training institution is when a particular institution comes to present the courses to be offered in the semester or year. (Port Authorities)*
- *Our organization, does not have an agreement with any METI (Shipping agencies)*
- *Unfortunately, our organization has few virtual trainings from our headquarters in France because of the quality of the training so, no contact with any local institution (Shipping agency).*
- *Our institution has no direct collaboration with METI for reasons I do not know (METIs).*

It was also found that the stakeholders believe that qualified professionals will bring desirable results, as expressed in Table 3 and Figures 7 and 8. However, the stakeholders who train their personnel in the existing METIs have raised questions about the quality and relevance of the training solutions offered. The discussions concerned the lack of international certification, curricula, qualified maritime teachers, instructors, lecturers, simulators, infrastructures, and libraries. Therefore, those who can afford to take their personnel to be trained abroad prefer to incur high costs on travelling and accommodation.

It is worth noting that Figure 5 reveals that only 59% have affirmed that stakeholders have some kind collaboration with METIs, which according to the literature, is insufficient for the development of the industry. For instance, researchers such as Oksavik et al. (2020) stated that the collaboration of clusters and stakeholders has a significant impact on people and communities worldwide and is a major driving force for change and, consequently, the development of the industry and, ultimately, the entire society. However, based on the interviewees' perceptions and responses, it leaves an idea of what Coady et al. (2013) called fragmentation and lack of collaboration among industry stakeholders and coordination across international, regional, and national policy levels. Furthermore, this shows a lack of guidelines and procedures from the legal body. Therefore, the fragmentation and lack of national coordination negatively affect the industry's development and its considerable contribution to the GDP of the jurisdiction (Branten & Purju, 2014).

Research question 3

How can maritime education and training assist the development of the maritime industry in Angola?

In this regard, it was found that Angola has only one training centre, one secondary school, and one university with maritime-related courses. Moreover, they do not certify seafarers for the international fleet or any other maritime competence with international standards.

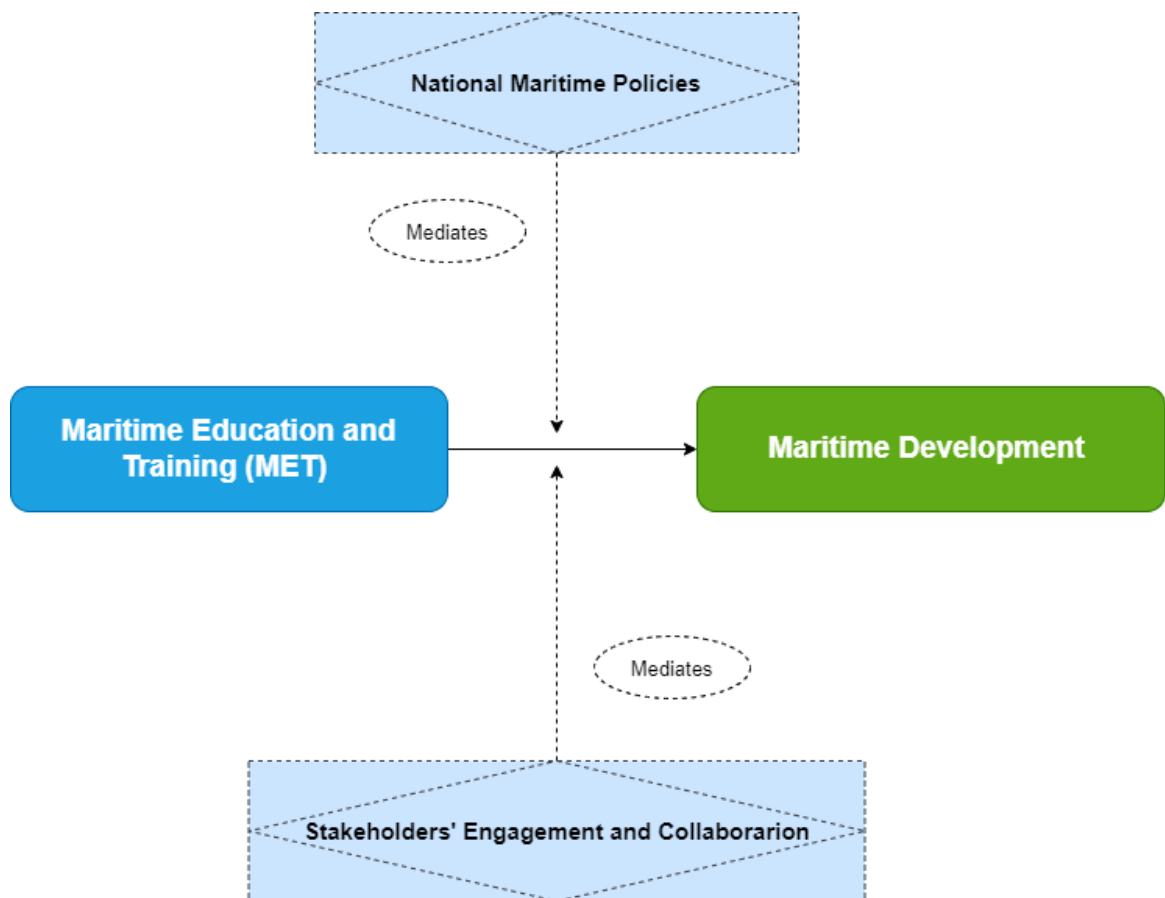
The findings show a high level of agreement among the stakeholders that, that MET plays a critical role in the development of the maritime industry in Angola. However, the stakeholders also shared common concerns related to the relevance, quality, and level of collaboration they currently have with METIs. This raised a call for a turnaround in the value given to maritime education and training in Angola to serve its purpose. According to Grewal & Haugstetter (2007), education and training add value to the individual and the organization. Therefore, the participants appealed to the government and private sector for appropriate dedication and considerable investment in all dimensions, such as human capital (teachers, lecturers, instructors, support staff and managers). In addition, other assets required are financial investment, simulators, libraries, common and consistent curricula across the existing institutions for similar courses, certification for the international fleet, adequate policies, database, quality internet, online platforms and more openness on the purpose as stated by respondents.

- *The policymakers should give the existing METIs in Angola space for the establishment and relevant expression of quality education and training (METIs).*
- *The Angolan METIs' courses should follow training standards according to the STCW/78 convention as amended (Port Authorities),*
- *There is no strategy for the METIs in the Angola (Shipping agencies),*
- *Little or no investment in education and training institutions in the country (Shipping agencies).*

In conclusion, MET has direct impact on maritime development by feasible, visible, relevant, and quality actions that change attitude of the professionals. As the literature states, MET is the promoter of capacity building for maritime development and attracts qualified, long-term, competent professionals to ensure sustainability in a more comprehensive maritime cluster. It also looks after the need to think and create continuous strategies to meet the demands of the industry (Erdogan & Demirel, 2017 and Heirs & Manuel, 2021). However, the findings discussed above reveals that

MET is mediated by national maritime policies and the stakeholders' engagement and collaboration, Figure 13 which is still deficient.

Figure 13 MET supports Maritime Development



5.1 Implications of the findings

Based on the interviews and the questionnaires, the study found that there is a notion that MET has a significant role to play in maritime development in Angola. However, multiple challenges and obstacles were observed and pointed out by the participants across the organization's relation to the three research questions.

For instance, under question 1, the findings presented that there were no adequate national policies that can assist maritime development today. It was also found that the absence of a close collaboration with the stakeholders, maritime awareness within the Angolan population and maritime education and training was attributed to a lack of national maritime policies in general for MET. In addition, it was found that there is a need to implement IMO conventions to be aligned with international regulations. Angola is a sovereign country. However, a member of the IMO maritime industry and shipping global spectrum governed by international pillars such as SOLAS-1974, STCW-1978, MARPOL-1978, and MLC-2006. IMO has been a significant factor in formulating policy and procedures for the global maritime industry since 1948. Therefore, adopting and implementing the ratified conventions is required to facilitate and be part of international trade. National policies would include the role of stakeholders, strategies to create awareness, the role of quality maritime education and training considered as the provisions that help promote safety in the industry and at sea, and the protection of the marine environment under STCW-78 as amended. Therefore, it was found that with adequate national policies, the stakeholders and the local population will benefit significantly from the maritime industry because of the opportunities it creates for all interested parties.

Under question 2, the existing stakeholders and their needs were identified. It was also found that the stakeholders are willing to partake in the industry's life, from policy making to implementation, based on their experiences from different jurisdictions. They would like to share and support the industry to develop in Angola. It was also found that stakeholders would like to see improvements in services provided by METIs in Angola to meet the real needs within the international requirement.

Under question 3, it was found that through general knowledge, participants were aware of the benefits of MET for maritime development in Angola. However, it was also found that more than half of the participants worked in maritime-related

organizations and managerial and leadership positions with short courses or without any maritime education and training before.

The findings presented bring to light several challenges ranging from qualified personnel within the METIs to the appropriateness curricula, as well as adequacy and efficiency of the training provided. It was also found that the existing METIs need to be more open to the stakeholders and learn from their ideas and suggestions. Therefore, it was found that the MET playing its ideal role will benefit the policymakers, the government agencies, and the stakeholders.

In conclusion, when the national policies are adequately framed with the active participation of the stakeholders, academics, and technicians, the possibilities of implementation, evaluation, and improvement whenever the need arises are higher. Furthermore, the industry's need for capacity building will be efficiently attended to by qualified personnel in adequate infrastructures, with the necessary simulators and other teaching aids, allowing maritime education and training to assist maritime development in Angola.

5.2 Recommendations

Based on the findings, the study recommends the industry should prioritize the national policies which should guide the collaboration between stakeholders, abolition of national monopolies, the maintenance of safety standards and training and working conditions for maritime personnel. Then, the study recommends each cluster on the following.

Maritime Administration

Being the government body and acting as the industry's regulator, it should constantly update the national policies following the industry's trends. Should identify barriers and ensure the implementation of the IMO conventions. Should be the leading actor in bringing all the stakeholders together. Should create solid

strategies to awareness of the industry across the country. Furthermore, it should be the leading actor in ensuring maritime development through quality maritime education and training of maritime personnel. Therefore, the study recommends that the government with adequate national policies focused on maritime development should promote METIs by looking for funds and partnerships and setting up adequate METIs with qualified management and personnel in Angola to attain desired goals. Lastly, it recommends regular inspections of the stakeholders' and METIs' compliance with the national regulation and IMO conventions. In addition, it should ensure that the curriculum offered in all METIs in the country is the same and comply with STCW-78 requirements.

Furthermore, profit from the available IMO Training programme for capacity-building activities that assist developing countries in formulating and enhancing their NMTPs. The program is a collaboration between the Secretariat and World Maritime University (WMU). It covers policy rationale, formulation of maritime transport policy, international maritime instruments, and the economic, safety, security, human element, and environmental dimension of maritime transport policy formulation (IMO, 2019).

METIs

For capacity building focusing on maritime development in the 21st century, METIs should implement IMO's conventions, specifically STCW-78, as amended conventions, and IMO Model Courses available. In addition, it should work closely with the maritime administration and all the stakeholders. The curriculum must be designed with and according to stakeholders' needs. The study recommends that METIs should build in their students' minds a desire for change and lifelong learning mentality and invest in qualified instructors with academic and vocational experiences (French, 2013). It recommends establishing a solid partnership with

HTW and other METIs globally through the maritime administration. Focusing on current maritime demands, it recommends significant investment in modern technology tools to train offshore and onshore maritime labour force, with massive use of simulators.

The METIs should invest in firm management and leadership to effectively monitor program execution and quality control systems. Lastly, for an early and solid understanding of the maritime culture, awareness and continuity, the study recommends MET at all levels of education in the country.

Shipping agencies, forwarders, and port authorities

The study recommends solid collaboration with the maritime administration for legal actions, and with the METIs for training needs assessment, curriculum design, and development. Lastly, promoting organizational learning through knowledge acquisition, sharing and application fosters personal and organisational development. In addition, the study recommends investing in local METIs for context, language, and cost purposes.

5.3 Suggestions for further studies

Given the limitations, such as time, online surveys and interviews, number of stakeholders involved, number of respondents. The author highly urges that future studies should reconsider this topic but with more time, higher number of stakeholders and participants, more distribution on percentage from different stakeholders.

Considering the findings on the issue of quality of the METIs in Angola, future studies should examine the quality of graduates from the Angolan METIs and come up with recommendations for improvement.

5.4 Conclusion

The literature and this study's findings have shown a correlation between maritime education and training and maritime development. According to Malek & Mokhtar (2015), the maritime sector is a unique industry that supports and stimulates the growth of all other national development areas. Considering the 21-century demand in the maritime industry that has propelled the business forward, maritime education and training is a specific but essential component to supply the related offshore and onshore industries with skilled and competent human capital. The findings show that competencies are needed to cover the Angolan maritime sector, specifically maritime policymaking, awareness creation, seaport management, expansion and development, cargo handling and delivery, etc. However, this industry cannot be sustained by MET if the role of different government entities in making national policies, international agencies such as IMO and stakeholders are not considered or not willing to cooperate for better business awareness and development. Therefore, although the maritime industry is regulated internationally, and Angola is a sovereign state, there is a need for clear, attractive, and objectively defined maritime national policies.

Consequently, it will improve and develop the industry and move forward within the national and international standards, which is a step forward in attracting investors to the Angolan maritime sector. Furthermore, for MET to continuously provide competent and skilled personnel and critical thinkers, there must be a collaboration with and support from all the industry players, such as the government through national maritime policies, international associations, and stakeholders, Figure 13. As a result, MET, as a backbone of the maritime industry, will assist maritime development in Angola.

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Appendices 1 The consent letter



Dear Participant,

Thank you for agreeing to participate in this research survey, which is carried out in connection with a Dissertation which will be written by the interviewer, in partial fulfilment of the requirements for the degree of Master of Science in Maritime at the World Maritime University in Malmo, Sweden.

The topic of the Dissertation is **The Role of Maritime Education and Training for Maritime Development in Angola**

The information provided by you in this interview will be used for research purposes and the results will form part of a dissertation, which will later be published online in WMU's digital repository (maritime commons) subject to final approval of the University and made available to the public. Your personal information will not be published. You may withdraw from the research at any time, and your personal data will be immediately deleted.

Anonymised research data will be archived on a secure virtual drive linked to a World Maritime University email address. All the data will be deleted as soon as the degree is awarded.

Your participation in the interview is highly appreciated.

Student's name	Domingos Albano Jones
Specialization	Maritime Education and Training (MET)
Email address	w2005192@wmu.se

* * *

I consent to my personal data, as outlined above, being used for this study. I understand that all personal data relating to participants is held and processed in the strictest confidence, and will be deleted at the end of the researcher's enrolment.

Name:
Signature:
Date:

Appendix 2 Questionnaire

Questionnaire

The Role of Maritime Education and Training for Maritime Development in Angola

1. What is your gender?

Mark only one.

- ☐ Male
☐ Female
☐ Other

2. What is your age?

3. What is the name of your current company/educational institution?

4. What level of education do you have?

Mark only one

- ☐ Secondary
☐ Diploma
☐ Bachelor
☐ Masters
☐ Doctorate
☐ Other:

5. What position do you hold in your organization?

Mark only one

- ☐ CEO
☐ Director
☐ Manager
☐ Supervisor
☐ Support
☐ Clerical
☐ Temporary
☐ Other: _____

6. Are you aware of the maritime career options available?

Make only one.

- ☐ Yes
☐ No

7. Do you have an interest in maritime careers?

Mark only one.

- ☐ Yes
☐ No

8. Are there any institutions in the country that offer maritime education and training?

Mark only one.

- ☐ Yes
☐ No *Next question 12*
☐ Do not know *Next question 12*

9. How many institutions in the country do you know of that offer maritime education and training?

10. Which levels of maritime education and training are offered? (*Select all that apply*)

- ☐ Short courses
☐ Secondary Level
☐ Diploma Level
☐ Bachelors Level
☐ Masters Level

11. What is the nature of the training and the subjects offered?

12. Have you had maritime education and training?

Mark only one.

- ☐ Yes *Next question 13*
☐ No *Next question 16*

13. At which levels have you had maritime education or training?

- ☐ Secondary Level
☐ Diploma Level
☐ Bachelor Level
☐ Masters Level
☐ PhD Level
☐ Management Level
☐ Operational Level
☐ Support Level
☐ Other: _____

14. Does maritime education and training help in securing employment?

Mark only one.

- ☐ Yes
☐ No
☐ Maybe
☐ Not sure

15. Are there jobs available in Angola for people who have completed maritime education and training?

Mark only one.

☐ Yes. Please describe the jobs available: _____

☐ No

☐ Maybe

☐ Not sure

16. What are your company's needs for capacity building for maritime development in Angola?

17. Does your company currently collaborate with the MET institutions?

18. What factors in your opinion could prevent a close collaboration between maritime education and training institutions with stakeholders?

19. What factors would prevent maritime education and training from playing a role in maritime development in Angola?

20. What are some of the possible solutions and strategies to develop the maritime industry in Angola?

Kindly indicate your level of agreement with each statement (Mark one answer only)

21. Maritime Education and Training in Angola has a positive impact on maritime professionals' performance.

Strongly disagree Disagree Not Sure Agree Strongly Agree
☐ ☐ ☐ ☐ ☐

22. Additional training would have a positive impact on job performance in the maritime industry in Angola.

Strongly disagree Disagree Not Sure Agree Strongly Agree
☐ ☐ ☐ ☐ ☐

23. Maritime Education and Training will assist maritime development in Angola.

Strongly disagree Disagree Not Sure Agree Strongly Agree
☐ ☐ ☐ ☐ ☐

24. The existing national policies are adequate in supporting Angola's maritime development.

Strongly disagree Disagree Not Sure Agree Strongly Agree
☐ ☐ ☐ ☐ ☐

25. Kindly tell us of any suggestions you may have about improving the national policies to better support Angola's maritime development.

26. How would you rate the level of maritime awareness in Angola?

1 is the lowest 5 is the highest

1 2 3 4 5
Lowest ☐ ☐ ☐ ☐ ☐ Highest

27. If you selected 1, 2 or 3, could you kindly indicate any suggestions you may have for improving awareness?

P. 28. Please let us know any suggestions you may have on improving national policies to better support Angola's maritime development.

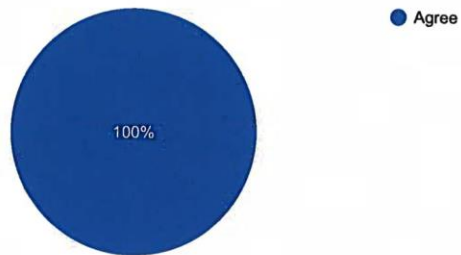
Q. 29. What are the challenges that maritime education and training has to play its role in the development of the maritime industry in Angola?

P. 30. What are the maritime industry opportunities that maritime education and training would help to realize.



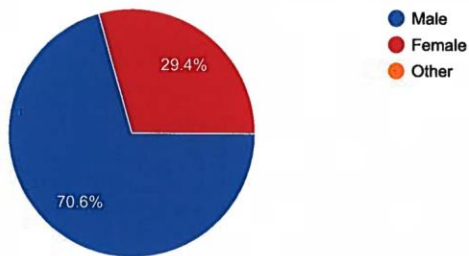
Questionnaire
34 responses
[Publish analytics](#)
Consent34 responses

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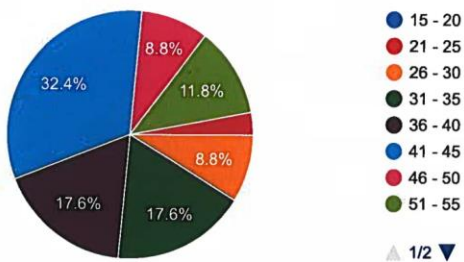
P.1. What's your type? 34 responses

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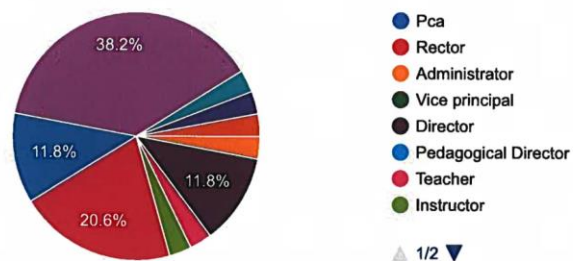
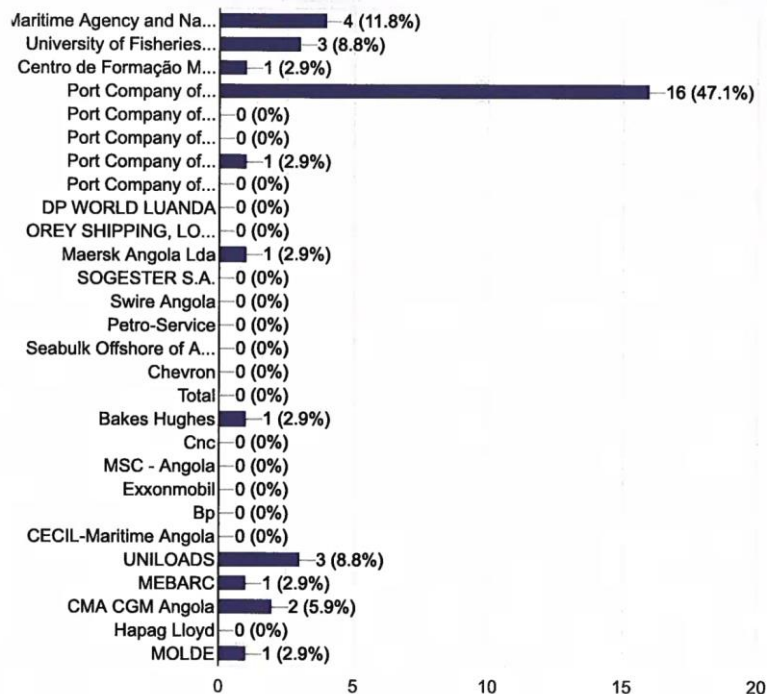
P. 2. Age? 34 responses

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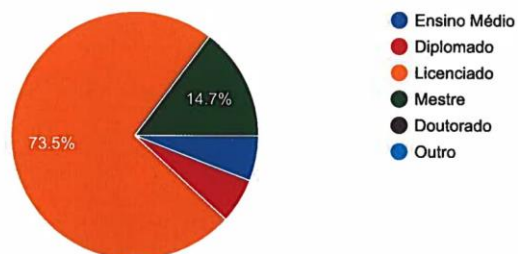
P.3. What's the name of your institute? 34 responses

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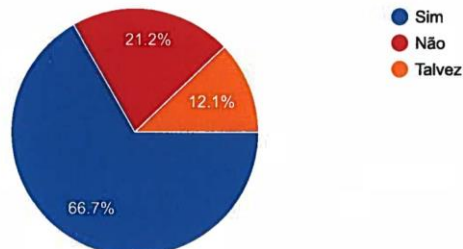
P. 5. Education level? 34 responses

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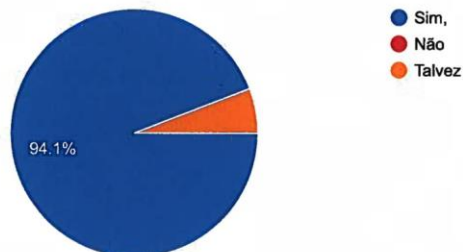
P. 6. Conheces as opções de carreira marítima disponíveis?33 responses

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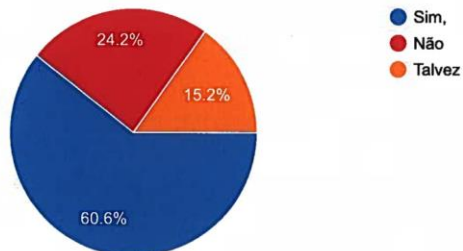
P. 7. Tens interesse em carreiras marítimas?34 responses

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P. 8. Existem instituições no país que oferecem educação e formação marítima?33 responses

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P. 9. Caso a sua resposta a pergunta 8, tenha sido sim, quantas e quais instituições conhece que ministram educação e formação marítima em Angola?22 responses

Faculdade de Ciências das Pescas/UNINBE, Centro de Formação Marítimas Cuanza Sul

2 instituições: Academia Marítima, Industrial e Tecnologias (OMITC) E Instituto Portuário Marítimo KDC

Não conheço

Nenhuma

ACITE

instituto superior de gestão portuária

Instituto do mar namibe

Instituto Politécnico Marítimo e Pesqueiro

Universidade de Pescas do Namibe e Instituto Helder Neto

Existem 6 instituições, sendo três do ensino médio, uma de ensino superior e dois centros de formação marítima em pleno funcionamento.

3 Helder Neto, UNINBE e CFMA

6. UNINBE, CFMA, NOMEAR, CEFOPECA, KLEMAC, HELDER NETO

2

4 UNINBE, HELDER NETO, CFMA CEFOPECA

Helder Neto, Universidade do Namibe, CEFOPECA

4: UNINBE, CFMA, Helder Neto, Cefopesca

3 APL, IMPA, IMPKDC

CFMA-- Centro de Formação Marítima de Angola., CFMS --Centro de Formação Marítima do Sumbe, Klemac Maritime Center, APL- -- Academia Portuária de Luanda.

IMPA, APL, IMPKDC e CFMA.

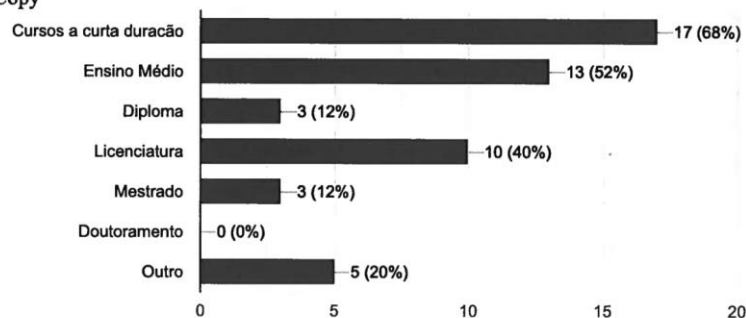
Porto de Luanda, Ministério dos Transportes, Agentes de Navegação e Terminais Portuários

Academia Portuária de Luanda e Academia do mar do Namibe

UNINBE

P. 10. Quais são os níveis? (Sinalize todos os círculos em que se aplica). 25 responses

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P. 11. Qual é a natureza e as disciplinas que ministram? 19 responses

Todas vocacionadas ao sector marítimo

cursos profissionais

Nada consta

Estratégias e Segurança Marítima

desconheço

Várias

Estabilidade de navio, navegação marítima, gestão de navio, higiene e segurança no trabalho, direito marítimo, economia dos transportes marítimos, transporte marítimo, telecomunicação marítima, lições de marinharia, salvamento marítimo, Regras internacionais para evitar abalroamento no mar, tecnologia de pescas, construção de máquinas, casas de máquinas, manobras, meteorologia e oceanografia, proteção do meio ambiente. OBS: apenas fiz menção das disciplinas ligadas a minha área de formação (navegação Marítima).

Maritime related courses

1. Cursos básicos de sobrevivência no mar 2. Cursos de maquinista 3. Cursos de navegação Marítima 4.

Cursos de Engenharia Naval

Formação profissional

Portuárias, marítimas

Navegação e máquinas marítimas

Curso de modelo IMO (IMO Model Course).

As disciplinas estão voltadas para o sector marítimo portuário: gestão marítima portuária, manuseamento de cargas perigosas, finanças portuárias e técnicas de importação

Gestão de Stocks e Logística. Técnicas de Exportação e Importação. Gestão Portuária - Regulamento de

Tarifas, Taxação e Exploração. Manuseamento de Cargas/ Poluentes de acordo ao Código.

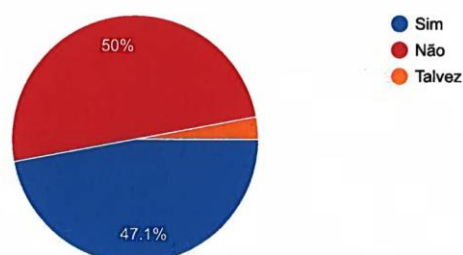
Gestão de transporte marítimo

Não sei, a resposta do número 10 é caso revíssemos instituições de formação
No meu entender são todas associadas ao universo marinho e marítimo, pois que ela abarca, um leque variado de matéria com questões económicas, sociais, engenharias (ambiental, naval, navegação, pesca etc.

Gestão portuária

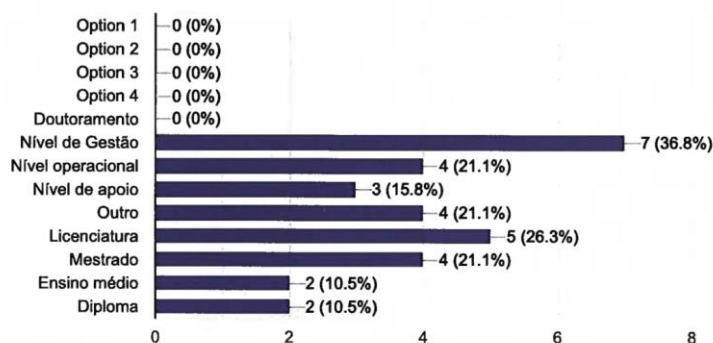
P. 12. Teve educação e formação marítima? 34 respostas

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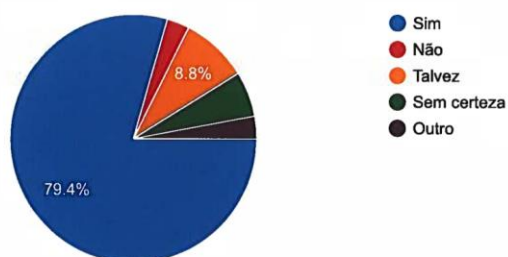
Levels of maritime education or training had. 19 responses

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P. 14. A educação e a formação marítima ajudam a garantir o emprego em Angola? 34 respostas

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- Poderia comentar a sua resposta sobre a pergunta 14. 31 respostas

Sim, pelo menos no Instituto onde me formei, isso ex Complexo escolar marítimo Helder Neto/Namibe, todos os anos várias empresas ligadas ao ramo petrolífero, vinham fazer recrutamento de estudantes finalistas

para integrarem aos quadros das mesmas, como por exemplo: SONASURF, SONASHIPPING, SURFMARINE, entre outras.

ajuda na economia do País

Tive uma formação já como trabalhador da Empresa Portuária de Luanda-E P, em Gestão Estratégica Portuária pela APEC em Antwerp

Por não termos escolas vocacionadas para o efeito, é muito provável que tenha sim

Não posso comentar porque nunca tive

Talvez sim desde que haja instituição vocacionada para o efeito

O conhecimento é aplicado a prática

Pelo facto do País ter acesso marítimo e que maior parte da mercadoria entra por este modal, logo as possibilidades de emprego são maiores.

sim, porque o mundo marítimo é vasto e tem muito emprego para oferecer

A formação marítima não pode ficar indiferente a estes esforços gigantesco do governo porque é neles que se barometrizam o crescimento.

Ajuda a preencher lacunas técnicas para a área marítima e portuária.

infelizmente é uma área que não se dê muita atenção

Porque sem um nível de instrução não há um desempenho favorável nas instituições.

Existe uma grande procura de especialistas formados em ciências náuticas e mecânica naval por parte das empresas que operam dentro do território angolano, infelizmente ainda há um défice de profissionais formados nestas áreas do saber.

It provides a good foundation especially in the Maritime sector

Formação em navegação Marítima Navegador durante 12 anos

Angola é um país com uma vasta costa marítima e que os seus portos são de grande estratégia para conexão com os países vizinhos.

Mediante oportunidade

Angola é um país banhado pelo oceano atlântico e em função disso possui 6 portos. Ter uma formação na área marítima constitui uma mais valia na empregabilidade em Angola.

Muitas empresas marítimas operam na Costa de Angola e estariam abertas a receber os angolanos

Angola precisa dos bons profissionais formados em ciências náuticas

Com o objetivo de cumprir atividades terra (onshore) relacionadas ao setor indústria marítima (marítimo-portuário). Diversas atividades terra (onshore) associadas ao Sea Cluster requerem habilidades únicas desenvolvidas pela experiência da formação marítima.

porque com o avanço tecnológico e não só, tem um grande impacto no desenvolvimento do país.

Uma educação de qualidade com Certificação Internacional daria oportunidades, não só em terra, como Offshore.

A Educação e a formação marítima ajudam a garantir o emprego em Angola, porque o nosso país possui uma extensão marítima muito vasta e rica, sendo explorado no ramo petrolífero bem como na recolha de outros recursos marítimos.

Pelo facto de não termos muitos quadros formados na área.

A Educação e Formação Marítima ajuda sim nas diversas áreas Marítima e não só

Sim isso depende muito, pelo que o sector infelizmente está inserido com pessoas não especialista, e não sabemos qual importância poderá dar o mercado de emprego a um especialista

As pessoas podem trabalhar na capitania.

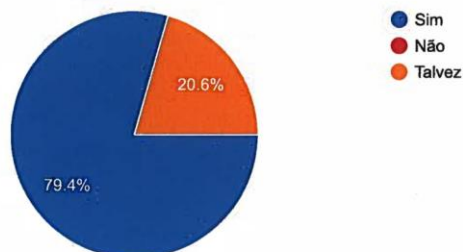
Trabalho no ramo marítimo há 30 anos, portanto tive oportunidade de beneficiar de várias formações 'on job' tanto no país como no exterior bem sendo o destaque a formação na University of Stellenbosch Business School- Executive Education

Existem possibilidades para o emprego nesta área, na medida em que são poucos os quadros formados nesta área.

P. 15. Existem empregos em Angola para pessoas que concluíram a educação e formação marítima?34

responses

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stentes em

Logística Portuária, Inspeção Marítima

Porto de Luanda, IMPA, MGA, Etc....

O negócio marítimo é vasto e o País tem diversas áreas como: offshore, Portos, empresas ligadas ao negócio, Agência de navegação, armadores, estivadores, despachantes....

Agências e instituto marítimo portuário

Técnico Portuário

as de serviços disponíveis nas empresas portuárias e no instituto superior de logística em Luanda

No sector marítimo, sector portuário e na cadeia logística.

Emprego para oficial de pilotagem ou engenheiro de máquinas, AB, Busun, Ab engineer, etc.

Various jobs in port and shipping companies

Posições de apoio, Oficiais seniores (Mquinas e captania) Oficiais juniores

Gestão ambiental Logística Portuária

Jurista, engenheiro naval, mergulhadores, harbour master

Operador logístico, de terminal, pilotagem, reboque, agente de navegação, administração portuária, etc.

Marinheiros, técnicos nas diversas empresas do Sector marítimo e portuário

Industria Pescas, Agente de carga, stevedore, broker, superintendente, inspetor e tripulantes de embarção.

-- Serviços de Pilotagem. -- Gestão de Stocks.-- Operações Portuárias. -- Planner. -- Gestão de Resíduos.

Alguns empregos são: Capitão imediato, Mestre de cabotagem, Chefe de máquinas, Condutor de máquinas,

Marinheiro, Bioquímico, Bombeador de convéns, Mergulhador, Operadores de grua, Biólogo marinho, etc.

O nosso sector portuária carece de especialistas se sector, as agências marítima e assimilar.

os Empregos Disponíveis para este ramo, são nas area de Agentes de Navegação, Portuário, Ministério dos Transporte e Captania

Professor de Ensino superior na Academia do Mar no Namibe

Capitania, sécil Marítima

Angola é uma pais como forte dependencia do Sector marítimo, com determinante influencia na economia, portanto a presenca Portuaria, na costa maritima, atrai nao so portuarios, como aduaneiros, outro operadores indirectos.

AMN, Porto de Luanda, Capitania, agências de navegação, são estas às possíveis oportunidades de emprego que se pode encontrar

P. 16. Quais são as necessidades de capacitação da sua empresa que contribuem para o desenvolvimento marítimo em Angola? 27 responses

Ha toda uma necessidade de se capacitar o pessoal, para que estejam a altura de atender todas as recomendações impostas pela IMO.

INSPECTORES

Planeamento de Navios, Gestão Estratégica Portuária, Logística Portuária, Direito Marítimo...

Grandes necessidades

Para contribuir no desenvolvimento de Angola

A aposta na reestruturação das infraestruturas portuários

Aplicação do código ISPS

capacitação do técnico com área de atuação diária.

Todas, o mercado é vasto para a exploração.

Um país sem mar nem porto dificilmente poderá ao nível de comércio externo protagonizar um influência dominante na região em que se encontra. Razão pela qual a necessidade de capacitar os RH em sempre muito importante.

as necessides são as formações, através de bolsas que vai concedendo aos colaboradores para potenciar o capital humano.

A EPL-EP é uma empresa estratégica no país cerca de 80 por cento de bens e consumos passam pelo Porto de Luanda.

Continuous training to upgrade skills and when there is a change in systems within the company

Muitas. Em todas as áreas técnicas particularmente

Segurança marítima

Formação em STCW, gestão portuária, engenheiros navais , inspeção marítima, direito marítimo

Formação no ramo marítimo

Formação em gestão e Operações portuárias, legislação e convenções marítimas.

Formação marítima

Mais quadros formados e competentes para transmitir conhecimento sobre as questões marítimas aos demais

As infra-estruturas, os recursos financeiros e humanos, bem como os quadros jurídicos adequados, devem ser melhorados para reforçar o investimento na formação marítima a nível nacional.

Gestão marítima, portuária, línguas, TIC'S, marketing e vendas.

Formação de Gestão Portuária. -- Gestão de Sftware Moderno. --Implementação e Modernização de Equipamentos de Elevação.

As necessidades de capacitação da minha empresa que contribuem para o desenvolvimento marítimo em Angola são: Conferencia de mercadorias, Operadores de tagmaster e Reastecker, Identificação e Avaliação dos Aspectos Ambientais, Código ISPS, Mapeamento dos riscos Ambientais, e outros.

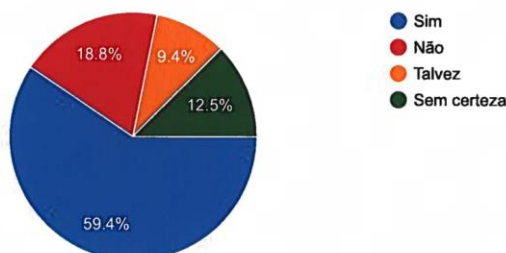
As necessidades são várias, como agência é praticamente estrangeira então, as formações são internas.

Nenhuma

Ajuda grandemente na capacitação através de formações integrativas no seio da companhia

P. 17. A sua empresa colabora com as instituições de ensino e formação marítima? 32 responses

Copy



- Poderia comentar a sua resposta sobre a pergunta 17.27 responses

Nós enquanto instituição vocacionada a formação de marítimos não temos outra saída, se não cooperarmos com as demais instituições cujo o seu foco seja este.

APOSTA NA FORMAÇÃO CONTÍNUA DOS COLABORADORES

Temos uma parceria com a APEC para formar os colaboradores em matérias ligadas a gestão Portuária no seu todo.

Não tenho esta informação

Não conheço

Instituto Marítimo Portuário de Angola

Penso que tem apoiado no instituto de gestao portuaria

O porto de Luanda converteu se no verdadeiro barómetro da economia do país. E é por ser uma plataforma logística onde comércio e indústria e a instituicoes do ensino aparecem casados

a minha empresa tem acordos nas áreas de formação com algumas instruções na Europa e não só.

O envio de trabalhadores bolseiros na vossa instituição de ensino é um exemplo.

They offer competence based courses which help upgrade employee skills thus enhancing their contribution to the sector

As posições marítimas nas embarcações a operar em Angola, são ocupadas em mais de 90% por tripulação expatriados.

A empresa colabora com instituições marítimas para capacitar os seus funcionários sobre segurança marítima.

Academia do Namibe

Proporcionando educação, formações ligadas a área e trocas de experiências.

A falta de instituições de formação no país não permitem a colaboração neste sentido.
 Sendo do ramo marítimo e para fins de uma colaboração para melhor estruturar os programas formativos temos de ouvir os stakeholders que depois vão receber os alunos que formamos
 Acordo de cooperação com a escola Hélder Neto (Estágio a bordo das embarcações da Capitania do Porto do Namibe aos finalistas do ensino médio)
 Colaborações com outras instituições para troca de experiências de formação e procura de outras experiências relacionadas com a formação marítima não só a nível nacional, mas também a nível regional e global devido à natureza global da indústria marítima.
 Por meio das formações para os seus colaboradores
 Colabora na troca de experiências de formação do ramo, bem como a Regulamentação.
 Não porque a Unicargas não tem conveio com nenhuma Instituição de Educação ou Formação profissional. Anualmente fizemos uma formação de capacitação, o que me dá a entender que existe alguma colaboração.
 Infelizmente apenas temos algumas formações virtuais da nossa sede de França
 Como não sei se o país tem formação na área marítima, não tenho outra resposta
 Há profissionais como pilotos, operadores de Grua cujo exercício exige formação técnica adequada e de qualidade.
 Não existe uma relação directa com as instituições de ensino, por motivos que não tenho domínio, mas tem contribuído bastante na formação de profissionais competentes através da visão prática do trabalho diário.
 Porque não é o core business da nossa empresa formação como tal.
 P. 18. Que fatores na sua opinião poderiam impedir uma estreita colaboração entre as instituições de ensino e formação marítima com as partes interessadas? 29 respostas
 O fator comunicação e os respectivos acordos de cooperação entre as partes.
FINANCEIRO
 Falta de Comprometimento, Falta de Aplicação dos Termos Acordados...
 Falta de oportunidade
 Factores não existem desde que haja Centros ou escola para o efeito
 Acredito que não existe impedimento, desde que seja instituição capacitada ao domínio Marítimo.
 outros interesses.
 Nenhum
 Formações em especialidades e interesse demonstrado ao negócio marítimo quando não se cumprem os protocolos ora rubricados
 Maior desenvolvimento da indústria marítima.
 O custo das formações
 A falta de políticas efectivas que visam a promover a colaboração entre as instituições intervenientes no processo de formação de marítimo, deve existir uma forte interação entre as instituições de ensino, a Agência marítima nacional e as empresas.
 Lack of awareness of the training courses offered ; Lack of frequent organized stakeholder engagement meetings
 Cumprimento dos padrões internacionais
 Barreiras linguísticas
 Certificação
 A fraca formação em questões marítimo portuárias.
 Reconhecimento dos programas a nível Internacional
 Falta de gestão participativa e inclusiva entre as instituições afins
 Há uma falta de conhecimento geral sobre a indústria marítima e há apenas um orçamento limitado para este assunto, então eleve o nível de gestão para garantir que haverá mais colaborações nesta questão.
 A falta de cumprimento com os objectivos traçados, incumprimento de prazos, pessoas proativas.
 Falta de Capital Financeiro. -- Falta de Capital Humano.
 Na minha opinião os factores que poderiam impedir uma estreita colaboração entre as instituições de ensino e formação marítima com as partes interessadas, são factores económicos e organizacionais.
 Falta de especialistas na área, País precisa ter mais interesse e investir no sector.
 Na Minha opinião nada impedia se haver a devida cooperação
 Falta de divulgação da importância de ter um especialista no sector Marítimo
 Pouca divulgação junto da Comunidade marítima, Falta acordos de parcerias.
 Julgamos nos o sistema burocrático para o acesso ao ensino nesta área penso ser um dos factores.
 P. 19. Que factores impediriam a educação e formação marítima de desempenhar um papel no desenvolvimento marítimo em Angola? 29 respostas

A entrada imediata na white list da IMO, caso contrário, pode-se até formar marítimos, mas apenas para a cabotagem.

FALTA DE QUADROS FORMADOS NA ÁREA

Falta de Instituições que ministram estes conhecimentos

Falta de oportunidade

A falta de Centros de Formação para o efeito

Falta de técnicos qualificados.

falta de vontade em chegar ao patamar do desenvolvimento.

Nenhum

Instabilidade Social, consecutivamente a falta de profissionais na área.

o não aproveitamento desta indústria que tem uma capacidade de empregabilidade

A falta de quadros qualificados.

Poucas instituições de ensino e poucas ofertas de emprego neste sector.

A ausência de Angola na lista branca da convenção STCW78 com as suas emendas de 2010. A falta de efetivação das políticas traçadas pelo executivo que visam a melhoria do sector. Um fraca colaboração entre instituições de ensino e a Agência marítima nacional, etc

Lack of awareness of the courses available, Lack of experts and qualified trainers for specialist courses; High cost of maritime courses, High cost of specialized training equipment; Lack of sufficient training aids and tools such as labs, computers, simulators, etc

O cumprimento dos padrões de formação conforme a convenção STCW/78 as amended

Na falta de estratégia para desenvolvimento do sector marítimo, Pouco ou investimentos inexistente nas instituições de educação e formação no país.

Capital humano

O fraco domínio de línguas estrangeiras em especial a língua inglesa.

Falta de equipamentos adequados como por exemplo simuladores, formadores, falta de políticas de Formação, escolas

Falta de alinhamento com as convenções da IMO e acompanhamento as tendências do desenvolvimento sustentável da estratégia marítima mundial

Geralmente, as partes relevantes para a questão não têm vontade de resolver a questão. Uma vez que Angola tem uma das costas mais extensas da África, falta cultura e interesse marítimo. Além disso, há menos recursos humanos disponíveis para orientar o processo

Formadores mal formados, conteúdos não objectivos, recursos didáticos não adequados, apoio administrativo deficiente, salas sem condições para formação.

Falta de Formandos nas áreas do Ramo. -- Falta de Incentivo ou Iniciativas por parte das Entidades Empregadoras.

Os factores que impediriam a educação e formação marítima de desempenhar um papel no desenvolvimento marítimo em Angola seria a falta de organização, meios financeiros, orientação dos jovens nas bases sobre a educação e formação marítima.

Investimento no sector

Os factores que impediriam a Educação e Formação Marítima a desempenhar um papel no desenvolvimento Marítimo em Angola, é ou seria apenas a criação da devidas políticas para tal

As políticas públicas fracas do nosso governo

Acredito que não existe nenhum factor que impediria a educação e formação marítima no desenvolvimento marítimo em Angola, mais seria uma mais valia para o desenvolvimento económico do país.

Falta de quadros capacitados e número irrisório de instituições vocacionadas ao ensino neste ramo.

P. 20. Quais são algumas das possíveis soluções e estratégias para desenvolver a indústria marítima em Angola? 32 responses

Primeiros formar marítimos com competências para a marinha mercante de acordo com os padrões preestabelecidos pela IMO, e esses por sua vez poderão dar resposta para que se desenvolva a indústria marítima angolana, caso contrário, não saímos dessa enorme inércia.

CRIAÇÃO DE INSTITUTOS PARA CAPACITAR AS PESSOAS

Desassociar a Indústria Marítima do Poder Político, Colocar pessoas conhecedoras da Matéria Marítima de modo a dirigirem o negócio, isto é, dar autonomia aos agentes da indústria Marítima.

Terms formadores bem qualificados

Acho que Falta de interesse

Criar ou construir Centros Universitários para a educação marítima

Criação de um sistema de comunicação entre os órgãos que constituem a área marítima

Instituições capacitadas para lecionar negócio marítimo.

apostar nas energias renováveis e na gestão de resíduos provenientes das embarcações

Apostar no desenvolvimento do recurso humano

Visão educativa

é necessário que se crie políticas coerentes e exequíveis para esta indústria.

Formar quadros nas distintas áreas.

Incentivar trabalhos e serviços no sectores marítimo e portuário

Para que a indústria marítima seja desenvolvida é necessário que se crie um Cluster Marítimo e por sinal o executivo por meio do ministério dos transportes angolano tem envidado esforço para a sua criação, mas é preciso que nesse processo o factor humano seja o elemento chave, no entanto é necessário que se valorizem e aproveitem as instituições de ensino marítimo como é o caso do instituto médio marítimo Hélder Neto e a Universidade Marítima do Namibe, ambos localizados na província do Namibe. É necessário que a AMN exerça o seu papel de órgão regulador, orientador, organizador, fiscalizador no sentido de garantir que as empresas portuárias, as instituições de ensino e outras entidades marítimas cumpram o que está tipificado nas convenções internacionais, mas que essa atuação seja efectiva e faça sentido na vida dos angolanos, no sentido de promover a cultura de boas práticas marítimas, a fim de salvaguardar a vida humana no mar e a proteção do meio ambiente.

Awareness campaigns in schools to assist students choose maritime related careers; Engage specialists from leading maritime nations to offer courses locally or through online platforms; Encouraging maritime players to offer internship positions and jobs to trainees from maritime institutions

A implementação efectiva da convenção STCW/78 em Angola

Criar instituições de ponte para formação do quadro, Criar parcerias com os países vizinhos para transporte de bens e serviços.

Formação do capital Humano

Criação de academias de ensino especializadas em questões marítimas.

Políticas bem definidas, vaporização dos quadros existentes, investimento do estado como parceiro e interessado pelo projecto,

Desenvolver o Cluster Marítimo Nacional, a Economia Azul todas alinhadas as directrizes da OMI

Estabelecer a estrutura legal, por exemplo, a ratificação e implementação da Convenção STCW e outros pilares da convenções da IMO. E o país aposta fortemente nos recursos humanos e desenvolve uma política nacional que enfatiza a importância da indústria marítima como meio de contribuir para o desenvolvimento da nação de forma sustentável.

As empresas precisam investir na formação do seu pessoal e os colaboradores devem investir em seu aprendizado e aperfeiçoar os seus conhecimentos e estar qualificados para conseguir lidar com a demanda do mercado.

Aumento dos Terminais Marítimos com calados superiores a 13 metros de Profundidade. -- Passagem de uma Gestão Pública para a Privada. -- Capacitação de quadros.

Algumas possíveis soluções e estratégias para desenvolver a indústria marítima em Angola é a divulgação e abertura de mais escolas para a educação e formação marítima.

Investir no sector com seriedade.

A formação de mais quadros no Ramo

Formar o recurso humanos

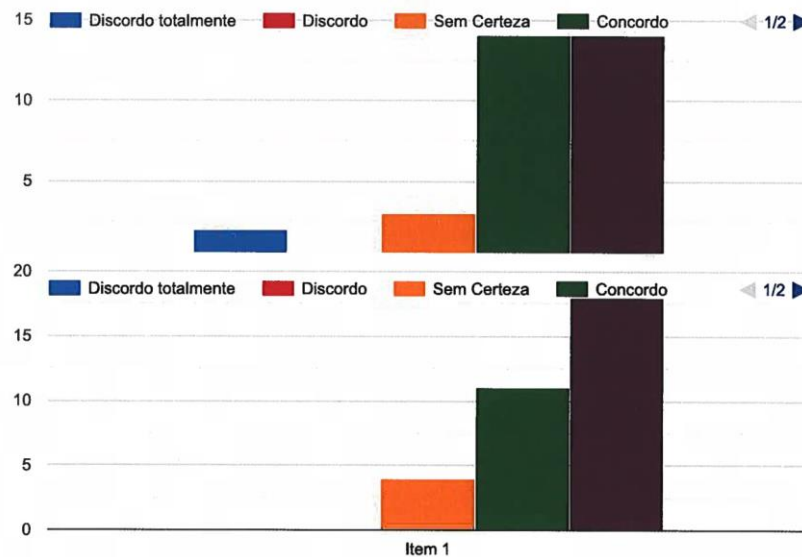
As possíveis soluções para desenvolvimento a Indústria marítima seria criação de escola marítima para formar os quadros .

Clarificar o papel dos intervenientes e tornar processo mais inclusivo para o demais stakeholders

Construção de mais escolas marítimas, obter parcerias com países como Filipinas para o know how, na formação de quadros capacitados para darem respostas adequadas

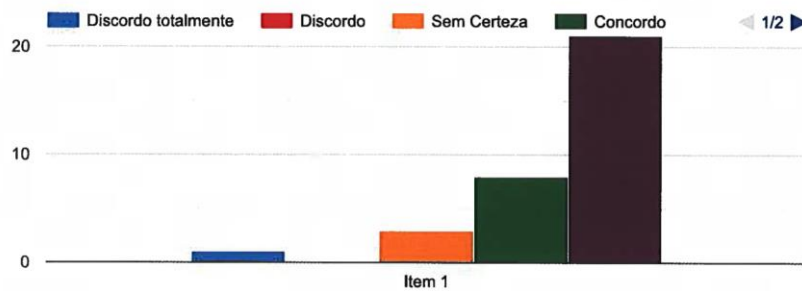
P. 21. A Educação e Formação Marítima em Angola tem um impacto positivo no desempenho dos profissionais marítimos.

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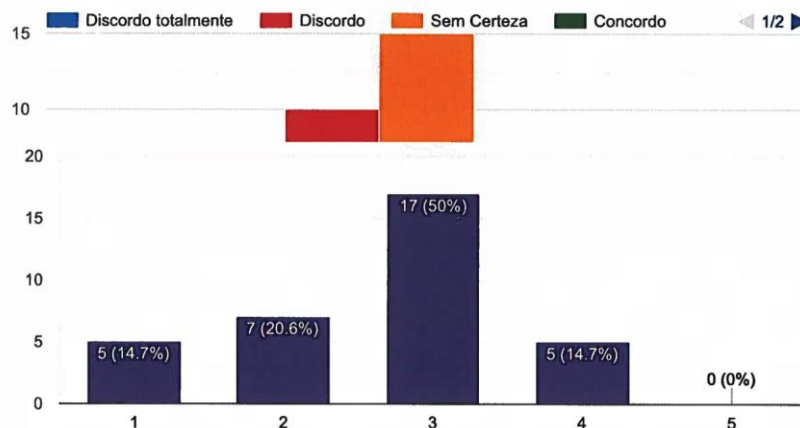
P. 23. A Educação e Formação Marítima vai ajudar o desenvolvimento marítimo em Angola

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P. 24. As políticas nacionais existentes são adequadas para apoiar o desenvolvimento marítimo de Angola.

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P. 26. Caso tenha selecionado 1, 2 ou 3, poderia gentilmente indicar alguma sugestão para melhorar o conhecimento? 27 responses

Entrar imediatamente na White List da IMO, e começarmos a certificar os nossos marítimos.

CAPACITAR OS QUADROS

Maior divulgação da matéria marítima, criação de instituições que ministrem ou formem na matéria marítima. Introduzir no curriculum escolar a matéria marítima ao nível médio.

Procura investir mas nesse área ou dar mas formação

Existem políticas públicas

Criação de instituições capacitadas para lecionar cursos do ramo marítimo.

fazer workshops nas universidades, divulgar mais as vantagens de optar pelo ramo marítimo, promover seminarios junto das escolas de formação de modos a que seja mais conhecido, apoiado e escolhido como uma alternativa visto que é vasto e engloba varias áreas do saber desde as engenharias até a medicina por causa da sanidade marítima

Optar mais na formação

Criação de Universidade para o ramo Marítimo e maior divulgação do ambiente de negócio para o melhor conhecimento deveria dar-se mais formações workshop e seminários.

Pouca divulgação das políticas

É necessário que se promova mais a formação de marítimos em Angola por meio de Workshops ou palestra que visam a trazer a tona o fantástico mundo marítimo, mas para isso é importante que as medidas traçadas para o processo de formação sejam efectivas para que os estudantes sejam os principais promotores ou a prova viva de que vale apenas optar por uma formação ligada ao mar, faço tais afirmação porque ainda há muitos atropelos as exigências internacionais por parte das instituições de ensino e da própria Agência Marítima nacional como o principal promotor do sector marítimo.

Awareness campaigns in schools to assist students choose maritime related careers; Engage specialists from leading maritime nations to offer courses locally or through online platforms; Encouraging maritime players to offer internship positions and jobs to trainees from maritime institutions

Elaborar um programa nacional de fomento do capital humano marítimo nacional envolvendo todos os stakeholders.

Marketing e publicidade

Capacitação do capital Humano

Criar instituições de ensino e academias do ramo marítimo.

Aposta na formação e aumento de investimentos nos portos.

Ir ao encontro das escolas, criar plataformas com a informação detalhada do sector.

Não há actividades centradas em trocas de experiências científicas sobre assuntos marítimos entre todos os órgãos ligados ao mar

Deve haver um maior foco no investimento da indústria marítima de todas as partes interessadas

Formação é a palavra certa.

A minha sugestão para melhorar o conhecimento é reforçar, divulgar mais a educação e formação marítima a população.

Divulgação mais.

Para melhorar o conhecimento da Indústria Marítima em Angola além da Media e dialgo, a inserção da formação no currículo escolar

Criar política materiais para efectivação das academias do sector Marítimo-Portuário

Construir centros de formação profissional nna área de navegação para formação de quadros técnicos e pois terior massificação de escolas náuticas em todas províncias do litoral

P. 27. Por favor, diga-nos quaisquer sugestões que possa ter sobre a melhoria das políticas nacionais para melhor apoiar o desenvolvimento marítimo de Angola.27 responses

CAPACITAR OS QUADROS

Formadores competentes

Construir centros universitários para maior educação a respeito

Implementação de um sistema integrado entre todos órgãos competente a área marítima

Reconhecimento de diplomas estrangeiros.

as políticas nacionais devem estar de acordo com as perspectivas de desenvolvimento dos portos de modos a que possa haver uma conformação dos interesses do porto em prol do impacto que causará no país e nas comunidades

maior investimento na educação e na sustentabilidade social

penso que a princípio é criar um instituto superior vocacionada para tal

Criar políticas para dinamizar a economia azul, que é um factor que irá dinamizar sector marítimo

Como já mencionei anteriormente, na minha humilde opinião uma das políticas que o executivo por meio das instituições afectas ao sector marítimo deve adoptar é a valorização de quadros angolanos e apostar nas instituições de ensino marítimo já existentes. Como é o caso da ex academia de pescas e ciências do mar do Namibe actual Universidade do Namibe que tem se deparado com grandes dificuldades no processo de lançamento ao mercado de emprego dos seus primeiros estudantes de classes de oficiais (navegação marítima e mecânica naval), isso devido ao facto de Angola não constar da lista branca da IMO, e consequentemente os estudantes afectos aquela instituição não podem ser certificados pela AMN. No entanto é preciso que os memorandos existentes entre Angola e países que fazem parte da lista branca sejam realmente efectuados no sentido de dar resposta a problemática de certificação de marítimos angolanos, isto por meio de cooperação técnica como está tipificado no artigo XI da convenção STCW78 e por consequência disso ganhar licença de constar da lista branca da convenção. Outra sugestão está relacionada ao trabalho marítimo. Angola não tem ratificada a convenção MLC, no entanto é muito importante que ratifiquemos esta convenção por meio da ILO, a fim de criar metas que visão a valorizar o trabalho marítimo e a facilitar a vida do marítimo angolano.

Consider coming up with a ministry dedicated to the maritime affairs; Engaging high level experts both from within the country and from other leading maritime nations in coming up with good policies.

- Maior rigor na implementação das convicções marítimas. - Capacitação continua dos quadros do sector -
Elaboração de um programa nacional de fomento da capacidade (Marítima) do capital humano marítimo nacional.

Melhor conhecimento sobre o seu potencial

Fazer um estudo sobre as políticas internacionais dos países mais desenvolvidos no ramo marítimo e desenvolvermos a mesma medida.

Desenvolvimento de planos directores sobre o sector dos transportes e afins.

Criar forums para os profissionais, investimento pelo estado, formação e implementação das convenções marítimas internacionais

Alinhamento as convenções da IMO/OMI

Angola deve ratificar as convenções que ainda não ratificou e dar passos concretos para implementar as convenções. Há uma série de ações que precisam ser tomadas pelo governo, bem como pelas partes interessadas, por exemplo, a decisão política, desenvolver a política nacional, estratégia e plano de ação (elaborar, promulgar, implementar legislação e efetuar a reforma institucional), implementação e monitoramento e avaliação.

Deve-se investir mais nas instituicoes e no capital humano.

O estado deve deixar de ser o Gestor/ Explorador dos Terminais , Passando assim como agente Regulador/ Fiscalizador dos terminais, deixando a Exploração aos Privados.

Sugestões que possa ter sobre a melhoria das políticas nacionais para melhor apoiar o desenvolvimento marítimo de Angola, seria priorizar o crescimento de infraestruturas portuária, priorizar o desenvolvimento dos recursos e os meios de vigilância e defesa dos interesses nacional.

Criação de academias do sector de modo a motivar interesse.

A resolução para melhorias na cadeia Marítima para melhor apoiar o sector passa pela capacitação dos recursos humano

Cooperação com algumas escolas internacionais

Há necessidade de criar instituto superior centro de formação, melhorar o instituto Marítimo de Angola , para criação de indústria marítima.

Promover a interacção com operadores de outras Geografias, partilhar conhecimentos e experiencias. Tendo sempre em conta os standards internacionais.

Construção de mais escolas náuticas no ensino médio, e profissional

P. 28. Quais são os desafios que a educação e formação marítima tem para desempenhar o seu papel no desenvolvimento da indústria marítima em Angola?

25 responses

Os grandes desafios são: 1. Formar marítimos com competências para desenvolverem com brio as suas funções; 2. Certifica-los por formas a que naveguem também em águas internacionais.

FALTA DE INSTITUIÇÕES E ESPECIALISTAS FORMADOS NA ÁREA

Os desafios são enormes, pois em Angola temos pouco ou quase nada em termos de literatura marítima.

Mais centros de formação e ensino marítimo

Implementação da ciência como disciplina

penso que muitos. desde a conformação em termos legislativos, a implantação e a execução

os desafios são vários tento em no mundo actual ela é uma indústria com múltiplas vantagens para o desenvolvimento global.

Facilitar o crescimento e desenvolvimento do econômico e social do país, como elhio de ligação dos vários entes neste universo

Um dos grandes desafios que Angola enfrenta quanto ao processo de formação de seus marítimos é a sua ausência na lista branca da convenção STCW78, visto que este factor condiciona ou limita o país ou as instituições de direito no processo de licenciamento das embarcações, ou certificações de marítimos, assim como o licenciamentos das instituições quer empresariais ou de ensino.

Lack of qualified trainers, inadequate training equipment and infrastructure

Falta de formadores qualificados, infraestruturas e equipamentos inadequadas e falta de simuladores

Trazer ao cidadão a importância deste sector e sua educação para o país.

Sem educação marítima não será possível desenvolver o sector

Criação de formadores nacionais.

Reconhecimento da Formação anível Nacional pelo estado

São vários, começando nada base.

- Há uma falta de compreensão do governo das oportunidades e benefícios associados à educação e treinamento marítimo. - Para além de criar conteúdos curriculares académicos adequados de acordo com a Convenção STCW, o currículo académico será determinado por quem e por que meios é desafiante num país como Angola porque o elemento humano é a chave para desenvolver essas coisas que aconteceram. - Como resultado da falta de compreensão do potencial da indústria marítima, é difícil obter financiamento na agenda do setor público. - Capacidade insuficiente na frota nacional, a formação marítima tem dificuldade em treinar marítimos a bordo de transportadoras internacionais para seu treinamento inicial no trabalho.

Aumentar as instituicoes de ensino para o sector marítimo . mais investimento tecnológico Mais formacao dos formadores

Aumento das Instituições de ensino sobre a matéria a todos níveis e a Exigência de Formação por parte das Entidades Empregadoras.

Os desafios que a educação e formação marítima tem para desempenhar o seu papel no desenvolvimento da indústria marítima em Angola, é tirar maior proveito dos recursos marítimos, criar mais infraestruturas portuárias e criação de ambientes turísticos.

Preparar os quadros do futuro e alavancar a economia no sector.

A divulgação da cadeia da Industria Marítima

Conforme já dizia, formar os especialistas nas escolas internacionais e fazer cooperação com essas escolas, para poder no futuro termos as nossa escolas nacionais e com capital humano angolano

Formação e mais divulgação sobre a área marítima

Construção de centros de formação de base e política que ajudam dar respostas

P. 29. Quais são as oportunidades da indústria marítima em que a educação e formação marítima ajudariam a concretizar.

27 responses

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CONHECIMENTO DO TRABALHO, MINIMIZAR ACIDENTES DE TRABALHO ETC.

A perseveração do mar, meio ambiente, isto é, na redução da poluição do mar.

A formação, criaria mais emprego

Formação e emprego

o know how poderia ajudar na abertura de centros de formação, factor relevante para ajudar a passarmos da teoria a pratica e a bem executar tarefas do dia a dia e estarmos ao nivel dos outros portos ja mais desenvolvidos por forma a gerar maior competitividade.

Muita

são variadíssimas no que diz respeito aos países que não está banhados pelo mar, para tal seria um veículo para exportar os seus bens e serviços para uma vida melhor,

Na melhoria do desempenho de condições e o seu desenvolvimento técnico profissional de pessoas e instituições.

Como já mencionado anteriormente, o factor humano é o elemento chave no processo de dinamização do sector marítimo, no entanto são as instituições de ensino que visam a satisfazer as necessidades do mercado na busca de profissionais que operam no sector. As infraestruturas não trabalham por elas mesmas, é preciso recursos humanos para alavancar a indústria marítima e só as instituições de ensino fornecem esse elemento. Many job and business opportunities related to the shipping and fishing industries.

Angola has a wide coastline and relies mostly on imports and exports allowing many shipping lines to operate in the Angolan waters. Therefore, MET has great opportunities to prepare both the future human resources as well as offer opportunities vocationally and academically for a lifelong learning.

A indústria marítima terá quadros capacitados que resultará em serviços de qualidade fornecidos pela as empresas para os seus clientes internos e externos

Olhar para as não conformidades por estarmos na lista negra da OMI

Melhorar as competências dos colaboradores para garantir a qualidade do trabalho e melhores políticas.

A formação é sempre um factor transversal no desenvolvimento da indústria e na proteção das pessoas e bens bem como na prestação de melhores serviços ao cliente final bem como a todos os sectores directa ou indirectamente ligados ao sector dos transportes.

A vasta orla marítima que deve ser explorada carecerá de técnicos competentes para melhor capitalizar estas oportunidades.

Definição de estratégias e políticas sustentáveis e inclusiva para que haja sinergias concretas e com ações práticas.

A oportunidade é oferecer ao pessoal da indústria que possua as competências necessárias. Além de atender aos requisitos da indústria marítima, essas competências também devem atender às de organizações marítimas nacionais e internacionais. Para serem aceites no mercado de trabalho, os requisitos do setor precisam ser atendidos, pois este é o mercado para graduados e, caso não consigam comprovar suas qualificações, suas inscrições serão rejeitadas.

Com o pessoal capacitado haverá sempre novas e melhores oportunidades de negocio

Entrada para o Mercado Internacional de acordo a Formação, com a respetiva certificação Internacional.

As oportunidades da indústria marítima em que a educação e formação marítima ajudariam a explorar melhor recursos marítimos e a desenvolver a área de formação portuária.

Mais informações, mais quadro, sobre tudo o País ganha mais em termos económicos.

As oportunidades são inumeras uma delas a profissionalização do Homem na Industria Marítima

O nosso projecto do porto de Barra de Dande

As oportunidades são: o país teria formação na área marítima, quadros capacitamos para o desenvolvimento da indústria

Formação de quadros e criar postos de emprego

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