

World Maritime University

# The Maritime Commons: Digital Repository of the World Maritime University

---

World Maritime University Dissertations

Dissertations

---

10-28-2023

## Exploring the role of education in addressing the skills gap for seafarers in Bangladesh's maritime industry

Fatema Tuz Tahera

Follow this and additional works at: [https://commons.wmu.se/all\\_dissertations](https://commons.wmu.se/all_dissertations)



Part of the [Energy Systems Commons](#)

---

This Dissertation is brought to you courtesy of Maritime Commons. Open Access items may be downloaded for non-commercial, fair use academic purposes. No items may be hosted on another server or web site without express written permission from the World Maritime University. For more information, please contact [library@wmu.se](mailto:library@wmu.se).

# **EXPLORING THE ROLE OF EDUCATION IN ADDRESSING THE SKILLS GAP FOR SEAFARERS IN BANGLADESH'S MARITIME INDUSTRY**

**FATEMA TUZ TAHERA**


A dissertation submitted to the World Maritime University in partial fulfillment  
of the requirements for the award of the degree of Master of Science in  
Maritime Affairs

2023

## Declaration

I certify that all the material in this dissertation that is not my 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 personal views and are not necessarily endorsed by the University.

(Signature): 

(Date): **25/09/2023**

Supervised by: **Professor Momoko Kitada**

Supervisor's affiliation: **Professor, Head,  
Maritime Education & Training**

## Acknowledgments

I am immensely grateful as I stand at the culmination of my dissertation journey, an odyssey that has been both intellectually enriching and emotionally fulfilling. This work stands as a testament to the unceasing blessings and guidance from the All Mighty Allah, whose light has illuminated my path throughout.

To my beloved family, my beloved parents, whose unwavering support and boundless encouragement have been my tower of strength; my husband, whose love and understanding have been a constant source of strength; and my daughter, whose innocence and laughter have infused joy into my every endeavor - I owe you all a debt of gratitude beyond words.

To my esteemed colleagues from WMU and my organization Bangladesh Shipping Corporation, whose insightful discussions and camaraderie have expanded my horizons and kindled my intellectual fire, thank you for fostering an environment of growth and collaboration.

The participants of my interviews and surveys, your invaluable contributions have been the heart and soul of this study. Your voices have lent authenticity to my work, and I am humbled by your willingness to share your experiences.

I am indebted to my dedicated supervisor and Head of the Maritime Education and Training Department, Prof. Momoko Kitada, whose expertise, guidance, and unwavering belief in my potential have been instrumental in shaping this dissertation. Your mentorship has been guiding me through the intricacies of research.

I extend my profound appreciation to Prof. Dr. Michael Ekow MANUEL, academic dean and former head of the department, for your leadership, support, and the platform you've provided for academic growth.

To the International Maritime Organization for the selfless contribution for my education. It has been an honour to be the recipient of such a prestigious scholarship. This whole journey was a great experience. To all those who have played a part in my academic journey WMU, whether in person or from afar, your impact resonates deeply within me. As I conclude this chapter and embark on new endeavors, I carry with me the lessons learned and the bonds forged.

With heartfelt gratitude,

## Abstract

Title of Dissertation: **Exploring the role of education in addressing the skills gap for seafarers in Bangladesh's maritime industry**

Degree: **Master of Science**

The maritime industry, as a cornerstone of global trade networks, heavily relies on the competence of seafarers. This research delves into the preparedness of seafarers in Bangladesh for the demanding job market in the maritime industry. Employing a sequential explanatory mixed-methods design, this study first collects and analyses quantitative data to understand the qualifications and skills acquired through conventional education and what is expected from them to work on board. Subsequently, qualitative data is collected to provide deeper insights into the perspectives of seafarers, employers, and industry stakeholders.

The findings underscore the multifaceted nature of seafarer readiness, encompassing essential characteristics and traits, technical qualifications and experience, and soft skills. Adaptability, integrity, and a positive attitude emerge as highly valued traits, in conjunction with effective communication, cultural sensitivity, and leadership potential. Technical qualifications, certifications, problem-solving skills, and knowledge of international regulations are considered crucial for safety and efficiency. Additionally, maritime experience and a willingness to learn new things are recognized as valuable assets, especially in navigation and maintenance roles.

Soft skills such as resilience, and effective communication, particularly in English, are pivotal for success in this global industry. Cultural sensitivity and familiarity with maritime communication protocols contribute to harmonious environments and positive relationships among seafarers.

The study's insights contribute to a holistic understanding of Bangladeshi seafarers' preparedness, bridging the gap between education and industry demands. By aligning education with industry requirements, this research seeks to enhance the employability of Bangladeshi seafarers, ultimately promoting the efficiency and sustainability of the maritime industry.

**KEYWORDS:** Bangladesh, Maritime industry, Preparedness, Sequential explanatory mixed-methods design, Skills, Soft skills, Employability, Education, Industry demands.

## Table of Contents

Declaration	ii
Acknowledgments	iii
Abstract	iv
Table of Contents	v
List of Tables	vii
List of Figures	viii
List of Abbreviations	ix
Chapter 1 Introduction	1
1.1. Background and context of the study	1
1.2. Purpose and Importance	4
1.3. Historical Context	4
1.4. Objectives of the research	6
1.5. Research questions	6
1.6. Structure of the Thesis	7
Chapter 2 Literature Review	8
2.1. Relationship between Education and Labor	8
2.2. Relationship between MET and Seafarers Employment in the Maritime Industry	9
2.3. Overview of the relevant literature	11
Chapter 3 Research Methodology	16
3.1. Research Design: A Sequential Explanatory Mixed-Methods Approach	16
3.2. Data Collection Method	17
3.2.1. Quantitative Data Collection	17
3.2.2. Qualitative Data Collection	18
3.3. Ethical Considerations	18
Chapter 4 Data Analysis and Discussion	20
4.1. Seafarers' survey	20
4.1.1. Skills and Knowledge Gaps	20
4.1.2. Recommendations for Education and Training	21
4.2. Seafarer Interview	22
4.2.1. Current State of Maritime Education in Bangladesh	22

4.2.2. Continuing Education and Certification	23
4.2.3. Industry-Specific Training and Hands-on Experience	24
4.3. Employers' Survey	25
4.3.1. Importance of Experience and Industry-Specific Training in Hiring	25
4.3.2. Advice for Seafarers	25
4.3.3. Additional Qualities or Skills Valued in Seafarers	26
4.4. Employers Interview	26
4.4.1. Essential Characteristics and Traits for Seafarers	27
4.4.2. Technical Qualifications and Experience	27
4.4.3. Soft Skills and Communication	28
4.5. Discussion	28
Chapter 5 Conclusion and Recommendations	31
5.1 Summary of Key Findings	31
5.2 Implications for Research and Practice	33
5.3 Limitations	34
5.4 Recommendations for Future Research	34
5.5 Conclusion	35
References	36
Appendices	41
Appendix 1. Seafarers Survey Questionnaire	41
Appendix 2. Employers Survey Questionnaire	45
Appendix 3. Seafarers Interview Question	47
Appendix 4. Employers Interview Question	49

## List of Tables

Table 1 Data from the 2021 BIMCO report.	13
Table 2 Year-wise number of CDC holders and employed Marine Officer	13
Table 3 Year-wise number of registered and employed seamen (rating)	14



## List of Figures

Figure 1 Necessity of collaboration of MET and Maritime Sector.	21
Figure 2 Areas of Improvement in MET of Bangladesh.	21

## List of Abbreviations

BIMCO	Baltic and International Maritime Council
BIMT	Bangladesh Institute of Marine Technology
BMA	Bangladesh Marine Academy
BMFA	Bangladesh Marine Fisheries Academy
BN	Bangladesh Navy
BNHOC	Bangladesh Navy Hydrographic and Oceanic Center
BSMRMU	Bangabandhu Sheikh Mujibur Rahman Maritime University
CBT	Computer-Based Training
CDC	Continuous Discharge Certificate
DP	Dynamic Positioning
IMO	International Maritime Organization
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
MECS	Maritime English and Communication Skill
MET	Maritime Education and Training
METI	Maritime Education and Training Institution
SDG	Sustainable Development Goal
STCW	International Convention on Standards of Training, Certification, and Watch-keeping for Seafarers.
UNCTAD	United Nations Conference on Trade and Development
WMU	World Maritime University

## Chapter 1 Introduction

### 1.1. Background and context of the study

The maritime sector serves as the backbone of global supply networks and is crucial to trade and commerce on a worldwide scale (Liu et al. 2023). Seafarers, the lifeblood of this global business, are in charge of ensuring safe and effective maritime transport (Conway et al. 2008). International shipping supports the three pillars of sustainable development that are environmental, social and economic by promoting global trade, wealth and prosperity among nations and peoples, and a wide range of jobs both on board ships and ashore (Caliskan, 2022). The quality of life of people is positively impacted by these professions in both direct and indirect ways. The maritime sector is one of the key players among numerous transportation sectors in ensuring national economic growth and maintaining international trades. The growth of a country's economy depends on having educated, trained, and competent people as resources who can take part in technological development and globalization of commerce (reference). Without a trained workforce, dynamic and sustainable development is not conceivable (Portney, 2013). According to Rahman (2021) a range of knowledgeable coastal and offshore engineers, navigators, merchant mariners, fisheries technologists, biotechnologists, etc., and in a range of other professions may provide a boost to the blue economy's expansion. In supplying seafarers for the global workforce, the majority of officers come from the Philippines, China, and India (Kartal et al., 2019). When it comes to ratings, Myanmar and Sri Lanka are ranked higher than India (Hussain et al., 2017). Due to the globalization and crewing practices in shipping, capacity building in developing countries is crucial to source qualified officers and ratings to international merchant ships.

Indeed, the role of developing countries in the maritime industry is significant. For example, Bangladesh has a vast coastline and a very advantageous geographic location

where the maritime sector carries a lot of potential. It also has a great history of maritime commerce. The Bangladeshi government has exhibited its commitment to maritime commerce by supporting it to get economic benefits out of it (Islam, 2021). It creates a large number of employment and socio-economic impacts through the earning of foreign remittances (Askari et al., 2021). The capacity building in a knowledgeable and capable seafaring workforce is essential to realizing this ambition. Still, a significant issue arises about the Bangladeshi seafarers' education and how well it meets the needs of the international maritime labor market. Rapid and drastic technological improvements, legislative modifications, and changes in operating needs have all affected the marine sector immensely (Vidović et al., 2023). As a result, the abilities required of seafarers have changed, raising concerns about how well-equipped maritime education programs are to give their graduates the necessary knowledge and skills.

The nature of the operations of the shipping industry and ships is very complex (Alop, 2019). To provide the shipping services, the ship owners or operators ensure the combination of three factors- capital, labor, and technology (Jimenez et al., 2022).

The price of the shipping service is determined by the interaction of supply and demand for this service on the open market as it is an international market and is generally expressed or named as a freight rate (Wang & Meng, 2021). Shipping services demand does not evolve or created by themselves rather are derived from the demand by the consumers for the commodities being shipped throughout the world to meet the need of its different parts. Consequently, the demand for seafaring labor is also dependent on the demand for maritime services. Requirements for seafaring work are also changing. Previously it was a combination of interpersonal and professional knowledge but in the future, it would be more automation and technology-driven impacts on seafarers skills.

To maintain the global standard of the seafarers aligning education with global regulations, technological advancements, cultural diversity, and sector-specific training needs is a must (Karakasnaki et al., 2023). Certification requirements are also a unique requirement of the shipping industry. A well-rounded seafarer education

program in Bangladesh should consider all these factors to produce graduates who are not only qualified but also adaptable to the ever-changing demands of the international maritime labor market. The research attempts to explore the complex connections between seafarer education in Bangladesh and the requirements of the international maritime labor market.

The study aims to give insight into the efficacy of existing educational systems in the Bangladesh maritime sector while highlighting the challenges faced by seafarers in bridging the gap between education and employment. The research intends to provide recommendations to the policymaker in developing a strategy that can improve seafarers' employability through the lens of maritime education and training.

In Maritime Education and Training (MET), "industry-specific training" refers to specialized training courses and programs created to educate seafarers for certain positions or sectors within the maritime industry (Edirisinghe et al. 2022). These programs focus on the special requirements and difficulties of certain sectors or jobs within the industry, beyond the minimal criteria established by the International Maritime Organization's (IMO) International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW), 1978 as amended. Some of the industry-specific training that is conducted by MET are- Dynamic Positioning (DP) Training, LNG/LPG Carrier Training, Offshore Wind Farm Support, Cruise Ship Hospitality, Arctic Navigation, etc (Sudhakar, 2015). This kind of training is essential to ensure that seafarers have efficient skills and bits of knowledge when dealing with specific kinds of ships and cargo. It prepares them well for the unique requirements of their role and reduces the chances of accidents thus saving life, assets, and even money and ensuring environmental sustainability. This kind of training also helps to maintain industry-specific requirements and standards thus ensuring compliance. For seafarers, it adds value to their job scope, career advancement, and better placement (Kilpi et al. 2021).

While the STCW convention sets the minimum global standards for seafarer training and certification, industry-specific training goes *beyond minimum standards* (Win, 2018). It is tailored to the specific needs and challenges of a particular sector and is

sometimes more stringent than STCW requirements. Through industry-specific training, seafarers can specialize in particular fields, improving their employment options and potential earnings. This study explores the impact of industry-specific training and experience on maritime education and training.

This study aims to improve seafarer education and, as a result, the maritime industry's overall efficiency in the transition from MET to maritime employment in Bangladesh.

### 1.2. Purpose and Importance

This study investigates a key part of Bangladesh's maritime industry by looking at how seafarer education is currently working and how the global maritime labor market interacts. By analyzing the connection this research sheds light on what are the gaps in current Maritime Education and Training in Bangladesh and how this gap can be mitigated to meet the global demand of a maritime workforce. Its conclusions and suggestions might lead to improvements that benefit the maritime sector, the nation, and seafarers while also advancing knowledge in the maritime community worldwide.

### 1.3. Historical Context

In 1419, the first organized maritime school was founded in the world. This was a school for sailors that was established by Henry Infante (Dong, 2014). However, the necessity for educated human resources in maritime education in the global shipping sector started to be seriously taken into consideration in the middle of the nineteenth century, and from the 1960s to the twentieth century. In several nations throughout the world, schooling was founded from that time. Since then, the shipping sector has become incredibly dependent on this knowledge (Rahman et al., 2022).

(Chaudhury et al., 2019). Bangladesh has always served as a hub for seaborne trade with Southeast Asia, the Middle East, and Europe thanks to its advantageous location along the Bay of Bengal. The region's rivers and canals have historically been important for aiding trade (Chaudhury et al., 2019). Although this region was not named Bangladesh at that time after the 1971 liberation war from Pakistan the name of Bangladesh got world recognition. A German Navy frigate was stationed at Chittagong in 1818. Bengalis gained a reputation as trustworthy and industrious sailors

during the colonial era on British, Portuguese, and French flagships. At least five Bengali seafarers were engaged on various seagoing commercial boats in the ports of Colombo, Kolkata, Mumbai, Rangoon, and Singapore during the partition of India in 1947. Without a doubt, these knowledgeable individuals did not have any formal schooling; rather, marine knowledge was passed down from generation to generation. Maritime education options were first developed at the institutional level in 1952 with the founding of Seaman's Training Centre or STC (now National Maritime Institute) (Rahman et al., 2022).

The evolution of maritime education and training in Bangladesh all started with the Bangladesh Marine Academy (BMA) and Bangladesh Institute of Marine Technology (BIMT) both began operations in 1958 and 1962 respectively. Bangladesh Marine Fisheries Academy (BMFA) was established in 1973. These institutions were aimed to produce skilled maritime professionals to meet both national and international demands. As a result of the success of the experts from these institutions, both public and private maritime schools steadily grew in number (Rahman et al., 2022). After the Bangladesh Navy (BN) established the BN Hydrographic and Oceanic Center (BNHOC) in 1983, Bangladesh moved forward with the process of developing mariners and ratings for exclusively commercial ships (Rahman et al., 2022).

From the very beginning of the establishment of this country, seafarers played a vital role to Bangladesh's economic development (Alamgir & Chowdhury, 2019). They have helped create employment possibilities and earn foreign remittances. More than 90% of Bangladesh's international freight commerce is carried by sea, and ongoing globalization has increased the significance of this movement (Colombage & Edirisinghe, 2018). Their education and training are therefore essential for the country's sustained development.

Seafarers and the global marine sector have faced problems as a result of quick technical advancements and changing international rules. To maintain safety, effectiveness, and compliance, seafarer education must adjust to reflect these modifications. As in the seafaring business, there is the prospect of working in the global market and joining the international workforce, hence seafarers from any

country should be ready to world standards. Understanding the world market demand is equally important. Studies suggest that there will be a more acute scarcity of seafarers in the future as there is a shortage of supply in the current labor market. According to the BIMCO and ICS report (2021), the five main nationalities of seafarers serving in the world merchant fleet are the Philippines, Russian Federation, Indonesia, China, and India. By adapting the programs to the changing demands of the international maritime industry and learning from those successful nations, Bangladesh can improve the quality of its Maritime Education and Training (MET) and produce highly skilled seafarers who can successfully compete in the global labor market.

#### 1.4. Objectives of the research

To achieve those aims, this research includes the following objectives.

- Examine the current state of seafarers' education in MET institutions in Bangladesh and its effectiveness in preparing them for the job market.
- Analyze the gap between the education received by seafarers and the actual skills needed on board vessels.
- Investigate the impact of incorporating industry-specific training and practical experience into the education of seafarers in Bangladesh.

#### 1.5. Research questions

This research paper aims to investigate the following research questions-

- How does the current education received by seafarers in the MET institutions of Bangladesh prepare them for the demands of the job market in the maritime industry?
- What is the gap between the education received by seafarers in Bangladesh and the actual skills needed on board vessels, and how can this gap be addressed?
- What is the impact of incorporating industry-specific training and practical experience into the education of seafarers in Bangladesh, and how does it improve their employment prospects in the maritime industry?



### 1.6. Structure of the Thesis

This research paper consists of four chapters. Chapter 2 is a literature review. It includes a discussion about the relationship between education and labor, the relationship between MET and seafarers' employment in the maritime industry, the relationship between MET and Seafarers of Bangladesh, an overview of the relevant literature, justification of the research questions and theories related to this research, Chapter 3 details data presentation, analysis and discussion of findings. Chapter 4 is the last chapter of this research paper and presents a summary of the main findings of this research, some practical recommendations for future actions and research, limitations of the research and challenges encountered, contribution in the relevant field, potential suggestions for future research, and a concise conclusion.

## Chapter 2 Literature Review

### 2.1. Relationship between Education and Labor

For the pragmatic time, labor was more likely to be related to the skills inherited as a part of family tradition or classes of the societal structure they belonged to (Adkins, 1995). For example, the child of the farmer is supposed to become a farmer. Sailors also had the class deviation as it is suggested by the names that were used for the people working on the ships such as boatswain, able seapersons, and coxswain. These names are of Anglo-Saxon origin and the position of Captain, Admiral, and Lieutenant are Norman- French origin (Belov, 2020). The need for academically higher education was not that prominent at that time. Practical experience and hands-on training were the most important ways of learning and achieving excellence in any kind of profession.

There is a unique link between education and the employment market in the modern world. Because it equips individuals with the information and abilities they will need to thrive in the labor market and their chosen professional path, higher education evaluation has accelerated. By increasing workers' productivity, efficiency, and flexibility, education may also be seen as a tool for improving the general quality of the labor force (Fasih, 2008).

On the other hand, the labor market greatly influences schooling (Hanushek & Kimko, 2000). The programs and approach to teaching in schools can be influenced by the demands of the labor market. Additionally, certain groups may face employment discrimination based on their education level, limiting their opportunities for advancement and employment. This can particularly affect disadvantaged or marginalized members of society (Enache, 2011).

Overall, the link between labor and education is dynamic and interwoven, with one influencing and modifying the other. A close connection between maritime education, training, and labor is necessary for the marine industry to access qualified workers. Programs for maritime education and training equip individuals with the skills, information, and competencies necessary to successfully work in the marine industry.

## 2.2. Relationship between MET and Seafarers Employment in the Maritime Industry

According to the USEM (understanding, skills, efficacy, and metacognition) model of employability (Knight and Yorke, 2002), there is a direct relationship between employment and good learning. The maritime sector is heavily regulated and necessitates specialists in navigation, ship operations, safety, and environmental safeguards (Kristiansen, 2013). By combining in-class instruction, hands-on training, and on-the-job experience, maritime education and training programs ensure students to be competent in their specialized studies, such as deck and engine. Throughout the discussion of relevant papers, it is possible to uncover information that gives insight into the complicated interactions between education, skill levels, and employer satisfaction (Balas-Timar, 2015; Wang et al., 2020). Evidence suggests that educational attainment growth has slowed, cognitive skill levels have remained stable, and job skill requirements have gradually increased, but a large portion of employer dissatisfaction is related to young people's effort levels and work attitudes, which may represent transitory life-cycle effects (Handel, 2003).

The transformation of MET is also very interesting. Traditionally, MET had been perceived as a system dedicated solely to producing officers and sailors for commercial ships (Demirel, 2020). However, the modern context was different. The shipping industry has emerged as a global economic powerhouse (UNCTAD, 2018). This realization prompted a re-evaluation of MET's definition. It was time to broaden the perspective and view MET through a more extensive lens, one that acknowledged its far-reaching impact beyond commercial shipping, touching various sectors and the global economy itself. Port management, freight forwarding, shipbuilding, maritime security, tourism, oceanography, maritime finance, and maritime archaeology are just a few of the fields where maritime education is prevalent today (Rahman et al., 2022). The growth and success of the maritime industry rely on having skilled individuals. Without qualified personnel, costs can rise, making it essential for the industry and maritime education to support each other. Education and training programs prepare people for the job market, which demands educated and competent workers to meet

industrial demands. A strong and efficient maritime education and training system is necessary to ensure the availability of knowledgeable workers in the maritime industry, which is essential for its success and sustainability.

Bangladesh having a suitable location at the Bay of Bengal cannot grasp all the benefits of the Blue economy. Approximately 30 million people in Bangladesh rely on economic activities related to the ocean, such as fishing and commercial transport (Islam, 2003). For this, strategic planning is important. Bangladesh needs a comprehensive strategy to develop knowledgeable seafarers for the world's maritime industries. A standardized education system must be nurtured and developed from the beginning before it can be properly formed at the end. To make the phenomenon more objective and visionary, maritime education for seafarers has to be up to the world standard by all means. It should be up-to-date according to the new technologies, regulations, and their implications. Modes and levels of the standard should always be controlled by the learning objectives. The standard style of maritime education must be maintained if the goal is to ensure skilled human resources for the Blue Economy.

### 2.3. Overview of the relevant literature

Bangladesh recognized as a leader in the maritime industry in South Asia, has control over a territory of 118,813 square kilometers in the Bay of Bengal, including a coastline stretching 710 kilometers (Ahsan, 2013). It also has a good number of seafarers as human resources of the maritime industry. Since the first half of the 20<sup>th</sup> century, more than 50,000 Bangladeshi seafarers have served aboard various foreign seagoing vessels (Kabir, 2014) but gradually the number has declined a lot. On the other hand, as the economy around the world is growing at an accelerating rate, the demand for human resources in the maritime sector is also increasing at a significant rate (Cahoon et al., 2014). This declining number of seafarers is very concerning for Bangladesh as it has a huge population and is the world's biggest delta, so it could have reached a greater number in the position of the world maritime human resource supplying countries. Previously, there was only one maritime academy in the whole country but then again understanding the potential of this promising sector the number has now increased to 5, and more than 3 are going to open soon. Bangabandhu Sheikh Mujibur Rahman Maritime University, or BSMRMU, was the first maritime institution to be founded in 2013. There are also several METI in both the public and private sectors and some universities and vocational maritime institutes also offer some courses for seafarers. The role of this sector plays a vital role in shaping the country's economy and building a better and prosperous Bangladesh.

Nahar and Rouf (2019) found that there is a gap between the education and skills provided by schools and universities and the skills required by the job market in the maritime industry in Bangladesh. This gap leads to high unemployment rates among maritime graduates, despite a growing demand for skilled seafarers in the industry. In another article (Rouf & Nahar, 2020), the authors focus on human capital development and career paths in the Bangladeshi shipping industry. The authors found a shortage of skilled seafarers in the industry due to a gap between the education provided by schools and universities and the skills required by the job market. Alamgir (2001) has identified several challenges facing the maritime education sector in Bangladesh,

including a lack of resources, inadequate infrastructure, and a lack of access to quality education and training opportunities for seafarers.

Exploring the relationship between maritime education and economic growth in Bangladesh Alamgir et al. (2019) have found that investing in maritime education is a key factor in the development and success of the maritime sector and the economy of Bangladesh. By addressing the challenge of bridging the gap between education and employment in the Bangladeshi maritime industry, specifically focusing on seafarers' education, this research has the potential to contribute to better employment outcomes for seafarers, provide insights into the current state of the maritime job market in Bangladesh, including employment opportunities, skills, and knowledge requirements, and challenges faced by maritime graduates. The research will identify best practices and strategies for preparing seafarers for the job market in Bangladesh and suggest solutions for improving the alignment between education and employment. It will also suggest justified recommendations for the development of policies and initiatives aimed at improving the connection between education and employment in the maritime industry in Bangladesh for seafarers.

Language and communication skills are other vital skills that every seafarer should excel in as they work in an international industry and here as a means of communication, referring to competency in using the English language as an international language. A study by Ahmmed, Sinha, Khan, and Islam (2020) has found that as most employment agencies in Bangladesh examine candidates' spoken language abilities during interviews. The study found that communication effectiveness (speaking) was the most crucial ability compared to the other three. The majority of manning agencies wanted their cadets to have a basic understanding of listening, reading, and writing skills and an intermediate level of speaking fluency. However, the senior cadets highlighted the significance of employing all four linguistic abilities when doing jobs on board (Ahmmed et al., 2020).

**Table 1** Key facts from the 2021 BIMCO/ICS report.

Seafarer required by 2026	additional 89,510 officers
Currently serving worldwide	1.89 million seafarers
The world merchant fleet,	over 74,000 vessels
Current shortfall	26,240 STCW-certified officers
In the supply of officers	10.8% increase
Per berth requirement	An average of 1.4 officers
Categories of shortage	technical experience especially at the Management Level, and in the tanker and offshore sectors
The trend in gender balance	Positive
Estimated women serving as seafarers	24,059
Percentage of increase	45.8%
Estimated female STCW certified seafarers	1.28%
Female ratings were found predominant	cruise ship and passenger ferry sectors

Considering the report, Bangladesh as a seafarer-providing nation, can play a pivotal role in mitigating the estimated shortfall of seafarers by training both ratings and officers. Although according to table 1 in the international market, there is a shortage of seafarers many Bangladeshi seafarers are not employed. Tables 2 and 3 show a gap between the certificate holders/registered numbers versus the numbers of employed officers/ratings, indicating a year-wise unemployment record of CDC-holder officers and able ratings.

**Table 2** Year-wise number of CDC holders and employed Marine Officers

Year	Total no. of CDC holder Officer	Number of Officers Employed		
		On National Ships	On Foreign Ships	Total
2018	10205	953	4215	5168
2019	10602	1303	4142	5445
2020	10841	1149	3197	4346
2021	10871	1394	4460	5854
2022	12089	1328	4650	5978

From: Department of Shipping, Ministry of Bangladesh

Source: <https://dos.gov.bd/site/page/a262d1fc-8c78-4949-8c96-1bb488ddf95e>

**Table 3** Year-wise number of registered and employed ratings

Year	Total no. of registered ratings	Number of ratings employed		
		On National Ships	On Foreign Ships	Total
2018	3849	795	1249	2044
2019	4377	1052	1296	2348
2020	4866	1064	1532	2596
2021	5107	1412	1819	3231
2022	5997	1315	2288	3603

From: Department of Shipping, Ministry of Bangladesh

Source: <https://dos.gov.bd/site/page/a262d1fc-8c78-4949-8c96-1bb488ddf95e>

The main reason behind this huge unemployment despite high demand in the international maritime market is that many of its MET institutions fail to maintain the education standard, due to the upgradation of the curriculum, infrastructural facilities, budget constraints, lack of technological facilities, etc (Islam et al., 2019). There are some other constraints like an inadequate number of national flag vessels, and Bangladeshi seafarers face visa difficulties in case of sign-on and sign-off in different countries which is why they get less preference in foreign fleets (Islam et al., 2019). There are issues of fake and fraudulent certifications and desertion cases too (Islam et al., 2019). Nowadays, the situation is getting better reputation-wise and according to IMO Bangladesh is a white-listed country. Proper and timely actions of the appropriate authority and the combined effort of the relevant stakeholders can bring the silver lining into reality.

The geological position just on the side of the Bay of Bengal is a great advantage as the people are familiar with seaborne activities. Furthermore, the demography dividend can also be a reason for Bangladesh to become a global role player in the seafarer supply. The unemployment problem is one of the biggest obstacles to the country's economic growth. The current unemployment rate of the country is 4.41 % (Rahman et al., 2023) which is a very alarming rate and to achieve the United Nations Sustainable Development Goal 8 (decent work for all) this percentage needs to be



reduced to 2.5% by year 2030. Setting up proper standardized training facilities and generating trained personnel can solve the unemployment problem of the Bangladeshi seafarer and thus help to minimize the shortfall of seafarers for international shipping and both unemployment and economic crises in Bangladesh.

#### 2.4. Theories of Relevance

**Human capital theory:** This theory focuses on how investments in education, training, and experience can increase an individual's productivity and earnings potential (Abbas et al.,2022). In this case, human capital theory can be used to explain how industry-specific training and practical experience can enhance seafarers' human capital and improve their employment prospects in the maritime industry.

**Social learning theory:** This theory emphasizes the importance of learning through observation, modeling, and social interaction (Amin, 2022). In this case, social learning theory can be used to understand how seafarers learn from experienced colleagues, mentors, and instructors during industry-specific training and practical experience. It can also impact their skills and behavior on board vessels.

**Expectancy theory:** This theory posits that individuals are motivated by the expectation that their efforts will lead to desired outcomes (El-Farr,2023). In this case, expectancy theory can be used to explain how seafarers' motivation to pursue industry-specific training and practical experience may be influenced by their belief that it will lead to improved employment prospects and career advancement opportunities.

**Cultural theory:** This theory looks at how individuals' beliefs, values, and norms are shaped by their cultural backgrounds and how this impacts their behaviour (Chibber, 2022). In this case, cultural theory can be used to understand how the cultural norms and expectations within the maritime industry in Bangladesh may influence seafarers' perceptions of industry-specific training and practical experience and their willingness to pursue it.

By using a combination of these theories, it is possible to gain a more comprehensive understanding of the complex factors that influence the impact of incorporating industry-specific training and practical experience into the education of seafarers in Bangladesh, and how it will improve their employment prospects in the maritime industry.

## Chapter 3 Research Methodology

The research approach used in this study is thoroughly explained in this chapter. The main goal of this study is to examine how equipped Bangladeshi seafarers are to fulfil the needs of the employment market in the maritime sector. To achieve this, a designed research framework has been implemented, incorporating different research methods and tools that are attached in the appendix of this paper. These methodologies are carefully chosen to provide a comprehensive grasp of the complexities associated with the education and training of seafarers in Bangladesh and their subsequent integration into the dynamic maritime labor market. Through the lens of empirical investigation, this chapter elucidates the systematic approaches, data collection techniques, and analytical strategies employed to scrutinize the multifaceted facets of seafarer preparedness. In doing so, this research aspires to contribute meaningful insights to the maritime education sector and the broader maritime industry, shedding light on the challenges, opportunities, and prospects that would help shape the career paths of seafarers in Bangladesh.

### 3.1. Research Design: A Sequential Explanatory Mixed-Methods Approach

In this research, a structured research design has been employed known as a "sequential explanatory mixed-methods" approach (Ivankova, Creswell, & Stick, 2006). This methodological choice holds significant relevance and advantages for this study, aimed at comprehensively exploring the preparedness of seafarers in Bangladesh for the competitive job market within the maritime industry.

The sequential explanatory mixed-methods design consists of two distinct phases: first, the collection and analysis of quantitative data, followed by the collection and analysis of qualitative data (Ivankova et al., 2006). This sequential approach was strategically selected to harness the strengths of both quantitative and qualitative

research, thereby ensuring a thorough examination of the multifaceted dimensions of Bangladeshi seafarer preparedness.

The initial quantitative phase involves gathering statistical data, enabling to quantification of the qualifications, skills, and educational aspects that seafarers receive from their conventional educational institutions. It serves as a foundational step in understanding the baseline capabilities of Bangladeshi seafarers who are working or entering the job market.

Subsequently, the qualitative phase delves deeper into the aspects of seafarer preparedness. Through interviews using close and open-ended inquiries, the quest was to unveil the subjective perspectives and experiences of seafarers and employers respectively. This qualitative phase adds depth and context to the quantitative findings, clarifying not only what qualifications and skills Bangladeshi seafarers possess but also their perception of the gaps in their education and training.

Moreover, by exploring the viewpoint of employers and industry experts, invaluable insights were gained into the specific attributes and competencies they seek in seafarers to meet the exacting standards of the international market.

This research design is suitable for the study because it not only provides a comprehensive understanding of the qualifications, skills, and traits possessed by Bangladeshi seafarers but also delves into the crucial aspect of what they believe they lack. Additionally, by incorporating the perspectives of employers and industry stakeholders, a holistic and well-rounded comprehension of the entire phenomenon was gained under the investigation. This mixed-methods approach ensures that our findings are robust, nuanced, and capable of informing targeted recommendations for enhancing the maritime education and training system in Bangladesh.

## 3.2. Data Collection Method

### 3.2.1. Quantitative Data Collection

The quantitative data were collected about seafarers' education and training and their employability in the global market through surveys of maritime graduates and employers in Bangladesh. The surveys were administered using online platforms. The survey included a mixture of closed-ended and open-ended questions allowing the

participants to reflect their views and elaborate if needed. It has undergone a pilot test to ensure its clarity and validity.

The target population of the survey questionnaire was the maritime graduates who have completed their education from different maritime education and training institutes in Bangladesh, currently working in different shipping companies, or waiting for their next employment. Another target group was the employers who employ seafarers both in private and public organizations. A stratified random sampling method was used for selecting the target sample for this survey (Bhardwaj, 2019).

Quantitative data gathered from the survey were analysed in descriptive statistical methods. This methods provide a clear and concise idea of the data that has been gathered. For the collection of the data Google Forms was used and for analysis, the data excel was used. This method was very helpful for broadening the scope of the data and spotting trends or patterns (Ortiz & Greene, 2007). Thematic analysis was used for the data gathered from the interviewer to find out the recurring themes and patterns of them. The process of thematic analysis involves identifying, analyzing, and reporting patterns within the qualitative data (Ridder, 2014). These themes again were compared and contrasted with the findings of the data gathered by quantitative research to give a clearer understanding of the research questions.

### 3.2.2. Qualitative Data Collection

Qualitative data for this research were collected through in-depth semi-structured interviews with the same participants of the survey. Interviews were conducted online depending on the preference of the participants using the interview guide that was based on three thematic areas as current education state of seafarers in Bangladesh, identifying the gap between the education received and the skills required on-board, and the impact of incorporating industry-specific training. The interviews were recorded for further data analysis with the prior consent obtained by the participants and transcriptions were produced for further analysis. The data has further been transcribed, organized, and coded, and thematic analysis has been done.

### 3.3. Ethical Considerations

Ethical consideration has been strictly maintained and followed for this research work. Questionnaires and interview questions are reviewed and approved by the WMU research ethics committee. This committee evaluates research protocols, assesses potential risks to participants, and provides necessary guidance on ethical best practices. Informed consent was taken in writing from each participant and participants were allowed to ask questions or seek clarifications before consenting. The confidentiality of the participants were ensured. Participants' identities were protected, and personally identifiable information was analyzed and preserved securely. Data gathered for this work will be disposed of after the completion of the research. Participants of the interviews were provided with a debriefing session before their participation to address any questions, concerns, or emotional reactions that could have arisen from their involvement in any particular events of the research.

## Chapter 4 Data Analysis and Discussion

This chapter presents the analysis of both quantitative and qualitative data gathered through interviews and questionnaires. First, the analyses based on the data gathered through questionnaires from seafarers and employers are presented with visual materials. Second, the thematic analysis based on the interview data from seafarers and employers provides further insights into the study.

### 4.1. Seafarers' survey

For seafarer's interviews, there are a total of 11 participants who are of different age groups and both male and female. The majority of the respondents of this survey are male. The respondents had completed their training either from private or public maritime academies.

The data has been collected from seafarers in Bangladesh regarding their educational backgrounds, navigational experience, and perceptions about the gaps in maritime education and training they received at their academies and the skills and knowledge required working on board. The findings are discussed in light of the research questions and objectives, with a focus on identifying the challenges and potential areas for improvement in seafarer education and training. The participants of the interviews are from seafaring experience is also varied among respondents, with some individuals possessing significant expertise spanning over two decades, while others were relatively new to the industry.

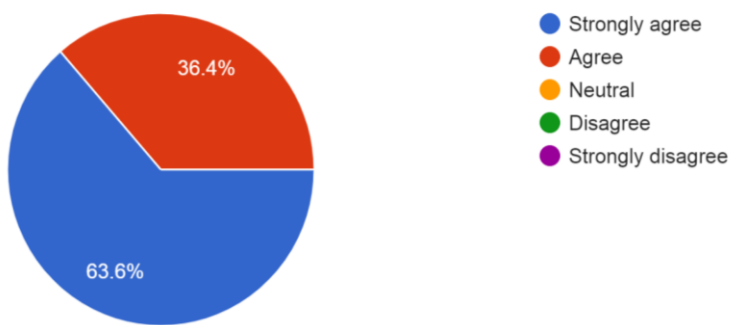
#### 4.1.1. Skills and Knowledge Gaps

Respondents have agreed that the education that they have received in their maritime education and training institution by and large prepares them for their role on board. Additionally, they have identified several areas where they found gaps in their maritime education and training that were crucial for their work on board vessels. For instance, the participants mentioned a lack of emphasis on international rules and regulations, insufficient practical skills development, and a need for more training in areas such as marine electrical/electronic systems. The respondents' feedback

underscores the importance of aligning educational curricula with the practical requirements of the maritime industry.

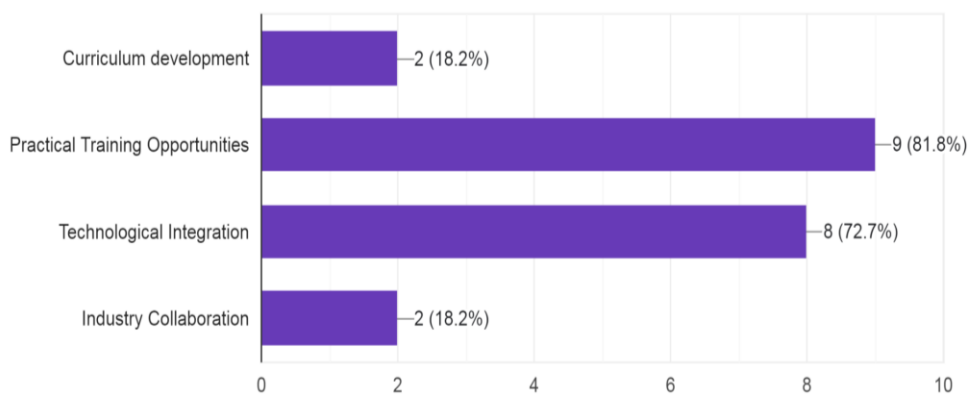
Importantly, as shown in figure 1 all the participants have agreed that the collaboration between maritime educational and training institutions and the maritime sector should be increased. This will result in more employability.

Figure 1 Necessity of collaboration of MET and Maritime Sector.



Other than that collaboration, as per figure 2 the participants also suggested there are areas where improvements in seafarer education and training are needed. The most important sector of their concern is the incorporation of practical training opportunities and technological integration, such as hands-on navigation simulations and the use of advanced maritime software.

Figure 2 Areas of Improvement in MET of Bangladesh.



#### 4.1.2. Recommendations for Education and Training

Seafarer participants provided valuable recommendations for improving the maritime education and training of maritime professionals in Bangladesh. Notable suggestions included the incorporation of more practical and hands-on training, the development of simulation-based training facilities, and a focus on control engineering. Respondents also emphasized the need for professional instructors and increased exposure to shipboard machinery and equipment.

Other than MET, there were also recommendations for other stakeholders, such as the government. For instance, the government can consider increasing the number of flag national vessels. This would help Bangladesh seafarers to gain practical experience and prepare more efficiently for their maritime careers. Working on these vessels would provide them with hands-on training, which is crucial for enhancing their skills and making them more competitive and expert in navigation, accessing berths, preparing for periodic and statutory inspections and surveys, and securing employment in the maritime industry for the national and international shipping workforce. Shipping companies can provide an equal chance to women seafarers by taking measures to prevent gender bias. During the practical training, mentorship can be integrated, for example, on-board senior officers can recommend suitable training for their subordinates which will be helpful for them to excel in their particular role or better prepare them for the future rank.

#### 4.2. Seafarer Interview

Following the questionnaires' responses further 5 interviews were conducted among seafarers' who participated in the survey and based on the responses provided by the interviewed seafarers, the main ideas are summarized about three thematic areas those are current state of maritime education and training in Bangladesh, importance of continuity of education and last but not the least the necessity of incorporation of industry-specific training and building strong background on hands-on experience,

##### 4.2.1. Current State of Maritime Education in Bangladesh



As the survey also highlighted, the majority of seafarer participants in the interviews also felt that they were somewhat prepared for their career by their maritime education, although they still see space for growth. One of the participants who is currently working in a national flagship of Bangladesh as a chief engineer has said that “Our current maritime training is good though need a lot of improvement. The focus should be given to developing skills which need Practical training, Industrial visits, and using proper simulation of ships. New and upcoming technologies to be introduced to the cadets and trainees.” Another second engineer currently working on foreign vessels have quoted that “Bangladeshi seafarer lack in modern maritime education and regulations. Maritime training programs should be designed and train people with proper practical skills and knowledge. More practical sessions on practical shipboard works and more advanced technology-based digital presentations of shipboard work can be developed to close the skills gap.”

They discovered a substantial gap between their acquired knowledge through their maritime education and the practical abilities desired on board ships, highlighting the importance of receiving more practical and hands-on instruction. Course outlines and modules could be updated, practical training could be added, and sophisticated technology-based digital presentations might be used as suggestions for development.

#### 4.2.2. Continuing Education and Certification

The participants, who have careers in seafaring, unanimously emphasized the importance of continuous education and the need to keep their certifications up-to-date for advancing in their jobs and enhancing employability. In other words, they highlighted that in the maritime industry, ongoing learning and ensuring that their qualifications remain valid are crucial for career growth and securing job opportunities. One participant has said, “For employability and career advancement obtaining new certification is compulsory. Actually in maritime sectors one must keep himself updated with knowledge of new technology as well as have to go through the required training from time to time”. It is one of the characteristics of the dynamic nature of the maritime industry. They emphasize that they have to put more effort into keeping

their certificates up to date and gaining expertise about the new technologies and changed regulations.

#### 4.2.3. Industry-Specific Training and Hands-on Experience

A key component that has been highlighted by all for preparing seafarers for their professions is the incorporation of industry-specific training and practical experiences in maritime education, particularly in terms of safety and emergency response. One participant has stated that “Industry-specific training and hands-on experience is required for developing seafarer’s skill. And most important thing seafaring is fully involved in practical work. So training and experience both are required for the survival on board”. Seafarers emphasize the need for more practical, hands-on training to bridge the gap between theoretical education and real-world shipboard operations. This calls for a refurbishment of maritime education curricula to include more simulation and practical experiences.

Effective communication is considered vital for safety and efficient vessel operation. Maritime education and training programs should stress the development of strong communication skills to ensure clear and precise communication among crew members. It is emphasized that effective communication skill is essential for safe and effective vessel operation. According to one experienced Bangladeshi seafarer, “For the safety and efficient operation of the vessel good communication skill is mandatory. Proper communication eliminates the risk in vessel operation. Nowadays trainee cadets are going through Training on MECS (Maritime English and Communication Skill). A regular training test and training prior to joining vessel can be established.” Overall, the results indicate that while Bangladesh's maritime education has had some beneficial elements, there is still plenty of room for growth to better satisfy industry expectations. By addressing these problems, the marine workforce may become more knowledgeable and trained, which would be advantageous to both seafarers and the industry.

### 4.3. Employers' Survey

To understand the perspective of the industry as well as the employer of the Bangladeshi seafarers one survey were conducted where 7 participants took part both from government organization and private organization. The responses obtained from maritime industry professionals regarding what the industry expects the extent of seafarers' experience levels in hiring decisions and what their pieces of advice are for seafarers. Among the participants, the age group was 30 to 54, and their level in the organization was mid-level to a top-level management position. They were from four different organizations.

#### 4.3.1. Importance of Experience and Industry-Specific Training in Hiring

Participants from the industry emphasized the substantial importance of seafarers' experience and industry-specific training when considering them for positions onboard vessels. They acknowledged that experience not only contributes to a deeper problem-solving capacity but also highlights its importance. For example, Seafarers with years of experience have typically encountered a wide range of navigational challenges, including adverse weather conditions, complex waterways, and congested ports. This experience equips them with the ability to make critical decisions, plot alternative routes, and safely navigate the vessel. Similarly, for seafarers on cargo ships, handling various types of cargo (e.g., containers, bulk goods, and hazardous materials) requires specific knowledge and skills. If the seafarers have necessary industry-specific training they will be well capable of safely loading, securing, and unloading cargo, minimizing the risk of accidents. Some respondents specified that the significance of experience could vary based on the rank for which the crew is being considered, and industry-specific training can also be used as an influential tool for the enhancement of the seafarers' skills and knowledge. The consensus among participants was clear: experience and training are pivotal factors in the hiring process.

#### 4.3.2. Advice for Seafarers

The suggestions provided by industry professionals for seafarers other than gaining adequate experience and training revolved around acquiring practical knowledge,

maintaining a positive attitude, and staying well-informed about the maritime industry's rules and regulations, especially those about safety and pollution prevention. The advice included taking on responsibilities beyond one's rank and gaining diverse experience on board. For example, it can be quoted directly for the participants' response that seafarers must be ready “To perform not only his rank duty but to actively take part with superior rank duty and get experience of any kind of work on-board.” Another suggestion was “Follow the standard working practice, no shortcuts, injuries, pollution. If there is any defect or difficulty that cannot be rectified, must inform the office immediately. The vessel must be ready to be inspected by third parties always.” Respondents emphasized the importance of adhering to standard working practices, communicating effectively with the office, and demonstrating confidence while appearing for their job interviews.

#### 4.3.3. Additional Qualities or Skills Valued in Seafarers

When questioned about additional qualities or skills the employer values in seafarers, respondents provided varied responses. Confidence emerged as a valued trait, as it indicates a seafarer's ability to perform under pressure. Respect for the employing company and problem-solving skills were also highlighted as desirable qualities. Cross-cultural management, language proficiency, and adaptability to different working environments were considered essential, reflecting the global nature of the maritime industry. Some respondents mentioned the completion of company-specific computer-based training (CBT) as a positive attribute.

#### 4.4. Employers Interview

After the survey, the employers are asked for interviews. To get a clearer picture of what traits or characteristics they value most while hiring a seafarer and how seafarers can earn them. A total of 5 interviews were conducted and their thematic analysis was conducted in three categories: Essential characteristics and traits for seafarers; Technical qualification and experience; and Soft skills and communication.

#### 4.4.1. Essential Characteristics and Traits for Seafarers

The traits and characteristics that employers highly value are adaptability, integrity, and a positive attitude in seafarers. Effective communication skills, leadership potential, and cultural sensitivity are considered crucial as a seafaring career is one of the most challenging ones, having to deal with different environments, people, cargo, and risks. Trustworthiness, strong work ethic, and resilience are non-negotiable qualities as they are trusted with the most valuable assets of life in the sea and also the vessels themselves with the cargo. A respondent stated, "We are responsible for valuable cargo and vessel safety. Trust is paramount, and a strong work ethic ensures everything runs smoothly". Seafarers must be able to respect and understand different cultures within diverse crews to work in coherence on board. These findings emphasize the importance of a well-rounded set of characteristics and traits in seafarers. One response stated, "We work with diverse crews from various backgrounds. Understanding and respecting different cultures is essential for teamwork". Beyond technical skills, these traits play a pivotal role in ensuring the success and safety of maritime operations. The maritime industry's multicultural nature highlights the significance of cultural sensitivity and teamwork.

#### 4.4.2. Technical Qualifications and Experience

Respondents have mentioned that technical qualifications and relevant certifications are crucial for ensuring safety and efficiency. One respondent stated, "Without the right qualifications, safety is compromised. Certifications ensure we meet industry standards". Respondents have also mentioned that problem-solving skills and knowledge of international regulations are highly valued among the employees. A respondent stated, "We operate in international waters, and knowing regulations is essential to avoid legal issues" and another one mentioned, "In our line of work, unexpected issues arise. Problem-solving skills are crucial to resolve them quickly." These findings underscore that Ship owners recognize the value of a combination of formal education and hands-on experience, particularly for roles involving navigation and maintenance. The role of maritime experience is prominent in the hiring process, indicating that familiarity with industry-specific challenges is highly regarded.

However, ship owners also acknowledge the value of potential and a willingness to learn, which can compensate for limited experience. Leadership roles, which may require a proven track record, underscore the importance of expertise in critical positions. The industry's openness to newcomers highlights the potential for fresh perspectives but emphasizes the need for ongoing training and development.

#### 4.4.3. Soft Skills and Communication

Soft skills are highly appreciated in the maritime business, with adaptability, resilience, and cultural sensitivity being crucial for succeeding in such a demanding environment, according to companies and ship owners. Given the global character of the sector, effective communication skills, particularly in English, are essential. A participant mentioned, "English is the industry's common language. Clear communication ensures safety and efficiency". It is crucial to communicate clearly and concisely to ensure safety and efficiency. Familiarity with maritime communication protocols and the ability to adapt communication styles to different cultural norms are highly appreciated by ship owners. A participant noted, "Knowing the right communication protocols ensures smooth coordination on board". This fosters a harmonious on-board environment and builds positive relationships with crew members from around the world.

#### 4.5. Discussion

The findings from this study align with the broader discourse on the challenges faced by maritime education and training programs worldwide. Seafarers in Bangladesh, like their counterparts in other countries, highlight the need for a more practical and industry-oriented approach to education. The call for greater emphasis on international rules and regulations reflects the evolving regulatory landscape of the maritime sector, emphasizing the importance of keeping curricula up-to-date.

Furthermore, the recommendations put forth by seafarers resonate with the industry's growing reliance on automation and technology. The demand for control engineering and mechatronics education underscores the maritime industry's transformation towards greater automation and digitalization.

The challenges identified in this study offer valuable insights for policymakers, maritime educators, and industry stakeholders. Addressing these challenges may involve curriculum redesign, investment in advanced training infrastructure, and closer collaboration between training institutions and industry partners.

The consensus among industry professionals in Bangladesh regarding the significance of experience aligns with the maritime industry's reliance on a skilled and knowledgeable workforce. The maritime industry carefully assesses seafarers' experience, ranks, and responsibilities to make informed decisions during the crew selection process, ensuring a well-structured and efficient operation on board vessels.

The advice offered to seafarers reflects the industry's expectations for professionalism, knowledge, and adaptability. The emphasis on adhering to safety and environmental regulations underscores the maritime industry's commitment to sustainability and safety. The encouragement to communicate effectively with the office highlights the importance of clear communication within the maritime hierarchy.

The additional qualities and skills valued by industry professionals, such as confidence, respect for the company, and problem-solving abilities, reinforce the multifaceted nature of seafarer roles. The global reach of the maritime industry necessitates cross-cultural competence and language skills.

In conclusion, the thematic analysis of ship owners' responses highlights the multifaceted nature of seafarer recruitment and the importance of both technical and interpersonal skills. Beyond qualifications and experience, ship owners prioritize qualities such as adaptability, integrity, and effective communication, recognizing their significant role in ensuring safety and success at sea. The industry's multicultural environment underscores the importance of cultural sensitivity and teamwork. These findings provide valuable insights into ship owners' expectations and preferences when hiring seafarers and can inform seafarers on how to stand out in the competitive job market.

This chapter has provided an in-depth analysis and discussion of the data collected from seafarers in Bangladesh. The findings underscore the importance of aligning

maritime education and training with the evolving needs of the industry. By addressing the identified gaps and implementing the recommendations put forth by seafarers, Bangladesh can enhance the education and training of its maritime workforce, ensuring more skilled and competent seafarers are ready to meet the demands of the “global maritime industry” responses from maritime industry professionals regarding the experience in hiring, advice for seafarers, and additional qualities valued in seafarers are the findings that underscore the industry's expectations for experienced, knowledgeable, and adaptable seafarers with safety and environmental responsibilities. Understanding these preferences and requirements can assist ambitious Bangladeshi seafarers in better preparing for a successful career in the maritime industry.



## Chapter 5 Conclusion and Recommendations

### 5.1 Summary of Key Findings

This study has explored the intersection of the current state of maritime education and training in Bangladesh and the current job market. It has also explored the impact of seafarer experience, industry-specific training, and hiring practices within the maritime industry of Bangladesh. Through a comprehensive analysis of survey responses and interviews with seafarers, and industry professionals, several key findings have emerged.

The analysis of first research question revealed that the current education in MET institutions of Bangladesh equips seafarers with a foundational knowledge of maritime practices. However, there is a notable gap in addressing the specific demands and evolving needs of the global maritime job market. Seafarers often lack certain industry-specific skills and practical experience required for efficiency and safety in their roles.

The examination of the second research question highlighted a considerable gap between the education received in Bangladesh and the practical skills demanded on vessels. This gap can be addressed through the integration of industry-specific training, hands-on experience, and a revised curriculum that evolves in response to the dynamic maritime industry. Collaboration between educational institutions and the industry itself is key to bridging this gap effectively.

For the last research question, the analysis conclusively illustrated that integrating industry-specific training and hands-on experience into the education of Bangladeshi seafarers significantly boosts their employability chances. This comprehensive approach furnishes them with the specialized expertise required for different maritime sectors, making them more appealing to potential employers. Consequently, not only does this strategy augment career opportunities, but it also plays a pivotal role in increasing the overall operational efficiency and safety standards within the maritime industry.

Both survey data and in-depth interviews with industry professionals underscored the paramount importance of seafarer experience in the hiring process. The experience was viewed as a critical factor influencing employability, with respondents

emphasizing its role in enhancing problem-solving skills and adaptability. The hierarchical consideration of experience, particularly concerning different ranks, was evident.

Participants from survey responses and interviews offered valuable advice to Bangladeshi seafarers. Their recommendations included the acquisition of practical knowledge, continuous training and maintaining a positive and responsible attitude, staying updated on industry regulations, and actively engaging with responsibilities beyond one's rank. The importance of adhering to safety and environmental regulations was highlighted, emphasizing the industry's commitment to sustainability. In addition to experience, certain qualities and skills were valued in seafarers. Respondents cited confidence, respect for the employing company, and problem-solving abilities as important attributes. The global nature of the maritime industry necessitated cross-cultural competence, language proficiency, and adaptability to different working environments. Some also consider completing company-specific computer-based training (CBT) a positive attribute. It is more flexible and it highlights the self-divineness and motivation of the learner. In the dynamic career of the seafarer, one should be always ready to learn new things as in most cases it's connected to lifelong learning. The industry is very unique, constantly driven by the changes in technologies, regulations, types of vessels, fuels, etc.

From the observation of Bangladeshi seafarers data research has found that there is scope for development in the current maritime education and training system. The gap between education and knowledge acquired there and the actual specific knowledge and skill required on board is a result of not incorporating the changing technologies and regulations into the curriculum. Necessary review and revision should be done with the curriculum. Many have suggested that strategic planning should be carried out to make these changes align with the maritime job market requirement. All the seafarers certify that industry-specific training should be carried out and given more importance to make them more qualified for their position and make the chance of employability higher. If one seafarer has more specific knowledge of the role, the vessels, rules and regulations, and changing technologies it would have given oneself

more preferences in the recruitment process and the seafarer would be more effective and efficient in the safe operation and navigation of the vessel.

### 5.2 Implications for Research and Practice

The findings of this study carry significant implications for practice in the maritime industry. The emphasis on practical knowledge acquisition and a proactive attitude among Bangladeshi seafarers suggests a need for maritime education programs to integrate more hands-on and experiential learning opportunities. This can bridge the gap between theoretical education and practical application, better preparing seafarers for their roles.

Industry professionals' acknowledgment of the importance of experience underscores the need for companies to develop comprehensive recruitment strategies that consider a candidate's background and rank-specific requirements. Clear guidelines for hiring decisions can lead to more effective and efficient crew selection processes.

The advice provided to seafarers underscores the importance of continuous learning and professional development. Maritime institutions and companies should offer opportunities for ongoing training and skills enhancement to ensure that seafarers remain competitive in the industry.

### 5.3 Limitations

The number of respondents in both the survey and interview were limited, a broader sample could have given a more comprehensive picture of the maritime industry of Bangladesh. The data collected through interviews and surveys is subject to bias, such as social desirability bias and self-reported bias. The proposed solutions may not address all the challenges faced by the maritime industry in Bangladesh.

### 5.4 Recommendations for Future Research

While this study has shed light on various aspects of maritime education, hiring practices, and seafarer qualities, there are avenues for further research. There is scope to conduct longitudinal studies to track the career trajectories of seafarers of Bangladesh, analyzing how their education and experience impact their long-term success in the industry. Research work can also be carried out to compare the hiring practices and seafarer requirements across different segments of the maritime industry (e.g., container shipping, oil and gas, cruise ships) to identify sector-specific practices and trends. It will give the seafarer a more in-depth understanding of the qualities that are valued in specific sectors of the job. Another approach could be applied to extend this research to encompass a broader international perspective, considering variations in hiring criteria and practices in different maritime regions.

### 5.5 Conclusion

In conclusion, this study has provided valuable insights into the factors influencing the employability of Bangladeshi seafarers, with a particular focus on experience, advice for new Bangladeshi seafarers, and additional qualities valued by industry professionals. Bangladesh has a good track of seafarer history. But compared to other neighboring countries like India and the Philippines which have excelled in the generation of trained seafarers for the international market, Bangladesh is not successful so far in keeping pace with them. The findings of this research offer guidance for maritime education institutions, recruitment processes, and seafarer development programs, contributing to a more competent and skilled maritime workforce.

## References

- Abbas, A., Ekowati, D., Suhariadi, F., & Anwar, A. (2022). Human capital creation: a collective psychological, social, organizational and religious perspective. *Journal of Religion and Health*, 1- 33.
- Adkins, L. (1995). *Gendered Work. Sexuality, Family and the Labour Market*. Open University Press, 1900 Frost Road, Suite 101, Bristol, PA 19007 (hardcover: ISBN-0-335-19297-1; paperback: ISBN-0-335-19296-3).
- Ahmed, R., Sinha, B. S., Khan, R., & Islam, D. M. (2020). A needs analysis of maritime English language skills for Bangladeshi seafarers to work on-board ships. *Marine Policy*, 119, 104041.
- Ahsan, M. E. (2013). *Coastal zone of Bangladesh: Fisheries resources and its potentials*. Lap LAMBERT Academic Publishing.
- Alamgir, C. M. Z., & Chowdhury, M. M. H. (2019). Maritime Education and National Economic Growth: Bangladesh Perspective. *Bangladesh Maritime Journal*, 3(1), 32-42.
- Alamgir, M. Z. (2001). Problems and prospects of Maritime Education in Bangladesh. *BMJ*, 1.
- Alop, A. (2019). *The main challenges and barriers to the successful "Smart shipping."* TransNav : International Journal on Marine Navigation and Safety of Sea Transportation.
- Amin, M. S. (2022). Organizational Commitment, Competence on Job Satisfaction and Lecturer Performance: Social Learning Theory Approach. *Golden Ratio of Human Resource Management*, 2(1), 40-56.
- Askari, H. R., Bushra, R. T., & Hossain, M. N. (2021). The Maritime Sector in the Economic Development of Bangladesh. *Bangladesh Maritime Journal (BMJ)*, 112.
- Balas-Timar, D. (2015). Relationship between job performance and job satisfaction viewed from the chaos theory perspective. *International Journal of Education and Research*, 3(3), 517-534.
- Bhardwaj, P. (2019). Types of sampling in research. *Journal of Primary Care Specialties*, 5(3), 157-163.

- BIMCO ISF. 2015. MANPOWER REPORT The global supply and demand for seafarers in 2015 (Executive Summary). [www.bimco.org](http://www.bimco.org).
- Cahoon, S., Caesar, L., & Fei, J. (2014). Human resource practices in seafaring: Opportunities for improving retention. In J. Xu (Ed.), *Contemporary marine and maritime policy* (pp. 85-104). *New York, Nova Science Publishers*.
- Caliskan, A. (2022). Seaports participation in enhancing the sustainable development goals. *Journal of Cleaner Production*, 379, 134715.
- Chaudhury, A. B. R., Basu, P., & Bose, S. (2019). Exploring India's Maritime Connectivity in the Extended Bay of Bengal (p. 41). *Observer Research Foundation*.
- Chibber, V. (2022). *The class matrix: Social theory after the cultural turn*. *Harvard University Press*.
- Colombage, J., & Edirisinghe, L. (2018). Maritime trade-dependence of Bangladesh, Myanmar and Sri Lanka: Implications and way forward. *Maritime Affairs: Journal of the National Maritime Foundation of India*, 14(1), 85-98.
- Conway, J. T., Roughead, G., & Allen, T. W. (2008). A cooperative strategy for 21st century seapower. *Naval War College Review*, 61(1), 7-19.
- Demirel, E. (2020). Maritime education and training in the digital era. *Universal Journal of Educational Research*.
- Dong W. H. (2014). Research on Maritime Education and Training in China: A Broader Perspective. *TransNav, the International Journal on Marine Navigation and Safety of Sea Transportation*,
- Edirisinghe, L., Siriwardena, S., & Ranwala, L. (2022). Significance of Blooms Taxonomy in Tartary Education A Case Study in the Maritime Industry. *Sustainable Development Research*, 4(1), p12-p12.
- El-Farr, H. (2023). Expectancy theory. In *Encyclopedia of Human Resource Management* (pp. 122-123). *Edward Elgar Publishing*.
- Enache, I. C. (2011). Marketing higher education using the 7 Ps framework. *Bulletin of the Transilvania University of Brasov. Economic Sciences*. Series V, 4(1), 23.
- Fasih, T. (2008). Linking education policy to labor market outcomes. *World Bank Publications*.

- Handel, M. J. (2003). Skills mismatch in the labor market. *Annual Review of Sociology*, 29(1), 135-165.
- Hanushek, E. A., & Kimko, D. D. (2000). Schooling, labor-force quality, and the growth of nations. *American economic review*, 90(5), 1184-1208.
- Hussain, M. G., Failler, P., Karim, A. A., & Alam, M. K. (2017). Review on opportunities, constraints and challenges of blue economy development in Bangladesh. *Journal of Fisheries and Life Sciences*, 2(1), 45-57.
- Islam, D. M., Alamgir, M. Z., Shaheen, M. A., & Mahmud, A. (2019). Seafarers Employment Issues: Bangladesh Perspective. *Br. Med. J*, 5, 181-192.
- Islam, M. M. (2021). Social dimensions in designing and managing marine protected areas in Bangladesh. *Human Ecology*, 49(2), 171-185.
- Islam, M. S. (2003). Perspectives of the coastal and marine fisheries of the Bay of Bengal, Bangladesh. *Ocean & Coastal Management*, 46(8), 763-796.
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field methods*, 18(1), 3-20.
- Jimenez, V. J., Kim, H., & Munim, Z. H. (2022). A review of ship energy efficiency research and directions towards emission reduction in the maritime industry. *Journal of Cleaner Production*, 366, 132888.
- Kabir, M. D. (2014). Enhancement of seafarers' employability through capacity building in maritime education and training (MET): a case study of Bangladesh.
- Karakasnaki, M., Pantouvakis, A., & Vlachos, I. (2023). Maritime social sustainability: Conceptualization and scale development. *Transportation Research Part D: Transport and Environment*, 121, 103804.
- Kartal, Ş. E., Uğurlu, Ö., Kaptan, M., Arslanoğlu, Y., Wang, J., & Loughney, S. (2019). An analysis and comparison of multinational officers of the watch in the global maritime labor market. *Maritime Policy & Management*, 46(6), 757-780.
- Kilpi, V., Solakivi, T., & Kiiski, T. (2021). Maritime sector at verge of change: learning and competence needs in Finnish maritime cluster. *WMU Journal of Maritime Affairs*, 20, 63-79.
- Knight, P. T., & Yorke, M. (2002). Employability through the curriculum. *Tertiary education and management*, 8(4), 261-276.



- Kristiansen, S. (2013). *Maritime transportation: safety management and risk analysis*. Routledge.
- Liu, J., Gu, B., & Chen, J. (2023). Enablers for maritime supply chain resilience during pandemic: An integrated MCDM approach. *Transportation Research Part A: Policy and Practice*, 175, 103777.
- Nahar, S., & Rouf, M. A. (2019). Maritime labour market trends and challenges in Bangladesh: The need for skill upgradation. *International Journal of Maritime Technology and Management*, 1(2), 138-149.
- Ortiz, D., & Greene, J. (2007). Research design: qualitative, quantitative, and mixed methods approaches. *Qualitative Research Journal*, 6(2), 205-208.
- Portney, K. E. (2013). Local sustainability policies and programs as economic development: Is the new economic development sustainable development?. *Cityscape*, 45-62.
- Rahman, F., Ahmad, T. S. T., & Islam, M. M. (2023). The Potential of Zakat and Sadaqah to Transform a Sustainable Development of Bangladesh: A Study on Moral Parenting Trust among Employment Opportunities. *International Journal of Advanced Research in Economics and Finance*, 5(1), 339-352.
- Rahman, K., Hasan, M. K., Seraj, I., Mahbub, P., & Begum, M. (2022). Maritime Education and Sustainable Development: Prospects of Bangladesh.
- Rahman, M. M. (2021). The rhetorical blue economy in Bangladesh: Analyzing the inborn regulatory bottlenecks. *Acta Aquatica: Aquatic Sciences Journal*, 8(2), 66-73.
- Ridder, H. G. (2014). Book Review: Qualitative data analysis. A methods sourcebook.
- Rouf, M. A., & Nahar, S. (2020). Human capital development and career paths in the Bangladesh shipping industry. *Maritime Economics & Logistics*, 22(1), 55-71.
- Sudhakar, U. R. P. (2015). Maritime Education & Training in India: Challenges Ahead. *International Journal of Innovative Research and Development*, 4(7), 101-106.
- UNCTAD (2018). *Review of Maritime Transport 2018*. New York, United Nations Publications.
- Vidović, T., Šimunović, J., Radica, G., & Penga, Ž. (2023). Systematic overview of newly available technologies in the green maritime sector. *Energies*, 16(2), 641.

- Wang, K. L., Johnson, A., Nguyen, H., Goodwin, R. E., & Groth, M. (2020). The changing value of skill utilisation: Interactions with job demands on job satisfaction and absenteeism. *Applied Psychology*, 69(1), 30-58.
- Wang, Y., & Meng, Q. (2021). Optimizing freight rate of spot market containers with uncertainties in shipping demand and available ship capacity. *Transportation Research Part B: Methodological*, 146, 314-332.
- Win, T. R. (2018). An analysis of advanced training courses beyond the requirements of STCW and applications in Myanmar.
- Belov, A. A. (2020). Ancient Alexandria as the centre of maritime innovations. *Египет и сопредельные страны*, (3), 28-48.

## Appendices

### Appendix 1. Seafarers Survey Questionnaire

Dear Participant,

Thank you for agreeing to participate in this survey, which aims to explore the current state of education for seafarers in Bangladesh and its effectiveness in preparing them for the job market. Your valuable insights will help to analyze the gap between the education currently received by seafarers and the actual skills needed on board vessels. Additionally, we seek to investigate the impact of incorporating industry-specific training and practical experience into the education of seafarers in Bangladesh and gather suggestions to bridge the gap between education and the job market.

Please answer the following questions based on your experiences and perspectives:

Gender: Male/ Female / Others

Age: \_\_\_\_\_ years

Educational Background:

1. How many years of seafaring experience do you have? (If you don't have any, please put 0)
2. How long do you have to wait for your first placement? ( months)
3. What type of maritime educational institutions have you attended? (Select all that apply)
  - a. Maritime Academies
  - b. Private Training Institutes
  - c. Government Training Centers
  - d. Others (Please specify)
4. How satisfied are you with the curriculum of your maritime education program in terms of preparing you for a career as a seafarer?

Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
----------------	-----------	---------	--------------	-------------------

5. Please rate the effectiveness of your maritime education in preparing you with the necessary skills and knowledge for your role as a seafarer.

Strongly Effective	Effective	Neutral	Ineffective	Strongly Ineffective
--------------------	-----------	---------	-------------	----------------------

6. What are the areas where you think the current maritime education system needs improvement? ( Check all that apply)
  - a. Curriculum development

- b. Practical Training Opportunities
  - c. Technological Integration
  - d. Industry Collaboration
  - e. Others (Please specify)
7. Please rate the adequacy of the skills and knowledge provided by your maritime education for your role on board vessels.

Highly Adequate	Adequate	Neutral	Inadequate	Highly Inadequate
-----------------	----------	---------	------------	-------------------

8. What essential skills or knowledge were lacking in the maritime education that you found necessary while working on board vessels?

---



---

9. Have you participated in any industry-specific training programs or practical workshops related to your role as a seafarer?
- a. Yes
  - b. No

10. Please describe how these training programs or workshops have contributed to your professional development and preparedness for your role.

Highly Impactful	Impactful	Neutral	Not Impactful	Not Applicable (if not participated)
------------------	-----------	---------	---------------	--------------------------------------

11. To better match the curriculum with industry demands, collaboration between maritime educational institutions and the maritime sector might be increased.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------

12. Please rate the importance of the following initiatives to bridge the gap between education and the job market for seafarers in Bangladesh (1 most important to 6 less important).

Enhancing Practical Training Opportunities	
Establishing Industry Advisory Boards for Curriculum Development	
Integrating Emerging Technologies into Education	
Facilitating Internships and On-the-job Training	
Strengthening Soft Skills Development	
Others (Please specify)	

13. Please share any other suggestions or recommendations you may have to enhance the education and training of seafarers in Bangladesh.

---



---

Thank you for taking the time to complete this questionnaire. Your responses will be kept confidential and will greatly contribute to advancing our understanding of the challenges and opportunities in maritime education and training.

Sincerely,

Fatema Tuz Tahera  
Student of Master of Science in Maritime Affairs  
Specializing in Maritime Education and Training  
World Maritime University, Malmö, Sweden



## Appendix 2. Employers Survey Questionnaire

Dear Participant,

Thank you for agreeing to participate in this survey, which aims to explore the current state of education for seafarers in Bangladesh and its effectiveness in preparing them for the job market. Your valuable insights will help to analyze the gap between the education currently received by seafarers and the actual skills needed on board vessels. Additionally, we seek to investigate the impact of incorporating industry-specific training and practical experience into the education of seafarers in Bangladesh and gather suggestions to bridge the gap between education and the job market.

Please answer the following questions based on your experiences and perspectives:

Gender: Male/ Female / Others

Age: \_\_\_\_\_ years

Organizations Name:

Designation:

### **Part A**

1. How do you assess a candidate's skills and credentials during the recruiting process to make sure they satisfy the needs of your vessel?
  - a) Through Document Verification
  - b) Through Practical Assessments
  - c) Through Interviews
  - d) Through Referrals from Trusted Sources
  - e) Other (Please specify)
  
2. What particular accomplishments or experiences strike you as a potential crew member when you read a seafarer's resume? (Select all that apply)
  - a) Previous Employment in Reputable Companies
  - b) Noteworthy Awards or Recognitions
  - c) Relevant Courses and Training Completed
  - d) Involvement in Specialized Projects
  - e) Other (Please specify)
  
3. How can you evaluate a candidate's adaptability, problem-solving capabilities, and communication skills during the interview or selection process?
  - a) Through Scenario-Based Questions
  - b) Through Role-Play Exercises
  - c) Through Group Discussion
  - d) Through Reference Checks
  - e) Other (Please specify)

4. How important, in your opinion, should the level of a seafarer's maritime industry experience be taken into consideration when thinking about employing them for a post onboard one of your vessels?

**Part B**

5. Have you ever noticed a discrepancy between the abilities that sailors learned via their school and the skills that are really required on board vessels? If so, do give examples.

- a) Yes
- b) No

6. To improve the employability of the seafarers the alignment of maritime education is very important.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
----------------	-------	---------	----------	-------------------

7. What is the significance of engaging seafarers in industry-specific training programs or practical workshops to enhance their employability chances and readiness for their jobs?

Very Important	Important	Neutral	Less Important	Not Important
----------------	-----------	---------	----------------	---------------

**Part C**

8. What advice would you give aspiring seafarers to enhance their chances of impressing employers like yourself during the hiring process?

9. Are there any additional qualities or skills not mentioned earlier that you value when hiring seafarers? If yes, please specify.

Thank you for taking the time to complete this questionnaire. Your responses will be kept confidential and will greatly contribute to our research on improving the recruitment process and enhancing the qualities and skills of seafarers in the maritime industry.

Sincerely,

Fatema Tuz Tahera  
 Student of Master of Science in Maritime Affairs  
 Specializing in Maritime Education and Training  
 World Maritime University, Malmö, Sweden



### Appendix 3. Seafarers Interview Question

#### **Part A**

1. How well prepared for a profession as a seafarer do you feel your maritime education has made you?
2. What particular abilities or information do you think your maritime education lacked that you discovered to be essential when working on board ships?
3. In your opinion, what can be done to close the skills gap between what you learned in school and what is actually required on board ships?
4. Have you ever taken part in any kind of practical workshops or industry-specific training programs linked to your profession as a seafarer? If so, could you explain how these training courses have influenced your career growth and role readiness?
5. What are the main characteristics and abilities you think ship owners look for when employing seafarers?

#### **Part B**

6. How essential do you think continuing education and obtaining new certifications are to improving your employability and career advancement in the marine industry?
7. How would you rate Bangladeshi sailors' access to education today?
8. Do you think it successfully prepares people for the job market?
9. As a seafarer, have you ever run into issues or problems because of a mismatch between the skills you learned in school and the ones needed on board ships?
10. What do you believe may be taken to better connect maritime education with the demands of the Bangladeshi labor market?

#### **Part C**

11. What effects do you believe the inclusion of industry-specific training and hands-on experiences throughout maritime education may have on seafarers' preparation for their jobs?
12. How can good communication be stressed in maritime education, in your opinion, and what function does it play in guaranteeing the safety and efficient operation of vessels?
13. How do you view Bangladesh's marine industry's cooperation with maritime educational institutions? Do you think it properly satisfies the demands of the sector?

14. In your opinion, how sector-specific training and hands-on experience in maritime education for seafarers be improved in Bangladesh?

## Appendix 4. Employers Interview Question

### Part A

1. What essential characteristics and traits do you place the highest value on when employing seafarers for your vessels?
2. Based on your experience, what particular abilities and credentials do you look for in seafarer applicants to make sure they fulfil the demands of your vessel?
3. How significant is a seafarer's degree of maritime sector experience when deciding whether to hire them for a position on one of your ships?
4. In addition to technical qualifications, what character traits or soft skills do you think are crucial for a seafarer to succeed on board your vessels?
5. On ships, communication is crucial. When selecting potential mariners for your crew, what language and communication abilities do you value?

### Part B

6. How do you gauge a candidate's aptitude for blending in with a diverse crew and keeping good relations on board?
7. Can you give instances when seafarer's leadership abilities were critical to ensuring the smooth running of your vessels?
8. What traits or characteristics, in your opinion as a ship owner, help a seafarer effectively manage emergency situations?
9. New technology and methods are continually being used by the marine sector. How can you evaluate a candidate's ability and readiness to pick up new skills and adjust to these changes?

### Part C

10. What particular accomplishments or experiences stick out to you as a possible crew member when you peruse a seafarer's resume?
11. Can you give examples of times when seafarers on your ships have exhibited remarkable cooperation and collaboration abilities?
12. Lastly, what tips would you provide aspiring seafarers to help them stand out to ship owners like yourself when applying for jobs?