

# Towards a Strategic Management Framework for Enhancing South Africa's Seafarer Development Programme: Addressing Placement Challenges

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**Abstract:** The global shortage of qualified seafarers, particularly at the officer level, presents both a challenge and an opportunity for South Africa. Despite the country's strategic location along critical international trade routes, South African seafarers face significant challenges in obtaining placement upon completion of their training. This article presents a systematic literature review on the placement challenges experienced by seafarers, supplemented with qualitative insights from South African stakeholders. The findings highlight the structural issues within South Africa's seafarer development programme and propose a strategic management framework to improve the placement and competitiveness of South African seafarers in the global maritime industry.

**Keywords:** Seafarer Development, Placement Challenges, Strategic Management Framework, Seafarer Cadetship, Ship Technology

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## 1. Introduction

South Africa's 4000 km coastline offers potential for a competitive seafarer labour market. Despite a global shortage, South African cadets face difficulties in securing vessel placements, critical for their careers (Ruggunan & Kanengoni, 2017). While the economy relies on shipping and ocean resources, South Africa is not recognised as a major maritime nation and has yet to capitalise fully on its maritime potential.

As a leading African economy and active International Maritime Organisation (IMO) member (IMF, 2018), South Africa has not translated its ocean resources into substantial economic growth or job creation (Odeku, 2021). By 2018, only four South African-flagged vessels were registered (SAMSA, 2022), despite being on the IMO Whitelist for compliant training.

Mokhele (2015) highlighted the need for maritime development to reduce unemployment, but challenges persist. While initiatives like Operation Phakisa aim to enhance investment and job creation in the sector, placement difficulties remain (Ruggunan & Kanengoni, 2017).

This study investigates the challenges in seafarer placement and proposes a strategic management framework. It combines literature review and qualitative insights to address the central question: What obstacles do South African seafarers face in securing placements?

## 2. Methodology

This study combines an empirical literature review with qualitative analysis from stakeholder interviews in South Africa. The literature review covers academic publications, industry reports, and policy documents on global and South African seafarer development and placement challenges. Qualitative insights were derived from discussions with seafarers and maritime industry leaders.

### Data Collection:

- *Sample:* Purposive sampling of 20 stakeholders, including education providers, industry leaders, and seafarers with 1-10+ years of experience.
- *Interviews:* Conducted 15 semi-structured interviews via Zoom, lasting 60-90 minutes, from June to August 2023.
- *Participant Selection:* Based on their roles in the seafarer development programme and experience with placement challenges.

### Interview Structure:

- Semi-structured, focusing on barriers to placement, training gaps, gender disparities, and technological skills. Key questions explored challenges in the placement process and the role of education.

**Ethical Considerations:**

- Ethical approval from the University of KwaZulu-Natal's Research Ethics Committee. Informed consent ensured confidentiality and privacy, with anonymised data.

**Data Analysis:**

- Thematic analysis using NVivo, following Braun and Clarke's six-step process. Themes included 'barriers to female seafarer employment,' 'technological skill gaps,' and 'training opportunities.'

**Validity and Reliability:**

- Data triangulation through interviews and policy documents. Member checking and peer debriefing enhanced reliability. Limitations include potential participant bias and the regional focus on South Africa, affecting generalisability.

### **3. Literature Review**

The 2021 BIMCO/ICS Seafarer Workforce Report highlights a global shortage of seafarers, particularly skilled officers for specialised vessels. Demand for these roles exceeds supply (Caesar et al., 2021). High turnover among officers is attributed to personal, organisational, and industry-related challenges, including isolation, family separation, and difficult working conditions (Gu et al., 2020; Cahoon et al., 2014).

Seafaring, once seen as a stable career, is no longer considered a lifelong occupation, especially among youth in developed countries, while developing countries dominate the supply of seafarers (Baum-Talmor, 2021; Wang & Yeo, 2016). Exploitation by crewing agencies, particularly in the Philippines and China, contributes to dissatisfaction and attrition (Zhao & Amante, 2005; Nguyen et al., 2014). Reduced training commitments from shipping companies and a decline in national fleets further exacerbate cadet training delays (Ghosh & Bowles, 2013).

The shortage of officers and oversupply of ratings results from mismatched demand and competition from land-based employers (Caesar et al., 2015). The cyclical nature of shipping often affects inexperienced seafarers seeking employment. Caesar et al. (2015) also note increased ship-to-shore mobility due to declining welfare standards. Addressing these imbalances requires coordinated action and strategic management to ensure sustainable training and employment opportunities.

#### **3.1 The Role of Maritime Education and Training Institutions in Seafarer Training and Placement**

Caesar, Baum-Talmor, and Kitada (2014) note ongoing quality issues in seafarer training despite STCW standards, emphasizing the need for updated training to ensure competency. Fei and Caesar (2018) point out that short sea tenures discourage investment in training, while Ghaderi (2019) suggests autonomous technologies could help address crew shortages.

Improving training could create sustainable career paths and reduce turnover. Caesar, Cahoon, and Fei (2014) call for MET systems that align with career needs, while Ghosh (2017) argues that traditional STCW assessments fail to develop industry-required skills, advocating for practical tests and simulators.

Islam et al. (2019) highlight the need for syllabus reviews, better onboard training, and advanced simulators. Maritime administrations must ensure compliance with STCW standards. Onyemечи and Nwokedi (2014) criticize West African training for focusing mainly on explicit knowledge, advocating for a mix of practical and academic approaches (Manuel, 2017).

Bauer (2008) warns that pressures like smaller crew sizes and fast turnaround times reduce training effectiveness, risking safety and performance (Nguyen et al., 2014; Fan, 2017). In Bangladesh, seafarers face employment barriers due to a lack of vessels and training resources. Islam et al. (2019) recommend expanding MET capacity to address these issues. Caesar et al. (2014) suggest that MET should address career sustainability to meet evolving industry needs. Van der Westhuizen (2023, 2024) emphasises the importance of youth accessibility to education and training.

#### **3.2 Technology Developments in Shipping**

Shipping, as a global industry, is heavily influenced by technological advancements. Smart vessels and automation are increasingly prevalent, offering potential solutions to the seafarer shortage (Kitada & Baum-

Talmor, 2019). With digitalisation and the Fourth Industrial Revolution, maritime stakeholders must adapt to new technologies (Abidin & Ismail, 2021; Hopcraft, 2021).

Technological progress has reshaped shipping work environments, encouraging cost reduction and regulatory compliance (Anvari, 2007; Ghaderi, 2019). Automation has reduced crew sizes, cutting costs but also leading to job dissatisfaction as tasks become routine (Cahoon & Haugstetter, 2008). Strengthening cyber security remains critical for shipping companies (Caralli et al., 2004).

Maritime businesses are investing in new technologies to improve efficiency, expecting crews, especially officers, to operate ships with greater precision (Kitada & Baum-Talmor, 2019). Despite automation, human intervention remains essential for tasks like customer service and safety, particularly on cruise ships.

Future seafarers will need advanced skills in navigation, robotics, and automation (Abidin & Ismail, 2021). Even with automation, roles such as maintenance and emergency operations will still require human input (Belcher et al., cited in Kinthaert, 2017).

Maritime Autonomous Surface Ships (MASS) aim to enhance safety and working conditions (Lee, Yun & Hong, 2019). The IMO defines four levels of autonomy, from semi-automated to fully autonomous ships (Rodseth, 2017; Ghaderi, 2019). MASS development will require Shore Control Centres (SCC) with skilled personnel (Kim et al., 2020). MET institutions must prepare seafarers to manage both automated and manual systems, as the shift to remote operations creates more land-based jobs and safer conditions (MarketsandMarkets, 2021).

## **4. Findings**

### **4.1 Access to Cadetship**

Caesar et al. (2014) point to limited availability and high competition for berths, leading to challenge when seafarers are requiring cadetship which is necessary for securing employment. This study found that one of the most significant challenges facing South African seafarers relates to the lack of training berths which require a collaborative approach by engaging with various stakeholders to address this challenge (SAMSA, 2022; SAIMI, 2024). The challenges with cadetship stems from the lack of merchant fleet owned by South African shipping companies or registered to fly the country's flag.

Furthermore, participants noted that although South Africa's training vessel, the **MV Agulhas**, has helped alleviate some of the bottlenecks, it remains unfunded and cannot accommodate all cadets seeking placements. This led to SAMSA as the maritime authority, having to carry the cost of managing and operating the training vessel. This has led to frustration and despair among aspiring seafarers, who having completed their coursework, have to spend years waiting for cadetship. Many of these seafarers are forced to seek employment outside the maritime industry with others ending up in sectors such as retail.

### **4.2 Employment Access and Gender Disparities**

Working with the International Maritime Organisation, the specialised agency of the United Nations. the maritime industry has invested a lot of time, energy and effort on developing and increasing women participation in maritime. Women still constitute around 2% of the global seafaring workforce. The findings of this study reveal significant barriers to employment for South African seafarers, particularly for women and those from disadvantaged backgrounds. Female seafarers, in particular, face both structural and cultural barriers that limit their opportunities in the industry, despite global initiatives aimed at promoting gender equality (Ryals, 2023). Whereas shipping companies are often reluctant to employ women due to perceived risks and a lack of gender-sensitive working environments onboard vessels (MacNeil & Gosh, 2017), respondents of this study seem to agree that employment of women in maritime is an ongoing challenge, requiring more interventions.

### **4.3 Technological Skills and Capacity**

Technological advancements in the maritime industry, including the shift towards automation and the development of **autonomous ships**, are reshaping the skill requirements for seafarers, with the industry seeking candidates with specialised technical skills to operate modern sophisticated and specialised vessels (Aboul-Dahab, 2021; Vagale, Osen, Brandsæter, Hovden, Kristiansen, & Bye, 2022). This study found that whereas the local maritime education and training institutions produce quality seafarers, they felt the need to upgrade their capacity to meet the technological developments in terms of human and infrastructural needs. The high cost of

modernising the training institutions negatively impact on the production of specialised seafarers which are globally needed.

#### **4.4 Despondency, Vulnerability and Recruitment Scams**

Due to the global competitiveness of seafarers, the challenge of finding employment has increased, leading to many graduates struggling to find cadetship and employment opportunities. Due to the long time it takes to find training and berth opportunities, some of the seafarers develop despondency and vulnerability. This study found that such despondency leads to vulnerability of being exploited by unscrupulous recruiters and scammers pretending to be maritime employers. Despondency also led to seafarers giving up on finding a job opportunity within a maritime environment, and opting for opportunities not related to their field of study.

#### **4.5 Lack of Coordination and Management**

Whereas SAMSA has led the seafarer development programme for the past years, SAIMI was later established with the purpose of coordinating and driving research and seafarer training. The study found that the challenges of ensuring that graduates access cadetship gets driven by SAIMI, whilst how completion of the training translate into an employment opportunity has no specific entity that champions it. There seems to be programmes of creating employment opportunities across the country, driven by respective entities and private organisations, with no central figure to champion a country delivery.

### **5. Discussion**

#### **5.1 Strategic Partnerships for Cadetship and Placement**

To address the cadetship bottleneck, South Africa needs to invest in expanding training opportunities and partnerships with international shipping companies. Such an arrangement will assist in creating a pool of vessels that may be used to advance the training of seafarers. Also critical for such partnerships to flourish, is the need to provide policy clarity on building a vibrant maritime economy, which encourages market competitiveness. The country needs to offer incentives needed to rebuild its ship register competitiveness so as to attract shipowners to fly the South African flag on their merchant vessels. By engaging with other maritime nations, South Africa may also negotiate bilateral and multilateral agreements that seek to advance seafarer cadetship, including placement. Establishing strong internal and external partnerships is essential to achieve strategic success (Chiwawa, Wissink & Fox, 2021).

#### **5.2 Capacitating Maritime Training Institutions for the Changing Role of the Seafarer**

Whereas countries such as Denmark and Japan have successfully implemented the dual-purpose seafarer training (Sugimoto, 2004), the study found that there is no best type of training, as job opportunities existed for both training types. South Africa implemented the traditional specialised seafarer training type. With the need to increase the number of seafarers who are able to work on modern sophisticated specialised vessels, training institutions require the update and upgrade their technological infrastructure. Such upgrade would also require the purchasing of new simulators to mimic the new specialised vessels. Through this process, institutions may also be able to offer a wider reach of participants through using the respective technological platforms.

Considering the challenges that seafarers face at sea and how these contribute to their short career life span, maritime institutions need to integrate awareness and coping mechanisms into their curriculum to ensure that cadets and seafarers are trained and taught how to deal with stressors at sea. Gu et al. (2020) indicate such stressors include burnout, piracy, risky conditions, occupational diseases, workplace noise, cross-cultural communication, interpersonal stress, sleep deprivation, time pressure and being separated from family (Tavacıoğlu, Eski, & İnan, 2022). Furthermore, maritime employers must also be empowered through education and coaching on how to motivate seafarers to stay longer onboard vessels.

#### **5.3 Overcoming Gender Barriers**

To enhance gender diversity within the maritime industry, South Africa should implement targeted policies that promote the recruitment, retention, and advancement of female seafarers. This could include the development of **mentorship programmes**, gender-sensitive workplace policies, and partnerships with global organisations such as **Women in Maritime (WIMA)** (Kitada, 2021). The recruitment of females needs to be advanced by

investing in young females, setting up recruitment and support mechanisms. The study found the need to have mentors in the seafaring environment to guide the young seafarers to navigate the environment. Having such support systems equip the new young graduates with skills needed to deal with various social and economic challenges that they may experience as they transition their seafaring journey. The inability to manage these challenges leads to some crew members being overwhelmed and deciding to quit the profession (Gekara, 2009; Ljung, 2010; Caesar et al., 2015).

#### 5.4 Decisive Leadership for Managing Seafarer Development Programme

Considering that the country is losing some of its prospective seafarers to other industries, not related to maritime, there is a need to have government intervention, providing strategic and decisive leadership. Through government leadership, the country may make it compulsory for certain cargoes to be handled by vessels which prioritise training and placement opportunities for South Africans. Creating and facilitating a safe environment for investing in the country's seafarers is critical to ensure preference of the local citizens. The establishment of a centralised **seafarer recruitment system** could also help streamline the placement process and reduce the time it takes for graduates to find cadetship and employment. Such a system will also create a safe platform for job seekers and potential employers to engage in employment relationship. With a centralised seafarer recruitment system, the country may also benefit from knowing the whereabouts of their citizens especially during natural disasters such as the recent Covid-19 pandemic. Also critical is the need to ensure that the promotion of the country's maritime gets driven at the highest level e.g. at the presidential level to ensure that it is part of the national agenda.

##### 5.4.1 Developing a Strategic Response Model

Understanding the challenges that are experienced by seafarers is critical to ensure that the country develops policies and strategies that will assist in addressing such challenges. The highlighted key issues indicate the need to further explore and develop a programme aimed at ensuring training of seafarers translate into employment. With the growth potential of the maritime economy as detailed in the Operations Phakisa Oceans Economy programme, noting the high unemployment rate of South Africa which according to Stats SA's Quarterly Labour Force Survey had reached 33.5% in the second quarter of the year 2024, and the global seafarer shortage, there is a need to focus on maritime as a sector positioned to contribute immensely to reducing high unemployment. Developing the country's seafarer development programme, requires that inputs be gathered from various stakeholders on the respective aspects that require attention and proper management. The government adopted the comprehensive maritime transport policy which seeks to strategically position South Africa as one of the recognised maritime nations. Figure 1 provides a proposed strategic response model that the country should pursue in progressing this work.

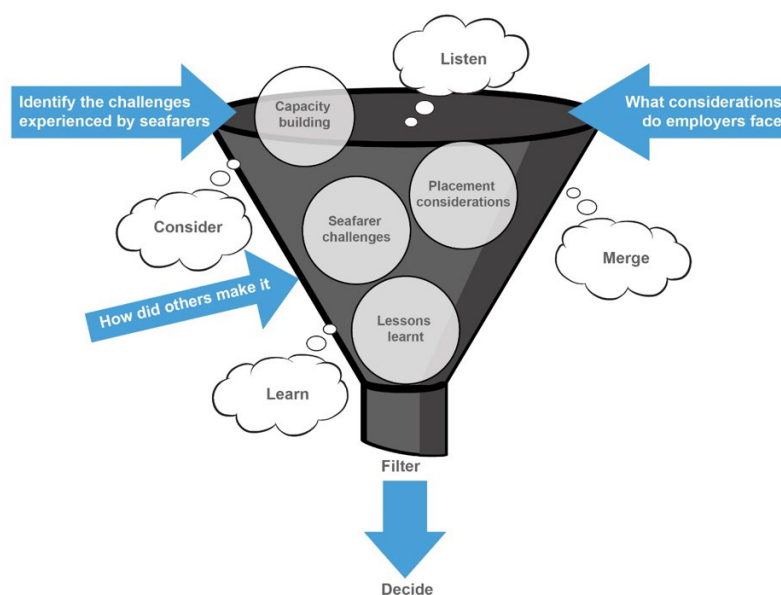


Figure 1: Strategic Management Framework

Source: Author's compilation

To develop a strategic response to the challenges seafarers encounter, there is a need for South Africa to conduct an assessment, analysis and development of a seafarer development programme which is informed by inputs from multiple stakeholders such as:

*5.4.1.1 Seafarers and Labour Unions – to Identify the Challenges That They Experience in Finding Placement and in Their Careers.*

Seafarers form an integral part of the programme, from the stages of training and development to working and developing sustainable seafarer capability. Seafarers has to ensure that they learn the trade, undertake their work with distinction, mentor the new generation of seafarers and impart their knowledge, skills and competencies by participating in the formal training and development of tomorrow's seafarers. In participating in the programme, seafarers need to strive to achieve quality seamanship and project a positive South African brand. It is also worth noting that seafarers may be represented by the labour union when dealing with matters of labour, including for bargaining purposes. This happens when the challenge of placement has been dealt with and issues of labour, conditions of working and salaries are concerned. Labour Unions are there to understand the labour challenges that their members experience in undertaking their daily operations.

*5.4.1.2 Maritime Employers – to Understand What Managerial Considerations They Take in Placing Seafarers.*

Maritime employers benefit from the training institutions producing quality seafarers and the government policies that aim to develop the seafarer development programme. In forming partnerships with the training institutions, maritime employers can provide insight into their business needs, guide the seafarers about the factors they consider in placement and provide training (cadetship) and job opportunities for seafarers. Maritime employers are responsible for ensuring that cadet and employment opportunities are made available to local seafarers.

*5.4.1.3 Maritime Education and Training Institutions – to Understand how They Prepare Seafarers for the World of Work.*

Maritime training institutions are essential to the programme, as they have to ensure that seafarers are properly trained to undertake their work and use new technologies. These institutions require setting up mechanisms that allow seafarers and employers to converge, thus enabling training that meets industry requirements. Training institutions need to ensure that they provide access to the industry (shipping companies, researchers, technology companies, etc.) to have input in developing training programmes. They need to develop strategies and plans to ensure they are well-capacitated to undertake their responsibilities. It is the responsibility of the training institution to provide quality training to seafarers and the industry in general. Additionally, the universities have to ensure that their seafarer training curriculum structure aligns with the National Qualifications Framework (NQF) to ensure recognition and portability of qualifications as required by the South African Qualifications Authority (SAQA). This will require that potential seafarers be allowed to meet their STCW requirements and acquire additional educational competencies that are required in the world of work, ranging from administrative, leadership, management, social and commercial.

*5.4.1.4 Government and Maritime Administrations – to Understand and Learn how Others Have Managed to Develop Their own Seafarer Programmes*

The government has a responsibility to facilitate ease of doing business. It has to implement regulations, policies and incentives that allow stakeholders to use their skills, knowledge and competencies to advance the seafarer development programme. The country needs to continue to develop and fast-track the maritime industry's transformation by putting the interests of South African citizens at the forefront, including facilitating ship ownership and registration. In growing the ship register, the government needs to assist with the preferential acquisition of cargo for the relevant shipping companies. It has to also assist the industry in building a particular brand of South African seafarers, as is the case with the other nations such as Philippines. The government is required to strive for the country to ratify conventions that apply to seafarers, domesticate these Conventions, and enforce compliance for a progressive seafarer development programme. In engaging with global partners, the government has to use its high offices (e.g. the presidency, ministerial and international relations, etc.) to promote the seafarer development programme.

#### 5.4.1.5 Shipbuilders – to Understand What Technologies are Being Developed and Used Onboard Vessels, Impacting on the Current Role of Seafarers.

Engaging with shipbuilding companies is also essential for informing maritime education and training institutions on improving the skills and competencies required in operating the new built vessels, including the improved technological advancements.

To fully respond to the challenges, South Africa as a maritime nation need to listen to the inputs made by the respective stakeholders. It is also important to engage with other maritime nations to learn how they have managed to build their competitive advantage and positioned themselves as preferred labour suppliers. What is required is for South Africa to consider the respective inputs, analyse and merge the issues raised, including filtering them as part of developing and deciding on the strategic response that the country need to undertake. The role of government in facilitating and inculcating the fertile climate of investment is critical in this regard.

## 6. Conclusion

This study acknowledges limitations in terms of the geographical focus on South Africa and the limited sample size of stakeholders. Future research could broaden the scope to include comparative analyses with other emerging maritime nations to explore best practices in addressing placement challenges. Additionally, further quantitative studies could provide deeper insights into the impact of technological training on employment outcomes. By refining the strategic management framework through continuous stakeholder engagement, South Africa can progressively enhance the career prospects of its seafarers.

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