

# The Benefits of Teaching and Learning Maritime Economics as a Subject in South African High Schools

*Aubrey Nhlanhla Sosibo<sup>†</sup>*

## **ABSTRACT**

This study examines the benefits of teaching and learning maritime economics as a subject in South African high schools since official approval was given by the Minister of Basic Education in 2009. Initially piloted in 1995 at Simon's Town School's Lawhill Maritime Centre, offering maritime economics as a school subject has expanded to 34 high schools across four provinces, namely Eastern Cape, Gauteng, KwaZulu Natal, and Western Cape. Using a qualitative research methodology involving semi-structured interviews, the study reveals several significant benefits, including increased maritime career awareness, diversification of the previously white male-dominated maritime sector, enhanced critical thinking among youth, indirect contributions to economic growth and ensuring a steady supply of partially trained maritime professionals. The research confirms that maritime economics education supports South Africa's mission to become a maritime nation, while aligning with Africa's Integrated Marine Strategy (AIMS) 2050, Agenda 2063: The Africa We Want and the International Maritime Organization's (IMO) mandate to ensure sufficient maritime professionals globally. The study concludes that offering maritime economics at the high school level creates exciting career opportunities, reduces youth unemployment and promotes general maritime awareness.

## **Background**

In 2009, the South African Minister of Basic Education approved the addition of a then-new Further Education and Training (FET) phase school subject called maritime economics to basic education's list of subject offerings for grades 10 to 12 for the National Senior Certificate (NSC). Piloted in 1995 by Simon's Town School's Lawhill Maritime Centre, maritime economics has, to date, been adopted and rolled out in 34 high schools across four of the country's provinces, namely Eastern Cape, Gauteng, KwaZulu Natal and Western Cape. In recent years, the maritime economics subject has gained popularity in the country's maritime industry. This can be seen by growing industry support for the teaching and learning of the subject. The South African Maritime Safety Authority (SAMSA), with a mandate to promote the maritime interests of the country, also supports and promotes the subject by giving bursaries to learners pursuing the subject in high school. The national government has included the promotion of maritime economics in its national policy, that is, the Comprehensive Maritime Transport Policy (CMTP).

---

<sup>†</sup> Maritime Economics Educator, Lawhill Maritime Centre.

### Study objective

This study sought to establish the benefits of teaching and learning maritime economics as part of the South African FET high school curriculum about 29 years after the subject was first introduced into schools.

### Method

A qualitative research methodology was used to obtain primary data for this study. Participants were invited to participate in semi-structured interviews.

### Results

The findings of this study affirmed that the introduction of maritime education and training at a secondary level of schooling has been a step in the right direction. Some notable benefits of offering maritime economics in high schools include a drive for maritime career awareness and a wide range of possible careers in an industry that had previously been known to but a few. Being previously a white male-dominated industry, the maritime sector now benefits from superb talent across different races, as a result of learners being introduced to the industry and pursuing careers in it. Enhancing the youth's critical thinking, indirectly contributing to the growth of the country's economy and ensuring a constant supply of 'half-trained' maritime professionals are other notable advantages of having maritime economics taught at secondary school level.

### Conclusion

The findings confirmed that the benefits of offering maritime economics to high school learners continue to support not only the country's mission as it charts its course to becoming a maritime nation but also in support of AIMS 2050, Agenda 2063 and IMO's mandate to ensure the continuous supply of maritime professionals to meet the growing demand of seafarers and other maritime professionals. Exciting career opportunities, reduction of youth unemployment and general maritime awareness are inevitable outcomes when the subject of maritime economics is offered.

**Keywords:** maritime economics, maritime awareness, maritime high schools

## 1 INTRODUCTION

The importance of maritime education and training (MET) in order to provide young people with the skills they need and to foster the expansion of the maritime industry has increased in South Africa (Kitada, 2022). According to Zimmerman (2022), South Africa produces sufficient graduates with maritime-related qualifications to meet the country's requirements; however, there is still a huge disconnect between the relevant skills required by the maritime industry and the skills that students obtained after attending

MET institutions. Relevant maritime education and skills development have been identified as key contributors to the growth of the ocean economy (Matoti, 2022).

The maritime sector includes all businesses involved in designing, building, manufacturing, acquiring, operating, supplying, repairing and/or maintaining vessels, or parts thereof; managing and/or operating shipping lines; providing stevedoring and customs broker services; and managing and operating shipyards, dry docks, harbours, marinas, slipways and marine repair facilities; and other similar businesses.

With shipping, transportation and port services, maritime-related businesses and endeavours also deal with resource extraction at sea, the leisure and tourism sectors, expert business services, physical law enforcement along the coast and public service (Marlyana, Tontowi & Yuniarto, 2017).

South Africa's increasing interest in growing the country's economy by means of the vast maritime sector, exploiting the country's blue and ocean economy to the fullest, has been a recent focus of the government and other stakeholders. The introduction and public launch of Operation Phakisa by a former president was intended to fast-track the country's economic growth and development as per the country's National Development Plan (NDP), focusing on the maritime industry and the blue economy (Zuma, 2016). The country's NDP itself recognises the maritime industry as one of the focus areas to eliminate poverty, reduce inequality, raise the country's economic growth and promote exports (National Science and Technology Forum, 2018). In 2019, the Comprehensive Maritime Transport Policy (CMTP) was passed to govern and facilitate the development and growth of the maritime industry (CMTP, 2019).

With a coastline of about 3 000 kilometres and surrounded by three oceans—the Indian Ocean, Atlantic Ocean, and Southern Ocean—about 95 per cent of South Africa's total trade volume is seaborne, representing about 80 per cent of the trade-in value. South Africa's eight commercial ports with 127 vessel berths handle about 200 million tonnes of cargo annually. This is equivalent to about 3.5 per cent of cargo volume traded globally and equivalent to about 6 per cent of global tonne-miles. Of the country's seven commercial ports, South Africa takes pride in the Durban port being the busiest in Africa and the largest container facility in Southern Africa; the port of Richards Bay having the world's largest bulk coal terminal; the port of Ngqura being the deepest container port in Africa; the port of Cape Town being the biggest refrigerated container facility in Africa; and the port of Saldanha being the largest in Africa (Department of Transport [DoT], 2021). This shows how huge and important the maritime sector is in South Africa.

To grow the maritime industry and raise awareness of the maritime industry among South African youth, a

Further Education and Training (FET) phase school subject called maritime economics was added to the Department of Basic Education's list of subject offerings for grades 10 to 12 for the National Senior Certificate (NSC) (circular). Introducing maritime education at the secondary school level could provide students with valuable knowledge and skills that could prepare them for a range of careers in the maritime industry, while also contributing to the growth and development of the industry.

Maritime economics has been taught in South African high schools for the past 29 years. This study sought to identify the major advantages of teaching and learning the subject at a high school level, and the benefits that come with knowledge of the subject.

## II LITERATURE REVIEW

The maritime industry faces a growing skills shortage because of increasing demand for seafarers, technological advancements and a mismatch between workforce supply and industry needs (International Maritime Organization [IMO], 2013; Baltic and International Maritime Council [BIMCO], 2015; Donepudi, 2014). In South Africa, this challenge is compounded by gaps in MET, highlighting the need for targeted skills development (Maritime Sector Skills Technical Task Team [MSSTTT], 2014). Early career awareness initiatives such as the IMO's 'Go-to-Sea' campaign, aim to address sea blindness and attract young talent (IMO, 2013). Additionally, the CMTP advocates integrating maritime education into the national curriculum to support industry growth (CMTP, 2017). This literature review explores these key issues in maritime workforce development.

### *Demand/supply of seafarers (and various maritime professionals)*

An announcement by the IMO stated that the human factor has become a major concern in merchant navy shipping. There is an evident challenge in finding and, in particular, retaining a sufficient number of seafarers who are properly trained and qualified (Caesar, 2015). The biggest challenge is finding skilled maritime

personnel with the proper motivation, knowledge and abilities for the professional application of new technology and procedures. The difficulty of this issue will increase as global trade and shipping activity both grow (IMO, 2013).

BIMCO showed that the growing demand in international trade, seaborne trade and global ship fleets have all resulted in the growth in demand for maritime professionals, particularly seafarers, using a model that suggests that global demand for seafarer officers could increase from about 790 000 in 2015 to almost 1.1 million in 2026. (BIMCO, 2015). According to Patchiappane & Rengamani (2018), it was forecasted that by 2015 there will be a shortage of over 27 000 seagoing officers.

The shipping industry at large is one of the most labour-intensive industries. It employs way over two million people directly and indirectly across the globe and requires a number of niche skills for all the specialised operations. (Donepudi, 2014). According to Donepudi (2014), as the industry moves more towards digitalisation and the fourth industrial revolution (4IR), a new set of skills is required and, currently, there is a mismatch between the manpower demanded and the set of skills supplied.

#### *Need for new maritime skills*

Similar to the rest of the world, South Africa is experiencing a skills crisis that is characterised by a mismatch between the labour pool and market demand. This mismatch has been linked to several issues, including the quality of the education system (Human Resource Development Council of South Africa [HRDC], 2013). The MSSTTT released a report on advancing skills development in the South African maritime sector in 2014 and, according to this report (MSSTTT, 2014), maritime transportation in South Africa is viewed as an enabling sector that not only serves the needs of transportation but also other societal and national goals, including, among others, regional integration, economic growth and access to numerous careers and employment possibilities. Furthermore, many industries, including the maritime sector, have identified skill shortages as a major problem in the

way of growth and expansion and the need for skill development as an imminent priority (Caesar, 2023).

The workforce in the marine industry, and particularly seafarers, must be adequately trained and possess the skills necessary to deal with both routine and emergency circumstances, and the flexibility to work in environments that include people from a variety of cultural backgrounds (MSSTTT, 2014). According to Oksavik, Hildre and Pan (2022), a report dealing with recommendations for MET highlighted that, with shipping being such an important source of both direct and indirect employment, there is now a change in the required needs of the maritime labour market. There is a need for MET to adapt as a result of digitalisation, sustainable technologies and globalisation. The complexity of technology on board seagoing vessels grows as a result of increasing automation, autonomy and digitalisation. It is more important now than ever to ensure that new training programmes enhance the adoption of new skill sets.

#### *Early childhood maritime career awareness*

The concept of sea blindness, according to Kirval and Ozkan (2023), is defined as a general ignorance and failure by the public to appreciate the importance of the maritime domain. This mainly results from a lack of early childhood awareness of a sector that could possibly offer career choices. The school curriculum plays a major role in introducing and orienting learners into the world of work (Olamide & Olawaiye, 2013). School subjects play a crucial role in exposing learners to the different careers available to them in the world of work, careers that learners can pursue either after engaging in tertiary level education or their immediate integration into the workforce (Kazi & Akhlaq, 2017).

In an attempt to attract more young people into the maritime industry and address the shortage of seafarer supply, the IMO has started campaigns like the 'Go-to-Sea' campaign, a campaign that was aimed at increasing awareness among youth around the world about seagoing careers. The IMO also initiated and launched a Maritime Ambassadors Program, which aims to have a chosen group of people around the world promote the maritime industry to young people (IMO, 2013).

### *Further education and training*

The FET phase is an essential component of the South African education system, providing learners with an opportunity to acquire the necessary knowledge, skills and attitudes required for their personal development and success in the workforce. The FET phase comprises grades 10 to 12 in the school environment and is a critical phase in a learner's education journey. The FET phase prepares learners for either further study at higher education institutions or for direct entry into the workforce (Department of Education, 1998). As part of the FET phase, vocational subjects such as hospitality studies, tourism and information technology equip learners with practical skills that are in demand in the job market. Occupational courses such as plumbing, electrical and automotive repairs offer learners the opportunity to gain specialised skills in a specific trade, while academic subjects like mathematics, sciences and history prepare learners for investigative and/or problem-solving careers (Meylan, 2022).

According to Green and Collett (2021), the FET phase also promotes the development of critical thinking, problem-solving and communication skills, all of which are essential for success in the workplace and in higher education. During this phase, learners are encouraged to be independent, responsible and self-motivated, preparing them for the challenges of adulthood.

### *The impact of the Comprehensive Maritime Transport Policy on maritime education*

Rallying behind Operation Phakisa, in 2017 the DoT launched a CMTP for South Africa. The primary goals of CMTP are to strengthen South Africa's maritime transport infrastructure and accelerate socioeconomic growth in order to promote the nation's socioeconomic development while, at the same time, contributing to international trade. It was compiled and promulgated as the government's commitment to grow, develop and transform South Africa's maritime transport sector (CMTP, 2017).

The CMTP Policy Statement 29 acknowledges that the responsibility for the development of a country's maritime culture and tradition lies with basic

education. It concludes section 286 by stating that maritime education and awareness should be part of the Department of Basic Education school curriculum throughout all grades. Section 287 acknowledges the role played by a few 'maritime schools' as a crucial role in maritime awareness, training and maritime human resource development. CMTP also finds it imperative to put in extra efforts to support, nurture and develop these schools (CMTP, 2017: 97).

## **III METHODOLOGY**

### *Research method*

This study has employed a qualitative research method because of its exploratory nature. A qualitative approach, which makes use of non-statistical methods to learn more about a population or subject that is being researched, allowing the researcher, in this case, to gain an in-depth understanding of the benefits of teaching maritime economics in South African high schools. One major shortcoming of using a qualitative research method is that, because of the nature of the research and data collection method, the viewpoints and opinions of participants on diverse topics are gathered, which can be challenging to analyse if coherent themes do not emerge. Furthermore, this method does not always yield verifiable facts (Haradhan, 2018). To mitigate this challenge, participants of this study were limited to maritime economics educators who teach a Grade 12 class and have at least five years' experience in teaching the subject.

### *Study population and sampling strategy*

The target population for this study was the 34 high schools that offer maritime economics as part of their FET phase curriculum. These schools are also referred to as maritime schools.

This study adopted a non-probability purposive sampling strategy, which enabled the researcher to decide which schools and educators would be used to generate data. The focus of the study was on high schools that offer maritime economics as a subject. The researcher's knowledge of and engagement with maritime school clusters were crucial in knowing and

selecting the best-suited maritime school educators as participants in this study. The maritime economics educators who participated in this study were from maritime schools in three of South African provinces, namely Western Cape (1 educator), KwaZulu-Natal (18 educators) and Eastern Cape (4 educators). The schools selected are all high schools that offer maritime economics as an elective subject to learners in grades 10 to 12 as part of their FET phase curriculum. Twenty-four educators were targeted as the sample for this study. The researcher, however, only managed to get to 23 participants.

Only maritime educators who had been teaching maritime economics for at least five years were included in this study. Limiting the sample size to educators with five or more years of experience brought forth the following advantages:

- **Expertise and depth:** Participants with five or more years of experience are likely to have a deeper understanding of their roles and the challenges of their work environment, providing more insightful and informed responses.
- **Consistency and reliability:** Limiting the sample to individuals with similar levels of experience ensured consistency, reducing variability that could be due to differing levels of expertise or job familiarity.
- **Practical insights:** Such participants could offer practical, real-world insights rather than theoretical or speculative views that might come from those with less experience.
- **Long-term perspectives:** The participants are more likely to reflect on changes and trends within their job over a significant period.

However, excluding those educators with less experience could limit the diversity of perspectives, potentially omitting fresh ideas from the newer maritime educators.

### *Data collection*

Data for this qualitative research study was collected by means of semi-structured interviews. Participants were interviewed using a semi-structured interview method at their convenience. The interviews lasted for about

40 minutes each, on average, and took place in a setting that was safe and comfortable for the participants. An informed consent letter that reaffirmed and assured participants of the process specifics was given to participants before the interviews.

During the semi-structured interviews, participants were first asked to introduce themselves, their schools and state how much maritime teaching experience they possessed. Furthermore, they were each asked four questions, in accordance with the objectives of this study. The questions asked the participants for their general views on maritime economics as a secondary school subject; whether they deemed it an important subject to be taught at the secondary school level; how they thought it was important to learners and how the subject impacted the learners' lives; and, lastly, on the benefits of teaching and learning the subject to the school community, and to the country at large.

Participants were given the freedom to express their opinions while being advised by the researcher to stay focused on the goal of the study. The researcher was also allowed to ask follow-up questions based on what participants had to say during the semi-structured interviews. The flexibility of the open-ended questions made it possible to delve deeply into the experiences of these schools who teach maritime economics. Open-ended questions allowed the researcher to prod and delve deeper (Cohen et al., 2018).

### *Data analysis*

In qualitative investigations, data analysis is a technique used to create logic from participant-generated data (Cohen et al., 2018). The researcher used notes, patterns, themes, categories and regularities to analyse, interpret and make sense of the data that was generated from the interviews on the benefits of teaching and learning maritime economics in South African high schools. The researcher used data analysis to transform data into a narrative, which was then analysed to yield valuable insights, according to Genapathy's (2016) approach.

A strategy for studying, spotting and summarising patterns in data is the thematic analysis used by the researcher in this study (Braun, Clark & Weate, 2016).

A significant feature of the data that pertains to the research questions was captured by a theme, which also indicated the degree of pattern behaviour or relevance in the data (Braun, Clark & Weate, 2016).

Thematic analysis was a valuable strategy for exploring the views of multiple study participants, revealing similarities and differences, and providing unexpected findings (Braun, Clark & Weate, 2016). The primary goal of thematic analysis was to locate significant or intriguing themes in the data and interpret them in order to make sense of the data. In the study, data from the open-ended questions posed during the interview discussions were analysed using thematic analysis. Thematic analysis was also chosen to guarantee that the data generated would be thoroughly articulated. This was done in line with the study objectives, focusing on addressing the study research questions. The researcher spent time sorting through the enormous amount of data in a methodical and organised manner in order to find the information pertinent to the construction of the research study.

#### *Ethical clearance*

The study adhered to all the University of KwaZulu-Natal rules and regulations concerning ethical conduct in research. Before commencing the research, ethical clearance was sought and full approval was obtained from the university's Humanities and Social Sciences Research Ethics Committee with EC protocol number HSSREC/00004762/2022.

## **IV RESEARCH FINDINGS AND DISCUSSION**

The research findings and the discussion thereof will be presented in this section, outlaying the benefits of teaching and learning maritime economics in South African high schools. The themes that emerged from the semi-structured interviews with the participants are discussed. The responses were grouped into themes, and the themes identified in this study focused on the benefits of teaching and learning maritime economics in South African schools.

Following are the main themes that emerged from the data analysis method, focusing on the benefits of the subject. These themes are discussed below:

- The subject exposes learners to the maritime industry at an early age.
- The subject ushers learners towards the maritime careers available for them directly after Grade 12 year and/or upon completion of tertiary studies.
- The subject is a catalyst to enhancing critical thinking among its learners because of the subject's curriculum design.
- The subject is also identified as a promoter of transformation and an indirect contributor to the country's economic growth.

Under each theme discussed, at least two direct quotations from the participants' responses will be cited. Additionally, the percentage of participants who made mention of a theme under discussion will be shown in brackets.

#### *Learner exposure to the maritime industry*

Most participants, 74 per cent, mentioned that the greatest benefit and advantage maritime learners have over learners doing other subjects is the exposure to the maritime industry they get from the subject content. This means that introducing maritime economics to high school learners plays a significant role in dealing with the country's sea blindness. According to Kirval and Ozkan (2023), sea blindness is viewed as when people are unaware of the importance of the ocean, and some believe in false myths about the ocean. Maritime learners benefit from childhood awareness of the maritime sector, ultimately 'curing' their sea blindness.

---

*When we grew up, we went to the beach just to swim. Even in that, we were told many things about the ocean. We were told that the ocean was angry when the tide was rising, or the wind became stronger and made bigger waves. We saw ships from a distance but didn't know much about them, and even there, there are different types of ships. To me, a ship was a ship, and I didn't even bother asking questions because I was clueless and not interested.*

---

Maritime economics offers general exposure to the maritime industry at large for general knowledge purposes. The study found that, even if learners do not intend to pursue a career in the maritime sector, they get to understand an industry that is important in their daily lives and in the country's economy and in the world's economy.

---

*The exposure these learners get from Maritime Economics is invaluable. Learning about international trade procedures, life, and the sea is all mind-opening. Even when going to the beach for leisure, they can look at the port and know what is going on there and even explain to their parents and friends, showing them what they learn about in class. Unlike some of us, their minds are much more open when going on a boat cruise. The level of excitement is higher because they don't just enjoy floating on water but also being part of what they learn about in class..*

---

This occurs at a time when there is a national (CMTP, 2017) and global desire for ordinary citizens to know and appreciate the maritime sector. Global Citizens, an international organisation working on eradicating poverty, has now zoomed its focus onto the shipping and maritime industry. Even though many people are unaware of the importance of shipping and the maritime sector, almost all of the items we use on a daily basis—including clothing, food and household items—are transported to us by ships. They urged that the least each global citizen can do is to learn and appreciate the maritime industry (Partridge-Hicks, 2020).

According to the participants, maritime economics learners are exposed to the maritime industry, which is 'hidden behind high fences at the harbours'. They are, therefore, able to understand how everyday life depends on the maritime industry.

### *Subject ushering learners to maritime careers*

Sixty-two per cent of participants saw maritime economics as a subject that introduces learners to careers in the maritime sector. Maritime career awareness and guidance are deemed the greatest benefits to learners who opt to do maritime economics at high school level. Participants revealed that the exposure that maritime learners get to different careers in the

maritime industry—that are mostly been unheard of—allows learners to look beyond the traditional careers out there and gives them an opportunity to choose a lucrative (some dollar-paying) career in the maritime sector. This is in line with Section 2.2 of the Department of Basic Education's CAPS Document for Maritime Economics, which highlights the fact that one of the main aims of maritime economics is to stimulate an interest in maritime activities in South Africa, especially with respect to the career choices available in the industry, which could contribute to the development of the country's shipping industry.

More than 62 per cent of participants took the time to mention that maritime economics exposes learners to new and unfamiliar career fields and opportunities. These participants' views aligned with Owen's (2018) views, who said that the main purpose of developing the maritime subject was to create awareness about maritime careers and develop a semi-skilled workforce that will exit Grade 12 with background knowledge and be ready to be absorbed into the maritime industry.

---

*There are so many opportunities and careers in the maritime industry. Not only seafaring, but there are also a lot of jobs ashore as well. Maritime Economics allows learners to make good career choices. While many people would change to a maritime career at a later stage in their lives because they had just found out about it, our learners now have a vast range of careers they can choose from even in the maritime industry. A nice thing is that there are better chances that they will choose a maritime career and can go straight into maritime careers because they now know about them.*

---

According to Bojuwoye & Mbanjwa (2006), school curricular subjects have a strong and positive role influence on learners' career choices. Learners who take maritime economics as a subject are exposed to the industry operations and, consequently, the different careers involved. This will likely to influence them to choose a career in the maritime sector compared to someone who has hardly heard about the industry at all, let alone the possible careers the industry has to offer.

This study also found that maritime economics at the school level plays a positive role in attempts to address the problem of maritime career sustainability, especially

seafaring. The subject not only exposes learners to maritime careers and attracts them to take one on but also gives learners the ‘foot-up’ knowledge required to excel at tertiary education and/or in the workplace.

---

*Learners can see the range of careers available to them—and either choose a career or realise that the maritime industry is not for them. Those entering the maritime industry will have been exposed to the “soft skills,” which include work ethic, punctuality, and long hours, that are required within the industry. Successful learners form a pool of semi-trained, knowledgeable people from whom the industry can choose when recruiting. It saves an employer from having to train new entrants from scratch—although there is still a lot of on-the-job training necessary to acquaint new entrants with the actual face of the industry, its procedures, and the operations of that company.*

---

This aligns with the views of Chala and Bouranta (2021), who wrote that a highly skilled workforce with specific soft skills, such as those that relate to personality, attitude and behaviour, is needed in this cutthroat and quickly expanding industry. Employees’ capacity to work productively is influenced by the combination of their hard and soft skills, which improves performance.

Some companies prefer to recruit and train post-Grade 12 learners who took maritime economics as a subject. These learners are absorbed into the shipping lines on learnership programmes, after which they are likely to be offered permanent employment.

---

*The greatest advantage and benefit of this subject is that you can go and work immediately after matric. Well, I know this because I did it. After matric, in fact, during my last days, I applied for a learnership at a certain maritime company. When they saw the school I came from and saw that I did Maritime economics, they gave me the learnership. I was the youngest in that department, but without blowing my own horn, I did better than the university graduates who were hired with me.*

---

The IMO addressed the human factor as a major concern in merchant navy shipping, namely finding and retaining sufficient properly trained and qualified seafarers. The shipping sector currently faces a challenge in finding skilled maritime personnel with

the proper motivation, knowledge and abilities to apply new technology and procedures professionally. The difficulty with this issue will increase as global trade and shipping activity both grow (IMO, 2013).

According to Heirs and Manuel (2021), MET is of significant relevance at the secondary level. Their study determined that raising awareness of the maritime industry by way of maritime education could result in the entry of the youth into the maritime sector and is one technique that could be used to address the challenge of a sustainable supply of seafarers, in particular, and human resources for the larger industry in general. They cited that secondary education and its accompanying curriculum could be established to form the basic elements of early marine awareness among children aged 11 to 18 years old. This is what the South African Department of Basic Education has done already by implementing maritime economics as a subject in 34 schools.

#### *Subject as the catalyst to enhance critical thinking among learners.*

According to the maritime economics’ CAPS document, a policy that governs the teaching of the subject, one of the main aims of maritime economics is to impart investigative and analytical skills to learners. The policy document states that learners who take maritime economics must be able to use different sources to critically analyse trends and come to intelligent conclusions about current matters relating to the maritime industry.

Furthermore, 60 per cent of the participants in this study perceive maritime economics as one of the subjects that cultivates critical thinking in learners. It is a subject that encourages learners to ‘think outside the box’, learn to apply classroom-accumulated knowledge in problem-solving questions and critically discuss issues on current affairs within the maritime industry.

---

*While many other elective subjects employ a ‘swallow and vomit’ approach where learners must memorise notes for tests and exams, Maritime is one of the few subjects that tests learners analysing and interpreting skills. Maritime tests and exams are pure applications of the notes instead of recalling verbatim. Scenarios given force them to think out of the box.*

---

According to Green and Collett (2021), the CAPS curriculum, which MRTE follows, particularly requires that learners develop critical and creative thinking skills. From the participants' responses, it was notable that even maritime teachers feel that their minds and thinking are being stretched and that they, as teachers, are learning to think critically and develop analytical skills.

---

*If you want to build your critical thinking, come teach maritime. Even as a teacher, I am still learning. Some questions still challenge me as well. They appear difficult on the question paper, but when the marking memorandum is received, then I will see that it was easy. Now I am learning to think out of the box, and I know my learners are learning the same.*

---

However, the Progress in International Reading Literacy Studies (PIRLS) show that South African learners are not yet developing as critical and creative thinkers (PIRLS, 2015). Participants emphasised the notion that maritime economics fosters the development of critical thinking skills among learners. They highlighted the fact that assessments in the subject comprise a minimal portion of recall-based tasks, with a greater emphasis placed on analysis, critical discussion, calculations and the formulation of practical solutions. After three years of maritime education and assessment, learners matriculate with enhanced critical thinking skills, independence in problem-solving and the ability to approach challenges with innovative and analytical perspectives.

#### *Subject as a promoter of transformation and indirect contribution to the country's economic growth.*

Since the introduction of Operation Phakisa, discussions surrounding the blue ocean economy have gained significant momentum across the country. Globally, there has been a growing emphasis on the need to uphold social equity as nations transition towards the blue economy, ensuring a balanced representation of race and gender in the sector (Arbow, 2019).

The issue of transformation within the maritime industry emerged as a significant theme among 15 (65 per cent) participants in this study. Historically perceived

as an industry dominated by white individuals, the sector is increasingly becoming accessible to people of colour. Participants highlighted the fact that the introduction of maritime economics in underprivileged black schools is creating new opportunities for young black men and women, facilitating their entry into the maritime sector.

---

*Maritime (economics) helps our South African youth to see a variety of maritime careers at sea and ashore. These are careers that were only limited to white people and certain privileged individuals. Look at South Africa today; we are slowly transforming the maritime industry as more young people of colour and more females are entering the maritime space.*

---

The maritime industry is an industry that is pushing the diversity agenda through the directives of the IMO and the International Labour Organization (ILO) and that has made the reduction of racial discrimination in the workplace and promoting equity its key outcomes (Gota, 2020). Furthermore, Gota explained that when talking about racial diversity, workplace diversity in the maritime sector may have been accomplished but eliminating racial prejudice is crucial for promoting and ensuring diversity. Minority groups become an easy target of discrimination. With maritime economics being taught at a high school level, learners form the base of the manpower supply chain, attracting more women and people of colour to see lucrative careers in the industry and help diversify it more.

The study established that maritime economics plays a crucial role in supporting the nation's blue ocean economy strategy by addressing unemployment and poverty, while contributing to economic growth. According to the HRDC (2013), the maritime industry holds significant potential for driving economic expansion, job creation and societal inclusivity, thereby addressing the triple challenges of poverty, unemployment and inequality. By introducing learners to career opportunities in the maritime sector—some of which they can enter directly after completing Grade 12—maritime economics not only prepares them for employment but also fosters entrepreneurial aspirations within the industry.

---

*In a nutshell, maritime economics is all about using education to deal with youth upliftment and poverty alleviation. As many may know, South Africa has one of the highest youth unemployment rates in Africa, sitting at 66 per cent the last time I checked. Africa also has the youngest population in the world, and according to the reports, this number is growing. The continent in general, and South Africa in particular, also has a huge youth unemployment issue, a story that is often told alongside that of the continent's economic growth prospects. The subject is not guaranteeing jobs but at least exposing learners to tap into the untapped maritime space to be able to put bread on their tables.*

---

This aligns with Dyers (2017), who argued that South Africa stands to benefit significantly from Operation Phakisa's vision of harnessing the ocean economy. He emphasised that, for this initiative to transition from concept to reality, investment in maritime education is essential. The study further found that maritime economics is designed to equip learners with foundational skills for entry-level positions in the maritime industry, minimising the need for extensive employer-led training beyond familiarisation with company-specific practices. Successful maritime economics learners form a pool of semi-trained, knowledgeable individuals who the industry can recruit. He further noted that this reduces the burden on employers to train new entrants from scratch, although on-the-job training remains necessary to familiarise recruits with industry-specific procedures and company operations (Dive In, 2020).

The DoT also shares the same vision about the potential of maritime schools to contribute to the country's ocean economic growth. The Department's transport policy (CMTP, 2017, Policy Statement 27) notes that:

---

*The country [South Africa] has a handful of maritime schools, and if we are to help transform the industry, an extra effort is necessary to develop, support, and nurture these schools because of the critical role they could play because of their strategic location in the ladder of human development ... . It goes without saying that if learners were never introduced and/or exposed to maritime awareness at the schools' level, the chances of an interest being generated at the point of enrolment at a tertiary institute are far reduced.*

---

## V CONCLUSION

The maritime and shipping industry is the backbone of South Africa's (and the world's) economy, with over 90 per cent of the country's trade moved at sea. The South African government has taken an interest in expediting the country's blue ocean economy by, among other things, the introduction of Operation Phakisa, Operation Vulindlela and the CMPT. These policies and strategies acknowledge that at the centre of achieving the exploration of the full potential of the ocean economy lies education and training.

Looking at maritime education at the secondary level of schooling, this study established that the South African Department of Basic Education, along with the South African Independent Examination Board (IEB), has taken an interest in introducing maritime studies in South African high schools. Maritime economics has been introduced in 34 high schools thus far.

The offering of maritime economics as a school subject has not only been associated with the country's economic growth and facilitation of diversity within the maritime industry but it also serves the fulfilment of the country's vision to be a maritime nation by 2030, to bring about equality and alleviate unemployment and poverty, and to have the maritime industry well communicated to South African citizens in a form of general maritime awareness. Maritime economics exposes learners to and prepares learners for the wonderful maritime careers that they can pursue, either straight after their matric year or after furthering their studies at tertiary institutions.

It remains a question of concern that after 29 years of the maritime economics syllabus rollout, the subject is only offered in 34 schools. With the understanding of the benefits of teaching and learning maritime economics in secondary schools, by now the subject should have been offered in many schools.

### Specific recommendations

- Subject to be spread across many other schools. Every young South African deserves the opportunity to receive this content.

- As stated in the CMTF, the government should support existing maritime schools.
- Reach out to communities that already use the ocean as a form of income, for example, indigenous fishing, to promote sustainability for future generations.
- Tertiary institutions offering maritime studies must look at making maritime economics one of the entry subjects for space in the maritime programme.

## REFERENCES

### Books, Chapters, Journal Articles, Conference Proceedings and Theses/Dissertations

- Arbow, T *Washington Maritime Blue and the Blue Economy: Using Diversity and Inclusion to Advance Social Justice in the Maritime Industry*. (Washington: University of Washington 2019).
- Bojuwoye, O and Mbanjwa, S 'Factors impacting on career choices of Technikon students' (2006) 16(1) *Journal of Psychology in Africa* 3–16.
- Braun, V, Clarke, V and Weate, P 'Using thematic analysis in sport and exercise in research' in B Smith and AC Sparkes (eds) *Routledge Handbook of Qualitative Research in Sport and Exercise* (London: Routledge 2016) 191–205.
- Caesar, L 'Emerging dynamics of training, recruiting and retaining a sustainable maritime workforce: A skill resilience framework' (2023) 16(1) *Sustainability* 239.
- Chala, FM and Bouranta, N 'Soft skills enhance employee contextual performance: The case of the maritime industry' (2021) 5(9) *KnE Social Sciences* 126–138.
- Cohen, L, Manion, L and Morrison, K *Research Methods in Education* 8 ed (London: Routledge 2018).
- Donepudi, P 'Technology growth in shipping industry: An overview' (2014) 1(3) *American Journal of Trade and Policy* 137–142.
- Gota, M *Diversity in the Shipping Industry* (University of the Aegean 2020).
- Green, L and Collett, K 'Teaching thinking in South African schools: Selected school leaders' perceptions' (2021) 41(2) *South African Journal of Education*.
- Haradhan, M 'Qualitative Research Methodology in Social Sciences and Related Subjects' (2018) 7(1) 23–48
- Heirs, S and Manuels, M 'Sustainable maritime career development: A case for maritime education and training (MET) at the secondary level' (2021) 15(1) *International Journal on Marine Navigation and Safety of Sea Transportation*.
- Kazi, AS and Akhlaq, A 'Factors affecting students' career choice' (2017) 11(2) *Journal of Research and Reflections in Education* 187–196.
- Kirval, L and Ozkan, A 'Sea blindness in Turkish international relations literature' (2023) 12(1) *All Azimuth* 85–105.
- Kitada, M 'Forward thinking for leading excellence in maritime education and training' (2022) 1(1) *South African Journal of Maritime Education and Training* 71–78.
- Marlyana, N, Tontowi, AE and Yuniarto, HA *Characteristic and Factors of Competitive Maritime Industry Clusters in Indonesia* (IOP Conference Series: Materials Science and Engineering 2017).
- Matoti, N 'Skills development and capacity building within the oceans economy' (2022) 1(1) *South African Journal of Maritime Education and Training* 53–62.
- Olamide, SO and Olawaiye, SO 'The factors determining the choice of career among secondary school students' (2013) 2(6) *The International Journal of Engineering and Science* 33–44.
- Patchiappane, M and Rengamani, DJ 'Study on the demand and supply of seafarers and its impact on maritime industry' (2018) 5(5) *Journal of Management* 63–72.
- Zimmerman, D 'South Africa's maritime skills supply and demand' (2022) 1(1) *South African Journal of Maritime Education and Training* 63–70.

### Websites, Articles and Industry Reports

- Baltic and International Maritime Council (BIMCO) *Manpower report: The global supply and demand for seafarers* (BIMCO 2015).
- Dive In 'High School Maritime Subjects' *DIVE IN Maritime Career Exploration* (22 September 2020) (available from: <https://divein.co.za/article/high-school-maritime-subjects/>) (accessed on 15 December 2022).

Dyers, J *Establishing Operation Phakisa from dreams to reality* (Durban: Moses Kotane Institute 2017).

Human Resource Development Council of South Africa (HRDC) *Skills Development in the Maritime Sector* (HRDC 2013) (available from: <<https://hrdcsa.org.za/services/skills-development-in-the-maritime-sector/>>) (accessed on 21 February 2023).

International Maritime Organization (IMO) *Go to Sea! – A campaign to attract entrants to the shipping industry* (IMO 2013) (available from: <https://www.imo.org/>).

Meylan, A 'Q: What Is Vocational Education?' *EHL Insights* (2022) (available from: <<https://hospitalityinsights.ehl.edu/what-is-vocational-education>>) (accessed on 28 June 2022).

Maritime Sector Skills Technical Task Team (MSSTTT) *Advancing Skills Development in the Maritime Sector* (Pretoria: Human Resource Development Council of South Africa 2014).

National Science and Technology Forum *National Science and Technology Forum* (2018) (available from: <<http://www.nstf.org.za/wp-content/uploads/2018/04/All-The-NDP.pdf>>) (accessed on 30 April 2022).

Oksavik, A, Hildre, H and Pan, Y *SKILLSEA*. (2022) (available from: <[https://skillsea.eu/images/Public\\_deliverables/del2022/D%201.3\\_Recommendations%20for%20education%20and%20training\\_final\\_24%20February%202022.pdf](https://skillsea.eu/images/Public_deliverables/del2022/D%201.3_Recommendations%20for%20education%20and%20training_final_24%20February%202022.pdf)>) (accessed on 3 March 2023).

Partridge-Hicks, S *6 Things Global Citizens Should Know About World Maritime Day 2020*. (Global Citizens 2020).

Progress in International Reading Literacy Studies (PIRLS) *Comparative Indicators of Education in the United States and other G20 countries*. (PIRLS 2015).

## Government Publications

Department of Education *Preparing for the 21st Century Through Education, Training and Work: Green paper on Further Education and Training* (Pretoria: Department of Education 1998).

Department of Transport *Department of Transport* (2021) (available from: <<https://www.transport.gov.za>>) (accessed on 28 April 2022).

South African Maritime Safety Authority (SAMSA) *South African Comprehensive Maritime Transport Policy* (SAMSA 2017) (available from: <[https://www.samsa.org.za/Other%20Forms/Strategic%20Plan%202020-25/2020-25%20SAMSA%20STRATEGIC%20PLAN\\_%20Final%20Sign%20off.pdf](https://www.samsa.org.za/Other%20Forms/Strategic%20Plan%202020-25/2020-25%20SAMSA%20STRATEGIC%20PLAN_%20Final%20Sign%20off.pdf)>) (accessed on 14 April 2025).

Zuma, J *Progress made in respect of the implementation of the Operation Phakisa: Oceans Economy initiatives*, (Gqeberha: South African Government 2016).



Aubrey Nhlanhla Sosibo