



Repositioning Maritime Education and Training in Maritime Organization of West and Central Africa and beyond: Implications for economic growth and global competitiveness

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Abstract

Repositioning Maritime education and training in Maritime Organization of West and Central Africa and beyond is imperative for driving sustainable economic growth and ensuring global competitiveness in the modern blue economy where 85% to 90% of global trade are carried out by sea hence there is need for skilled Maritime workforce to enhance port efficiency, But maritime education and training is faced with numerable challenges such as shortage of qualified staff, inadequate facilities poor funding obsolete curricular sea time experience and insecurity in the Gulf of Guinea. The paper identified the gaps in the current maritime education and training, the latest trends and technologies needed to transformed maritime education and training which include curriculum harmonization, bilingual integration, STCW realignment, industry partnership and blue economy expansion. The paper highlighted some benefits of repositioning maritime education and training among Maritime Organization of West and Central Africa and beyond which include Blue Economy growth capacity building and Regional hub development. It was recommended that the international Maritime organization and Maritime organization of West and Central Africa should increase funding of Maritime Education and training in the Gulf of Guinea meet international standard.

Keywords: Repositioning, Maritime Education and Training, economic growth and global competitiveness

Introduction

Repositioning Maritime education and training requires modernizing curricula to focus on smart shipping and green technologies. This involves acceleration capacity building through partnership with South/South East Asia focusing on STCW complaint training, instructors training and curriculum innovation to boost the blue economy. There is need to strengthen South-South and Triangular Cooperation (SSTC) framework designed to enhance the capacity of Maritime Education in line with International Maritime Organization standards and solidifies the diplomatic ties and cooperation between Indonesia and African partners. Maritime Education and Training in any Maritime institutions should be in line with STCW 2010 guidelines as amended. The curriculum of Maritime Education and Training institutions should base on competencies relevant to the industries and marine ecosystems and not general education (James *et al*, 2024) [13].

Adalikwu (2026) [2] observed that Maritime sector remained the backbone of regional economics that must be harnessed for the development of the region. He emphasized that MOWCA is committed to bridge human capital gaps through collaborations and synergies among training institutions in MOWCA and beyond.

Repositioning entails technology integration in the curricula which include training on artificial intelligence.

Okonna (2026) [16] observed that collaboration with Maritime Education and Training institutions would lead to harmonized curricula in line with international standards. The collaboration should focus on decarbonization, ship building, ferry safety and Cadets placement.

At the moment Indonesia shared insights into its national strategy highlighting the country's progress toward biofuel and liquidfuel natural gas-powered engines, the adoption of electric port equipment and the integration of

decarbonization into its "Golden Indonesia 2024" agenda is a welcome development to emulate. The invitation of Indonesian government by MOWCA to regional workshop on Ferry safety was a calculated attempt to reduce ferry accidents which have claimed lives and property in many members state. Indonesia has become a strong Maritime ally for MOWCA and a model for developing countries in Maritime Education and Training. Repositioning Maritime Education is ultimately about fostering a "knowledge-based" approach where investment in human capital creates a robust safe and efficient maritime industry capable of competing on the global stage. There is need for upskilling for digital transformation since maritime ecosystem needs a workforce that can managed sophisticated high value assets and navigational digital communication as stated in SOLAS convention (James *et al*, 2024; Akinola, 2026) [4, 13].

Baylon (2019) [5] urged that proper Maritime Education and Training ensures improvement in maritime safety better production of marine environmental and better efficiency of international shipping and port operations. Maritime Education is a critical factor to improving the quality of human resources in general and behavioural pattern needed for a better understanding of the sea. With ship technology changing rapidly and the world becoming increasingly knowledge-based, Maritime Education has emerged as a key determinant in shaping our understanding of the oceans and their potentials in pursuit of our global interest thus maritime industry must also evolve a maritime education strategy that emphasizes critical thinking leadership cultural awareness, innovation and adaptability. Maritime education and training is one area whose manpower needs keep increasing so also, its capacity development requires consistent training in the maritime sector holds a key to a successful future for seafarers and maritime industry in general. In fact, education and training is an important

pathway for improving access to employment opportunities. The global shipping industry continuously provides attractive career opportunities with a broad international perspective (Erdogan, Demirel 2017; Oyetola, 2023)^[10, 20].

Historical Background of the Maritime Organization of West and Central Africa (Mowca)

It is an intergovernmental body that unifies twenty-five nations to coordinate maritime transport safety and port efficiency across the region. It was founded in May 1975 as a ministerial conference of West and central African States on maritime transport in Abidjan Côte d'Ivoire aimed at reducing shipping costs and protecting the maritime interests of both coastal and landlocked African countries as well as managing the challenges of freight rates, shipping capacities and port efficiency. After fourteen years of evolutionary trends during an extraordinary session in Abidjan in 1999, the organization officially adopted its current name, MOWCA to reflect an expanded mandate beyond just a ministerial conference which includes division of the sub-region into specialized coast guard zones to better combat piracy, protect the marine environment and boost port safety such as the ISPS code. Currently, MOWCA has embarked on manpower training of instructors in maritime training institutions among members states through collaboration with Indonesian government. About ninety-six MOWCA instructors have been trained in IMO 6.09 (TOT) and IMO 3.12 (TOE) model courses in BP (31P) and STIP Marine College Jakarta in 2025 and more collaboration on going (Gadaliwu, 2026)^[16].

Overview of the Current State of Maritime Education and Training

The current state of maritime education and training is at a devastating condition due to non-harmonization of curriculum, non-recognition of certificate of competency and certificate of proficiency among members states and beyond. There is insecurity in the Gulf of Guinea, problem of sea time experience and language barrier. Hence there is need for exchange visit among maritime training institutions within MOWCA and beyond (Coulibaly, 2026)^[17].

Issues and Challenges of Maritime Education and Training

Poor funding and resource allocation in maritime education and training institutions in MOWCA and beyond suffer chronic underfunding which severely limits the acquisition of modern training equipment, advanced simulators, and operational vessels. This financial constraint creates a vicious cycle where institutions cannot invest in quality infrastructure, leading to poor training outcomes which in turn reduces industry confidence and support. (Onyenucheyo *et al.*, 2025)^[18] opined that the absence of functional dedicated funding mechanisms for maritime education and training has resulted in persistent budgetary inadequacies that compromise institutional effectiveness. James (2020)^[11] posited that the government's priority to maritime education is still very low. Apparent shortage of funds available to maritime institutions has been responsible for declining library and infrastructural materials in recent years. Staff proficiency and competency training re-training are necessary in maritime environment. This is done through conferences, seminars, workshops, symposia, book reviews,

and book presentations. These cannot be done without effective financing of Maritime Education and Training.

Shortage of Qualified Instructors: There is a persistent brain drain of experienced maritime professionals from academia to the more lucrative maritime industry, leaving institutions with underqualified or inexperienced teaching staff. The remuneration and working conditions in Maritime Education and Training-based institutions cannot compete with those offered by international shipping companies, leading to a talent exodus that depletes institutional capacity. This shortage is particularly acute in specialized areas such as marine engineering, electronic navigation, high voltage simulator, and maritime safety management. (James *et al.*, 2025; Taiwo, 2018)^[12, 21]

Inadequate Infrastructure: The lack of state-of-the-art simulators, functional training ships, and well-equipped laboratories fundamentally undermines practical training, which is the cornerstone of effective maritime education. Ship simulators, which are essential for training in navigation, engine operations, and emergency procedures, are either non-existent or obsolete in most Maritime Education and Training institutions. Similarly, the absence of operational training vessels means that cadets and instructors cannot gain adequate sea time experience within the sub-region, forcing expensive overseas arrangements that are often poorly coordinated. (Nwokoro *et al.*, 2022)^[14]

Weak Industry-Academia Linkage: The maritime industry often fails to provide adequate sea-time opportunities for cadets and there is insufficient collaboration in curriculum design, practical training, and job placement. This disconnect means that educational institutions operate in relative isolation from industry needs, producing graduates whose skills may not align with current market demands. The absence of structured internship programs, industry advisory boards, and collaborative research initiatives further widens this gap, limiting the employability of graduates. (Adekumle *et al.*, 2021)^[3]

Regulatory and Certification Gaps: Maritime Organization of West and Central Africa (MOWCA) seafarers face significant challenges in obtaining internationally recognized Certificates of Competency (CoCs) which are essential for employment on ocean-going vessels. The certification process is often bureaucratic, slow, and lacks the transparency required to meet international standards. This regulatory deficiency limits the global mobility and employability among MOWCA seafarers. Confining many to domestic coastal shipping roles that offer lower remuneration and limited career progression. (Dosumu, 2025)^[9].

Strategies for Effective Maritime Education and Training in Mowca Countries and Beyond

Provision of Instructional Space and Instructional Materials: Instructional space and functional instructional materials are essential in teaching and learning process. One cannot expect high level of instructional role performance of maritime instructors when instructional space such as flipped classroom, laboratories, technical workshop, electronic library, and simulators for effective teaching and learning are inadequate. Dauda (2021)^[8] stated that the

major challenge of flipped classroom is power supply. Because most instruments and gadgets are electrically operated. He observed that environment space can support or hinder the goal of the institutions. Adequate space, functional equipment, and a comfortable environment contribute to educational goals and objectives, causing an instructor to be more productive, stay longer and affiliate positively with co-teacher. Maritime teacher needs physical arrangement that support instructional programme.

Curriculum Reform and Harmonization: There is need for curriculum harmonization and reforms among Maritime training institutions in the Sub-region and beyond. This is done by integrating emerging topics such as digitalization and automation in shipping applications, cybersecurity in maritime operations, marine search, pirate prevention, green shipping and emissions reduction technologies, blue economy management, and sustainable ocean exploitation, marine environment, and electro-technical course into Maritime Education and Training curricula. Also incorporate soft skills training including leadership, cross-cultural communication, crisis resolution and conflict resolution and entrepreneurship to produce well-rounded maritime professionals capable of advancing to senior managerial positions. (Onyenucheya *et al.*, 2017; Onyenucheya, 2023)^[17]

Institutional Collaboration: This involves faculty / student exchange programs particularly sea time experience sharing research outputs, exchange visit among maritime training institutions in the Gulf of Guinea and beyond like Indonesia, Philippines, and Singapore to expand sea-time opportunities and establishing a unified framework to address emerging maritime challenges. Also, members state can participate in Blue Economy courses such as digital ship operations, decarbonization compliance, and maritime security in the Gulf of Guinea. (Ojo & Ajagbe, 2020)^[15]

Regional Maritime Expo: This is designed to connect professional with global shipping companies and international employment markets. This is to ensure proper collaboration in terms of industry-academia partnership bridging the gap between educational institutions and maritime employers ensuring training is directly relevance to market needs and enhancing employment opportunities for maritime graduates. (Abdullah *et al.*, 2023)^[1]

Benefits of Repositioning Maritime Education and Training among Mowca Countries and Beyond

Blue Economy Growth: Repositioning strengthening professional skills for safe and environmental sound maritime operations as well as training to support local engineers to improve professional skills. It also encourages strategic partnership with Asia-Pacific maritime nations to enhance training quality and regulatory compliance. (Brook, 2026; Adalikwu, 2026)^[2]

Harmonized Standards and Global Recognition: This will ensure standardize training frameworks across maritime education and training institutions in the Gulf of Guinea as well as mutual certification of programmes in line with international standard. It will also promote international employability and transborder placement of west and Central African seafarers. (Adalikwu, 2026)^[2]

Facility Sharing: It promotes sharing of advanced simulators, specialized workshops, and e-libraries among member states. (Okonna, 2026)^[16], posited that members nation should established mutual recognition of STCW certificates as well as sharing training experiences.

Bilingual Proficiency: It will generate and integrate dual English and French training modules to bridge linguistic hindrances across the sub-region. (Couchaly, 2026)^[2].

Tackling Sea-Time Deficits: This will coordinate regional efforts to secure cadet placement partnerships with international shipping lines. (Akinola, 2026)^[4]

Economic Advantage: Repositioning prepares the workforce for specialized demands in green shipping, alternative fuels and digitalization. (Akinola, 2026)^[4]

Curriculum Harmonization Frameworks: Aligns training programs with global conventions such as STCW among Maritime training institution within the sub-region. Adalikwu (2026)^[2], observed that maritime education remains the backbone of regional economies that must be harnessed for the development of the region. He posited that MOWCA is committed to bridge the curriculum gaps through collaboration and synergies among maritime training institutions. Brooks (2026)^[16] advocated for collaborative, home-grown solutions to African maritime training challenges. He emphasized that harmonizing regional training curricula is essential to address youth unemployment and improve seafarer employability.

Repositioning Maritime Education and Training in MOWCA Countries and Beyond: Implications for Economic Growth and Global Competitiveness

- **Repositioning Maritime Education and Training** will bring about standardized curricula aligned with international maritime organization requirement thus its enhanced harmonized curricula in the sub-region (Okonna, 2026)^[16].
- **Regional Hub Development:** Strengthening training institutions enables MOWCA countries to become regional hubs for maritime trade and education which foster rapid economic growth and development. (Brooks, 2026).
- **Job Creation:** Repositioning Maritime Education and Training enhances improved maritime training. Supports initiatives like cabotage, vessel financing fund which stimulates the growth of indigenous shipping companies, shipbuilding, and ship repairs industries, thereby creating employment opportunities in shipping and port management and contributing to the sub-region's gross domestic product. (James *et al.*, 2025)^[12]
- **Enhancing Global Competitiveness:** By adhering to global standards in ensuring compliance with the international conventions on standards of training certification and watch keeping for seafarers (STCW) for issuing internationally recognized certificates within the Gulf of Guinea as well as offering professional training on low emission technologies and waste management to meet international environmental

regulations such as international maritime organization (IMO) and to compete in a greener global market. (Onyenucheya, 2023)^[17]

- **Driving Economic Growth:** Investing in maritime education and training directly supports the growth of the marine and blue economy, which promotes gross domestic product. Maritime training aligns with maximizing the trillion-dollar potential of the blue economy by upgrading skills in maritime logistics and ship repairs. The blue economy encompasses the sustainable use of the ocean resources for economic growth and environmental conservation. The maritime industry is a vital component of the blue economy, and the repositioning of Maritime Education and Training can promote the responsible utilization of the Gulf of Guinea and beyond in terms of fisheries maritime tourism and mining which promote foreign investment. (Adekunle & Akingbede, 2021)^[3].
- **Sea time opportunities:** It enhance seetime opportunities to instructors and cadet through collaborations with shipping companies on near coastal voyages and unlimited voyages. (Adalikwu, 2006).
- **Access to instructional facilities:** It encouraged smooth access to instructional facilities such as simulation technology through academic partnership with Maritime Education and Training Institutions (METIS) this brings about shared knowledge and transfer of skills needed in competitive global market. Akinola (2026)^[4] opined that knowledge sharing would unlock the vast potential of the maritime sector and effective strategic planning.
- Reposition of maritime education and training would improve digital learning and research through exploring digital platform among Maritime Education and Training Institutions (METIS). It would also boost regional trade, improve maritime ecosystem, smart port system green shipping, capacity development shared value and technology transfer which stimulate economic growth and promote sustainable maritime development (James et'al, 2024)^[13].

Conclusion

The Maritime Organization of West and Central Africa (MOWCA) holds immense promise for driving economic growth, creating employment, earning foreign exchange, and enhancing global competitiveness in an increasingly interconnected world. The sub-region's strategic location in the Gulf of Guinea, extensive coastline, and large youth population provide a strong foundation for maritime excellence. However, this promise cannot be realized without a fundamental repositioning of the Maritime Education and Training system. The current challenges such as poor funding, inadequate infrastructure, weak industry-academia linkage, outdated curricula, language barrier, sea-time deficit, and brain drain have kept the sub-region from tapping into the lucrative global seafarer market and building a vibrant sustainable blue economy that could transform the region's economic trajectory. Therefore, it is obvious that MOWCA and maritime stakeholders should revamp Maritime Education and

Training through curricula harmonization, bilingual integration, STCW realignment, industry-academia partnership, manpower training of trainers, cadet sea-time expansion, and exchange programme and Exchange visit among maritime training institutions. These will help to reposition Maritime Education and Training among MOWCA countries and beyond for economic growth and global competitiveness.

Recommendations

The following recommendations were made:

- The International Maritime Organization and Maritime Organization of West and Central Africa should increase funding of Maritime Education and Training to meet international standards.
- The collaboration of MOWCA with Indonesian government in the training of seafarers in IMO model courses among Maritime Education Training Institutions in the sub-region should be encouraged and sustained.
- The Maritime Organization of West and Central Africa should implement Memorandum of Understanding and recommendation made at the exchange visits of Maritime Education, and Training Institutions at Maritime Academy of Nigeria, Oron.
- The International Maritime Organization (IMO) should upgrade Sekolah Tinggi Ilmu Pelayaran (STIP) Jakarta Indonesia to Regional Maritime University to encourage Africa/Asia maritime cooperation.
- The Maritime Organization of West and Central Africa should ensure that curricula of Maritime education and Training Institutions in the sub-region are harmonized.

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