



# Decision Making in Transnational Maritime Education in West Africa

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**Abstract-** This research investigates the position of maritime universities in transnational education (TNE) in West Africa, highlighting both identified limitations and opportunities. In developing countries, there is a limited access to resources, literatures, and proven evidences of the challenges faced by decision makers in maritime institutions engaging in TNE processes. In this paper, key factors that influence a typical TNE are analysed and ranked using expert input for effective decision making. The results of this research shows that student engagements and exposing student to studies abroad with diverse working conditions are ranked as the top most influencing factors in transnational maritime education decision making process.

**Keywords-** *Transnational Maritime Education, Risk Register, Decision Making Process*

## I. INTRODUCTION

Shortages in academic exchanges and partnerships greatly limit a maritime university's overall visibility in the global higher education system. There is a need for maritime universities in developing nations to increase its transnational education (TNE) partnership especially during these COVID-19 pandemic, to promote its educational opportunities to suit the local and international environment. Presently, the British Council in Ghana is creating more opportunities through TNEs to help maritime universities enhance their maritime curriculums, enhance integration among students, and avoid duplications [1]. TNE is increasingly becoming popular and with the reduction of government subsidies to maritime universities in West Africa, most institutions are now looking for alternative ways to generate income to offset this shortfall [2]. Presently across many West African universities, there have been an increased in developed countries offering their education to international students in their home countries. Maritime universities in West Africa must take advantage of the long term benefit of these increasing trends by understanding the decision making process in TNEs. One of the challenges faced by decision makers in maritime tertiary education in West Africa is that, they don't go into TNEs but are rather approached by developed countries with different stakeholders' benefits. Although there exist limited understanding in comparing the infrastructures, staffing, student-staff ratios and staff profiling, maritime universities in West Africa need visibility at the international level. The aim

of this research is to identify the factors affecting the implementation of TNEs partnerships in West Africa, highlighting the needs for new modes of education delivery, TNE offices, and comprehensive assessment. Again, the role played by maritime regulatory bodies in TNEs will be identified. Lastly, the potential opportunities, risks and factors are ranked for effective decision making. In this paper, section 2 presents the literature review, section 3 the methodology and the discussions and conclusions are presented in section 4.

## II. LITERATURE REVIEW

A research conducted in the Ghana Technology University examined the factors affecting students' enrolment into TNEs programs using structural equation model with surveyed sample data drawn from 2720 active student participants. The main reasons for student enrolment in TNEs were for human capital development, stronger path relationships and a need for higher earnings [3]. Again, a research was carried out in China to explore a framework to ascertain the utility of TNEs in terms of application and research. The result of this study revealed that understanding the peculiarities of TNEs in host countries plays a critical role [4]. Furthermore, a research on student engagement setting - consumer, partner, co-creator and citizen - in TNE has been carried out. The result indicates that students are stakeholders and their opinions are needed by decision makers on the need for TNE engagements [5]. Another study on the strategies in enhancing learning experience of Indian marine engineering students in TNE has been carried out. An investigation into the learning styles of 270 students from 16 groups and the review of personal audit visits undertaken with collaborative partners were particularly revealing. Overall, a strategy for enhancing the learning experiences was highlighted using the strength and weaknesses experienced by the students [6]. Various TNE research were on cultural differences and learning styles [7], quality [8,9], assessing student satisfaction [10], policy level [11], global student mobility patterns [12], experts going transnational [13], institutional social capacity [14], threats and challenges [2], moderation of assessment [15], ethical issues [16], enhancing student learning and teacher development [17], risk based typology [18], educational landscape [19], and quality assurance [20]. In 2013, the British Council carried out a research focusing on the local impact of TNE in supporting economic empowerment and the development of global

knowledge [21]. The factors identified affecting TNEs were career development, student profile coverage, importance of international outlook, intercultural competence, cost of TNE, academic impacts of TNE, and lack of awareness. The results of this study indicated that the myriad factors that determine the impact and implications of TNE are, maturity of higher education system in host country, national policy on the objectives regulating TNE, type of programme, provider mobility, number of local students, international students enrolment, relationships between TNE engaged institution, local higher education provider motive, political, economic cultural context, involvement on other sectors - immigration, science, foreign affairs, history of international partnership - and experience of host-country institution's collaboration with international education [22]. Also, in 2018, Coventry University in UK partnered with Ghana Technology University College (GTUC) to enable more than 4,000 students obtain cheaper UK certificates [23]. Along the same lines, the Transnational Education Ghana Ltd recently acquired accreditation from British Accreditation Council (BAC) as an international quality assurance and guide in selecting higher education provider [21]. However, there is a huge debate on paying attention to foreign provider's motives and program nature when importing TNE [24]. Again the impact of TNE on the professional staff must be considered with the enrolment of special capacity building programs [25]. Similarly, the World Trade Organization and the General Agreement on Trade in Services have played instrumental role in promoting TNEs as a tool of accessing quality education which is susceptible to cultural differences [26]. A significant increase in internationally mobile students have been observe in the past decades with the strong intention of enhancing competitiveness in the global labor markets through studying abroad or enrolling in TNEs programs [27]. Generally, the modes widely used for TNEs are branch campus, franchising or partnership, articulation or twinning, distance or virtual learning and study abroad [2]. A typical decision making tree used in this study is presented in Figure I upon reviewing various factors influencing decision making in maritime TNE.

Maritime education, research and training plays an important role in enhancing the future prospects of students in the maritime job market globally. The necessity to have a good trained officer on board ships today comes in complete accordance with the present development of the shipping industry [28]. The missions of maritime universities in West Africa are to prepare officers using trained lecturers with international competence to prepare young students with little or no experience working at sea with international workers. Preparing these young students to international and diverse working environment through TNE both in the maritime course content and teaching methods to meet different set of skills and expectations remains critical [6]. The regional status of maritime universities has seen several international engagements from China, Singapore and more is required to engage overseas partners to diversify TNEs programs in marine engineering, nautical science and related maritime education fields [29].

In the UK for example, TNE is an increasingly significant and successful characteristics of UK universities' international activity in which maritime universities in West Africa can collaborate with potential maritime universities to improve student inter - cultural knowledge, the universities' reputation, improve students' trust and identification, and increase students' engagements [30, 31]. Due to the social fabrics in developing maritime universities in West Africa, there is a need to formulate a long term higher education policy and development program that factors in the role of TNE [2]. By 2022, around 3 million students from developing nations will seek their higher education outside their own countries to major English speaking countries of UK, Australia, Canada, USA and New Zealand and this can be outstripped by the demand for education through the TNE [32]. In other to make foreign maritime education locally available at an affordable price, governments of many developing nations especially, Singapore and Malaysia have enacted laws and policies to attract leading universities from developed nations to offer programs for local students at affordable cost [2].

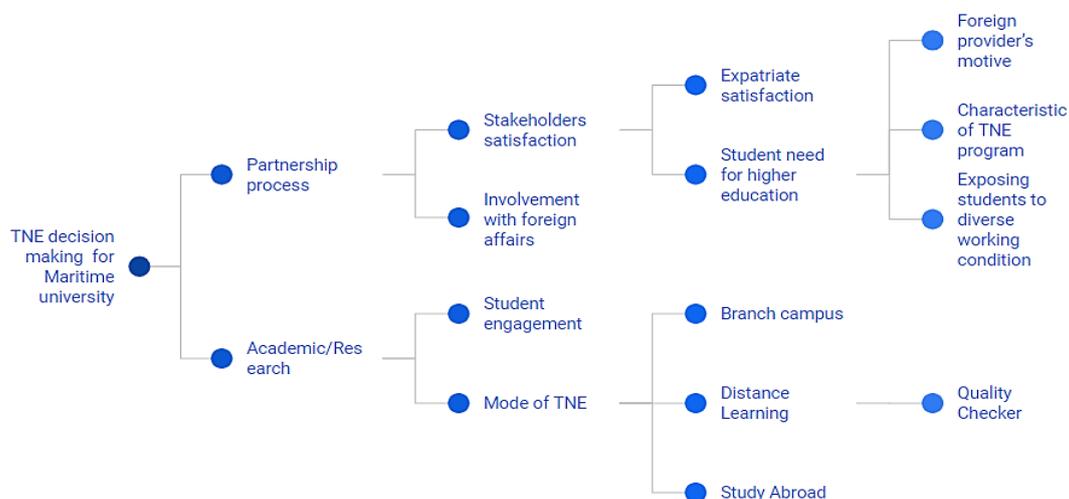


Figure 1. TNE decision making tree

In some TNE programs, expatriates will be working out of their comfort zone. There is a need to be highly motivated and committed in the working environment by interacting well with local staff [33]. Another challenge in some TNE is the need of high speed internet to meet the demands on distance learning. Although distance learning can lead to plagiarism, maritime universities must put in place necessary checkers to maintain academic integrity, issues of meritocracy, and production of value [34, 35]. For maritime teaching universities, TNE is mainly used to expand enrolment and the internationalization of activities on campuses to generate revenue and reduce cost [36]. For maritime research universities, TNE main function is to provide academic opportunities to advance professional degrees and the ownerships of TNEs are typically shrouded in secrecy – as only university management are involved in decisions, making it more uncertain [16, 37].

Decision makers can easily fail to appreciate the new markets, tuition solutions and other related matters such as ethical norms required to run a successful TNE program. For effective decision making into maritime TNE agreements, there is a need for detailed research on organizational practices, stakeholder management, quality assurances, financial investment, decision making, commercial and legal support etc., that affects the adaptability of TNEs both for the short and long term. Scant information on decision making in TNE engagement is currently available. The aim of this paper is to rank identified factors in TNEs for effective decision making with the use of expert elicitation methods under uncertainty as in Figure 1.

### III. METHODOLOGY

A risk register weighted average approach is a quantitative risk assessment used to combine risks and produce an overall risk score. For example, for base event as seen in Figure 1 – ‘quality checker’, three (3) experts input the probability and the weights (or impact on the system). Although the weighted average as a score is deterministic, the values for the criteria are based on a range of uncertain factors and relations that require a model in which the weighted average is just a component [38]. Weighted average approach has the following advantages; it measures for similar registered risks, aid in making judgments on whether or not to accept a new proposal, helps access the value of risks and choose from different opportunities, provides a more accurate look at a set of data than normal average, and provides useful equalization of frequency values of data [38, 39, 40, 41]. A limitation however of this method is associated with the limited scope of assumptions. Table 1 provides the weighted average on quality checker. The overall risk score on engaging in maritime TNE is 52.066 as seen in Table 2. Factors that greatly influence decision making in this study are the quality of TNE education (25), need for distance learning education (25), and clarity on the characteristics of TNE program (26.1). Decision makers in TNE have myriad of factors that are interrelated for effective decision. However, efforts in putting in place priority factors in decision making tree, can be of great benefit in making the process quantifiable and easier to interpret.

TABLE I. QUALITY CHECKER EXPERT INPUT

Base Event Quality Checker	Probability	Weight	Normalized weights	Probability times normalized weight
Expert A	10	3	0.50	5.00
Expert B	20	2	0.33	6.67
Expert C	80	1	0.17	13.33
			Weighted Average	25

TABLE II. WEIGHTED AVERAGE OUTPUT

Identified factors	
TNE decision making for Maritime University Overall Risk Score	(52.066)
Partnership process	(40.898)
Academic/research	(63.233)
Stakeholders satisfaction	(37.695)
Involvement with foreign affairs	(44.1)
Student engagement	(76.7)
Mode of TNE	(49.767)
Expatriate satisfaction	(25.05)
Student need for higher education	(50.341)
Branch campus	(47.6)
Distance learning	(25)
Study abroad	(76.7)
Foreign provider’s motive	(53.125)
Characteristic of TNE program	(26.8)
Exposing students to diverse working condition	(71.1)
Quality checker	(25)

### IV. DISCUSSIONS & CONCLUSION

The objective behind this study was to generate deeper understanding on the factors that influence decision making in transnational maritime education. In identifying what motivates students to engage in maritime transnational education, the student numbers and student perception in TNE remains a main decision factor. Decision makers must continue to engage students, meet student expectations, provide service quality to students, and enhance student perceptions & expectation. The findings of this paper are firmly linked to West Africa but are of value to the wider maritime TNE community. Future strategic discussions on the factors that affect decision making in maritime TNE must be student focused. Although the role and positionality of the TNE provider may be an added advantage, students’ perception and marketability must be upheld.

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