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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**A MODEL-MET INSTITUTE IN KENYA FOR THE
EAST AFRICA REGION:**

**Creating an Effective Infrastructure for Outreach and Improved
Standards.**

By

MUSA HASSAN MUSA

Kenya

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

In

Maritime Education and training

(Engineering)

2000

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

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DEDICATION

*This dissertation is dedicated to my lovely wife Salma
and son Mohammed.*

ACKNOWLEDGEMENTS

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No achievement would be possible without the kind understanding, criticism and professional assistance of the professors at WMU, visiting professors/specialists, the library staff and all other staff for support. I would especially like to acknowledge the support and generous assistance of my supervisor Prof. Peter Muirhead. I would like to express my appreciation to my assessors Prof. Toshio Hikima and Capt. George Angas for assessing this dissertation.

My thanks go to all those who provided me with valuable information and advice, in particular, Susan Wangeci-Eklow and colleagues both in WMU and KPA. I am indebted for their contribution and help.

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ABSTRACT

Title of dissertation: **A model-MET institute in Kenya for the East Africa region: Creating an Effective Infrastructure for Outreach and Improved Standards.**

Degree: **MSc**

This dissertation is a study on the necessary requirements for a model-Maritime Education and Training institute in Kenya for the East Africa region. The revised STCW, the demands for trained maritime professionals and other developments in the maritime industry have all had great impact on the MET systems and institutions in developing countries. Hence, the current MET situation is examined and the available resources in the region identified.

The justification for having a model-MET established in Kenya is assessed. Reports on the analysis of seafarers in the world and the region are examined and discussed, identifying and highlighting both direct and indirect benefits. Other reports and documents on maritime education and training in the region are examined, stakeholders interviewed and data collected. Particular interest is paid towards the creation of employment opportunities and careers for Kenyans.

In order to create an effective infrastructure for outreach and improved standards, a strategic planning of the existing Bandari College is conducted emphasising the requirements for a model-MET institution.

The concluding chapters examine the possible programs to be offered and discuss how the institution should be linked and funded.

KEYWORDS: Model-MET, justification, strategic planning, effective infrastructure, institution requirements and East Africa region.

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LIST OF ABBREVIATIONS

BIMCO	Baltic International Maritime Council
BoG	Board of Governors
COMESA	Common Market for East and Southern Africa
DCWF	Diploma in Clearing, Warehouse and Freight Forward
DIT	Directory of Industrial Training
DMI	Dar es Salaam Maritime Institute
DMTU	Dar es Salaam Maritime Training Unit
EAC	East African Co-operation
FCMS	Foundation Certificate in Maritime Studies
FDS	Foundation Diploma in Shipping
ICS	Institute of Chartered Shipbrokers
IMO	International Maritime Organisation
JAB	Joint Admission Board
JKUCAT	Jomo Kenyatta University College of Agriculture and Technology
JICA	Japan International Co-operation Agency
KCSE	Kenya Certificate of Secondary Education
KIE	Kenya Institute of Education
KPA	Kenya Ports Authority
KCWFA	Kenya Clearing, Warehousing and Forwarding Association
MET	Maritime Education and Training
NORAD	Norwegian Agency for International Development
OECD	Organisation for Economic Co-operation and Development
PDP	Portworkers' Development Programme
PMAESA	Port Management Association of Eastern and Southern Africa
SADC	Southern African Development Community

STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
SWOT	Strengths, Weaknesses, Opportunities and Threats
TACOSHILI	Tanzania Coastal Shipping Line
TASU	Tanzania Seamen's Union
TCD	Technical Co-operation Division
UK P&I	United Kingdom Protection and Indemnity
UNCTAD	United Nation Conference on Trade and Development
UoN	University of Nairobi
WMU	World Maritime University

CHAPTER 1

INTRODUCTION

When people talk about maritime education and training in the world, the perspective normally connected with this is that of training mariners for shipboard operations. This is not really true in the sense that, the current maritime industry involves professions other than the seafaring. In essence, this should be reflected in the so-called professional studies in the maritime education and training sector.

In this thesis therefore, the author looks at an ideal maritime education and training model, which could be adapted in Kenya. In the framework, policies related to MET institutions as affected by the revised STCW 78, needs for maritime training and the effects of new developments in the maritime industry are taken into account. This is done in order to create an effective infrastructure for outreach and improve the training standards of the developing nations such as in the East African region.

By description, an institute's (school's) policy is a statement of purpose and one or more guidelines as to how that purpose is to be achieved. Taken together, it should provide a framework for the operation of the institute, school or programs. Bearing this in mind, it has led the author to identify the necessary requirements for a MET institution in Kenya, indeed a model for the region, which would strengthen co-operation and harmonize the MET systems in the region.

1.1 OBJECTIVES

In creating this model-MET, the author had the following objectives in order to achieve the overall aim:

- To examine the current MET systems in the East Africa region for compliance with the new international legislation and standards.

- To survey the need of maritime training as a way of creating employment and careers for Kenyans and East Africans.
- To survey and identify available resources by conducting a strategic planning through SWOT analysis, creation of a mission statement and setting strategic objectives.
- To identify the requirements for the model-MET institute in Kenya for the East Africa region.
- To draw conclusions for a future pathway for the model-MET and harmonizing the system in the East Africa region and make suitable recommendations based on the findings of the study.

1.2 METHODOLOGY

The developed strategic planning which is based on the observation of the current situation of the MET systems and resources is used to prescribe the necessary requirements of the institute in Kenya.

The sources of information used in this study include interviews conducted by the writer during his vacation in December 1999, and observation and discussions held during field trips to the various MET institutions. Utilization of concepts and materials from lectures that the author attended at the World Maritime University and other training institutions.

A literature search with focus on the need for maritime training in the world, institution requirements, co-operation and harmonization of maritime education and training was conducted. This was done through examining the relevant books, journals, conference proceedings, handouts and lecture notes, newspapers as well as Internet sources.

1.3 LIMITATIONS

Basically, the main limitations in this thesis are:

- It covers only the analysis of seafarers in the world and the region and has not looked at other professions related to the maritime industry in surveying, maritime law, classification, ports and shipping.
- In order to have a broader application or interpretation of the developed policies to suit the model in any developing country, the policies on the requirements are generalized. Where necessary, Bandari College is used as a focal point.

CHAPTER 2

CURRENT MET SYSTEMS AND INSTITUTIONS IN EAST AFRICA REGION

Most of the countries in the East African region have not put in place the revised STCW 78. In order to understand what is in existence, it is important to look at each country's current MET system and the state of progress. The countries that comprise the East Africa region for the purpose of this paper are Kenya and Tanzania while a brief description is given for Mozambique. Figure 1.1 shows a map of the region.



Fig 1.1 Map of the East African region.

Source: Atlas of the World, Oxford.

2.1 KENYA

2.1.1 Background

Although Kenya has one of the leading ports in the region, it does not have a well-defined maritime policy and as a result has not established a sound Maritime Education and Training system of its own. This does not mean that, as a country, it has not been involved in the matters related to MET. For a long period, most of the Kenyan maritime officers were trained in United Kingdom. This is derived from the fact that Kenya is a former British colony.

Looking briefly at the short history of the Kenyan maritime sector, with respect to training, the first trainees were sent to Britain in the early 1960s. This was during the East African Community (which broke up in 1975) and the main purpose was to get qualified officers who were to man the joint common services, lakes and harbours shared by Kenya, Uganda and Tanzania. However, most of these officers did not return home as expected, and this may be due to lack of proper policies, guidelines, incentives and limited opportunities on return.

The formation of the common lake services led to the establishment of the first Seamanship Centre, Marine Training School in Kisumu on the shores of Lake Victoria in 1957. The 3 East African colonies were aiming at training the African seaman. The centre was not a success and it shut its doors pretty soon.

2.1.2 Current MET and Certification System

In looking at the current framework and administrative system of Maritime Education and Training in Kenya and the issue of certificates of competency, Kenya is still governed by the outdated Merchant Shipping Act of 1967, revised in 1983 (a duplicate of the British Merchant Shipping Act of 1894). This act has so far been amended twice, 1996 and 1999 although not yet put into force. In both

cases the training aspect was affected, that is the inclusion of STCW 78 and the revised STCW 78 (STCW 95). Kenya ratified the STCW 78 in 1993.

The Merchant Shipping Office where MET and certification is governed, falls under the Ministry of Transport and Communication, but relies and depends on Kenya Ports Authority for conducting its activities. For instance, after candidates have successfully passed their examinations, which are conducted by the Harbour Master for Deck officers and the Senior Marine Engineer, for Engineering Officers, the Merchant Shipping Superintendent issues the certificates of competency. The Minister who also can apply whatever may be found expedient for the good operation of exam regulates these examinations.

The revised act, Merchant Shipping Act of 1983 has not mentioned the examination subjects for any of the certificates, or the periods of sea service required before sitting for these examinations. These issues are included in the unpublished amended act of 1999, which has taken into account STCW 95.

The certificates of competency to be granted in accordance with the existing act include:

Deck Officers' Certificates

- Foreign Going Ships; Master, Chief, Second and Third mate.
- Near Coastal Ships not exceeding 500 grt; Master and Mate.
- Near Coastal Ships not exceeding 100 grt; Master.

Engineer Officers' Certificates

- First, Second and Third Class Engineer

The Merchant Shipping Act of 1983 also refers to the recognition of Certificates of Competency granted by other countries.

2.1.3 Institutions for MET

Currently there are no dedicated MET institutions for seafarers in Kenya. The only institution, which offers maritime training activities, is Bandari College. It was basically established to offer training to Kenya Ports Authority (KPA) staff in cargo handling, management and administration, operation and maintenance of equipment and marine craft (tugs, pilot and mooring boats).

Figure 1.2 shows the organisational structure indicating a long linkage chain to the KPA management. One may ask if it is effective to have this long executive chain of command influencing the running of an educational institution, or if the college should be autonomous. These are some of the issues, which need to be looked into.

Some pre-sea training for KPA's cadet officers, preparing to become marine pilots, is also conducted in this college. Other courses offered are for external port users. These include a Diploma in Clearing and Freight Forwarding, Institute of Chartered Shipbrokers (ICS) course, ferry coxswains and other short courses like basic fire-fighting, first aid and survival craft.

In terms of training facilities, the Bandari College has teaching facilities available to train skills both deck and engine room ratings. However, there could be some further improvements in training facilities, such as:

- (a) survival training – the construction of a swimming pool
- (b) fire-fighting complex – the construction of a fire simulation complex
- (c) seamanship/waterside facilities – equipping the current seamanship workshop.

Actually, it can be said that these facilities are under utilised since no meaningful crew training programmes are run regularly.

BANDARI COLLEGE ORGANISATIONAL STRUCTURE

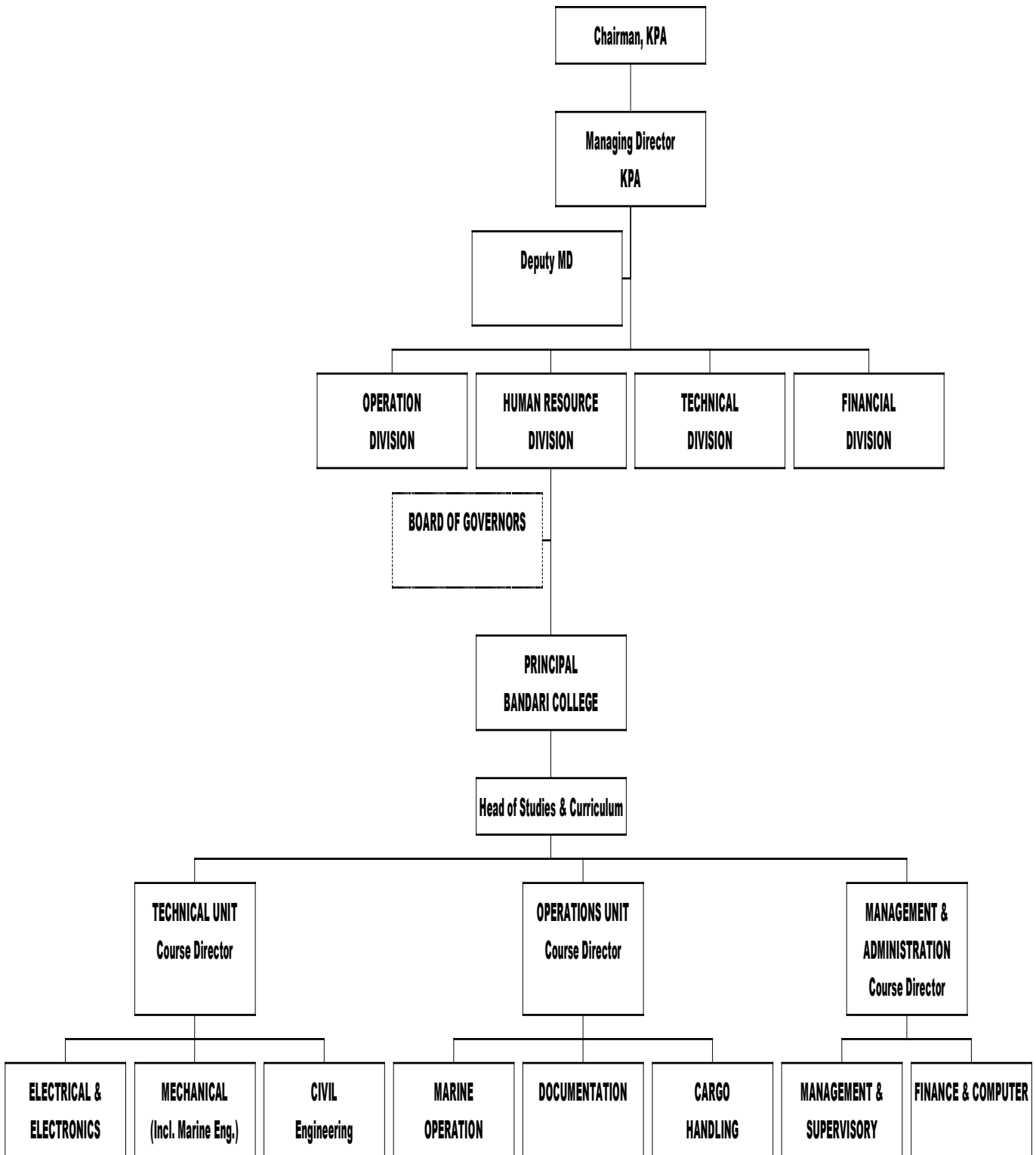


Fig.1.2 Bandari College organisational structure showing the KPA linkage.

Other facilities available include workshops (mechanical, electrical installation, and civil engineering), a modern amphitheatre, conference rooms, audio-visual equipment, computer room (20 PCs), hostel (for 70 students) and a mock hatch with derricks.

The Bandari College library forms one of the most impressive teaching resource and educational facilities in the college. It caters a wide range of users and has a comprehensive range of text and reference books on its shelves together with a liberal supply of regular periodicals with a broad coverage of specialised subjects. The major problem faced by this magnificent library is the issue of upgrading the stock with newly published books. For the past five years, the rate at which new library materials have been purchased has decreased tremendously, according to the librarian. This has basically been blamed or attributed to the long purchasing process through the long chain pointed out.

2.2 TANZANIA

Tanzania has its own Maritime Education and Training system, which has stemmed from the STCW 78 Convention. The MET system is under the Ministry of Communications and Transport. As with many other former British colonies, the legal instrument, which organises the issuance of certificates of Competency, is the Merchant Shipping Act of November 6th 1981 (Act No. 43 of 1967).

2.2.1 Examination and Certification system

The Dar es Salaam Maritime Institute (DMI) issues Diplomas and Certificates. The examinations at DMI are conducted by the Board of Examiners who are appointed by the Minister of Communication and Transport in accordance with the Merchant

Shipping Act, 1967 and the Merchant Shipping (Certificates of Marine Officers) Regulations, 1981.

2.2.2 Dar es Salaam Maritime Institute

The Dar es Salaam Maritime Institute (DMI) is a parastatal institution under the Ministry of Communication and Transport as stipulated by an Act of the Tanzanian parliament of 1991.

DMI started as Dar es Salaam Maritime Training Unit (DMTU) with the technical and financial support from NORAD in 1980. DMTU was initially developed out of the training needs perceived by the Tanzania Coastal Shipping Line (TACOSHILI) in 1978. Its original mission was that of training marine engineers and navigators for the merchant marine up to Class III level of competency. The name later changed to Dar es Salaam Maritime Institute with the realisation that it had sufficiently developed into an institution capable of serving the whole of the shipping industry in Tanzania.

The institute offers both short and long courses for the maritime industry. The summary of the main/long courses offered by the navigation and engineering departments include:

Navigation Department

- Class 3 Deck Officer
- Class 4 Deck Officer
- Class 5 Deck Officer certificate

Engineering Department

- Engine room assistants
- Marine Engineers' cadet course

- Pre-course class 3 Marine Engineer
- Class 3 Marine Engineering Officer
- Chief Engineers Endorsement

DMI is currently faced with the big challenge of responding to the revised international (IMO) conventions.

Other maritime related training institutes in Tanzania are Bandari College, Dar es Salaam and National Institute of Transport.

Bandari College is a port institute, which conducts the Tanzania Harbour Authority's tailor-made training programmes.

The National Institute of Transport, which was established in 1975 offers Diplomas and Certificates in Transport Management, Professional Freight Clearing and Forwarding and Automobile Engineering.

2.3 MOZAMBIQUE

The Maritime Education and Training system in Mozambique was partly inherited from the Portuguese. MET falls under the National Directorate for Maritime and Inland Waters Transport, a Ministry of Transport and Communications Department. The institution, which conducts the Maritime Training, is the Escola Nautica de Mozambique, ENM (Nautical School of Mozambique) which is situated in Maputo. The institution was founded in 1977 and in 1983 it was upgraded and renovated with the help of NORAD and IMO. The renovations and upgrading led to the accession of Mozambique to the STCW 1978 Convention in 15th November 1985.

From this chapter, it can be concluded that the existing MET system and Bandari College in Kenya need to be considered and raised to a desirable level. With the improvement in the management and organisational structure, facilities, academic programmes, qualified personnel then it is possible to have the model in Kenya. The question coming up would be if there is need for this type of training in Kenya. Chapter 3 surveys the needs and justification of having maritime training in Kenya.

CHAPTER 3

NEED FOR MARITIME TRAINING IN KENYA

In order to survey the needs of training seafarers and other maritime personnel as a way of creating employment and career opportunities in Kenya, the author analyses the trends of seafarers in the world, and the potentiality in Kenya and East Africa as a region. This chapter puts in place whether there is justification for establishing a model maritime education and training institution, the benefits of it and the difficulties and limitations expected.

3.1 ANALYSIS OF SEAFARERS IN THE WORLD

In analysing the world's seafarers in terms of supply and demand, it will be in order to indicate whether there is need for training and the implications or impacts it would have in Kenya and the maritime world in general. This issue of manning will be achieved by looking at the various reports published such as the BIMCO/ISF 1995 and 2000 (released in April 2000) Manpower Updates which provide a global scrutiny of the seagoing workforce, and the UK P&I Club reports.

The BIMCO/ISF world supply of seafarer statistics/report of 1995 provided several conclusions. It was observed that there would exist an imbalance between the labour supply areas against the particular region's demand.

Apart from the above, other conclusions of the BIMCO 1995 update report are as follows:

- Numbers of seafarers from the OECD countries have continued to decline, whilst Far Eastern supply has increased. The Philippines remain

the major supply centre with almost 20% of the world's seafarers and an increasing international demand for Chinese seafarers is expected.

- The emergence of substantial numbers of officers and ratings from Eastern Europe has not had a major global impact.
- The shore-based sectors, which often fill these vacancies with seagoing staff drawing on limited resources, are an important feature. These sectors also have a responsibility for the recruitment and training of seafarers. This issue has yet to be properly addressed.
- The age profile of OECD officers is higher than other regions and, as is generally known, the majority of senior officers are currently from OECD countries. The industry needs to discern from where the next generation of officers will be recruited. 10% of OECD nationals under officer training and 15% of Eastern Europe ratings fail to complete their training courses and leave the industry.
- The quality of the labour supply continues to be an area of concern. Recruitment levels peaked in 1993 when, on average, just under 12% of officer employees were trainees. This can be compared to 6% in 1990 and 10% in 1995. (BIMCO, 2000).

<http://www.bimco.dk/html/issues%5F3.htm> (3/30/00)

As a matter of fact, the study was not only to produce world seafaring statistics for the period 1995 to 2005 but equally important, to identify manpower trends and comment on any relevant issues emerging from the research.

From the BIMCO 1995 report, training institutions, shipping companies, governments and administration were challenged in the provision of manpower and training. In this aspect the developing countries need to take this issue seriously as the maritime power is predicted to shift to them, according to the IMO Secretary General, William O'Neil:

Asian, Latin American, Caribbean and African states would play an increasingly important role in maritime affairs. Half the top 12 contributors to IMO's annual £18 million budget were developing countries 'due to the migration of ships to their flags and, in some cases, the build-up of their national fleets.

(The Sea, (141))

It is obvious that a tremendous gap exists between the developing and the developed countries in the MET training and yet the latter requires more labour force.

The forecasting of the future supply of seafarers by the 1995 BIMCO report concentrated on the effects of inflows and outflows of the Far Eastern group and the OECD group. It was expected that there would be an increase in the number of Chinese seafarers as the long-term alternative to the Philippines (currently the major source of labour supply) although the scale of increase is now being questioned. According to Dr. Minghua Zhoa (Seaways, February 2000) of the Seafarers' International Research Centre (SIRC) in Wales, the Chinese seafarers' predictions could have been greatly overestimated. The current situation is due to some significant problems in difficulties in learning English and lack of an adequate social security system, otherwise they would be a significant force in the seafaring labour market in the future.

The latest BIMCO/ISF 2000 Manpower Update is said to be probably the most comprehensive study of the global supply and demand for merchant seafarers that has so far been undertaken. Derived from the studies conducted in 1990 and 1995 (BIMCO, 1995), the report describes the situation in 2000 and makes predictions for 5-10 years' time. This is to enable the industry to anticipate changes and, if appropriate, take the necessary corrective action.

Following the analysis of data of the current estimates of worldwide demand and supply for seafarers, Table 3.1 below indicates the balance of officers and ratings.

Table 3.1 Supply and Demand for Seafarers in 2000 (000s)

	Supply	Demand	Balance
Officers	404	420	-16
Ratings	823	599	+224

Source: BIMCO/ISF 2000 Manpower Update

This data translates into a modest theoretical shortfall of 4% of officers required while ratings continue to have a significant overall surplus of 27%. There exist some doubts about the extent to which large numbers of these ratings are qualified for international service.

It is interesting to note that this overall supply/demand imbalance for seafarers is very similar to the situation in the 1995 BIMCO report. In the case of the officers, the same obstacles are experienced with barriers such as cultural and language differences, lack of international experience and the nationality restrictions that apply to many flags.

A 'benchmark' scenario, which is believed to be realistic, based on the analysis of developments over the last 5-10 years, provides the global balance between supply and demand in the future.

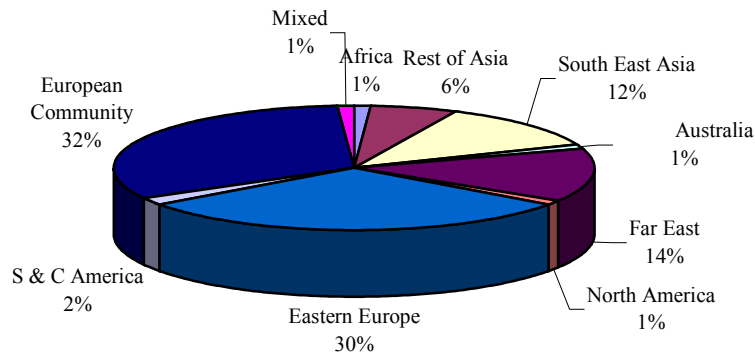
Table 3.2 Supply – Demand Balances for Seafarers (000s)

	2000		2010	
	000s	%	000s	%
Officers	-16	-4	-46	-12
Ratings	+224	+27	+255	+30

Source: BIMCO/ISF 2000 Manpower Update

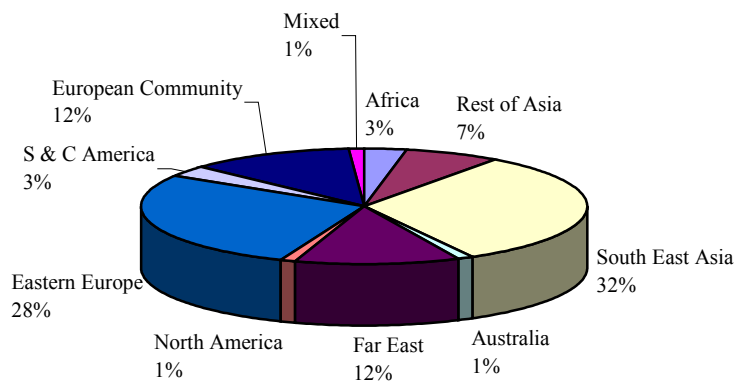
This forecast definitely calls for corrective action by increasing the manning levels through education and training. This is where countries such as Kenya should capitalise in the provision of manpower in the industry. The imbalance also extends to the other job categories in the maritime industry like ship surveyors, Coast Guard, Port State Control and examiners/lecturers, which entirely depend on seafarers.

The nationality of officers and crews could also be examined as it influences the career patterns with changes in responsibilities, career development, depth of training and in the levels of experiences. The employment of mixed crews by shipowners always seems to be a way of reducing costs. According to another report on manning by the UK P & I Club, The Human Factor, it was found that ships may typically have European officers and south-east Asian ratings. A substantial percentage of officers and ratings are recruited from less expensive sources. Figures 3.1 and 3.2 indicates pie charts for officers and ratings showing the distribution of dominant nationalities by region as investigated in the manning report.



Source: UK P&I CLUB (1996).

Fig.3.1 Officer nationality by region (dominant nationality)



Source: UK P&I CLUB (1996).

Fig 3.2 Ratings nationality by region (dominant nationality)

From the graphs and the report in general, it is understandable that officers mainly come from Europe where most of the shipowners are and ratings from developing countries because they are cheaper. Out of which only 3% of the ratings are from Africa. Can it be improved? The answer is only yes if the region develops its MET

system and infrastructure to educate and train the required manpower to a higher standard surpassing the current main players such as the South East Asia.

The current trend by the developed nations is to urge shipowners to try and boost the supply:

NUMAST is urging British shipowners to follow the example of a £600,000 Norwegian scheme to boost officer training.

Telegraph Vol. 32 No.10, Oct. 1999.

The scheme involves funding of training in developing countries, such as the Philippines, whereby, the shipowners' association assists in the provision of facilities such simulators in exchange of supply of seafarers from these institutions.

3.2 SEAFARERS IN KENYA AND EAST AFRICA REGION

The number of seafarers has been decreasing in the East African region as compared to the 1970s during the time of the East Africa Community (EAC). Then, EAC had its own fleet of ships and the region's economy was also on the rise.

On record Kenya has no foreign going vessel fleet but has a substantial number of registered seafarers. There are quite a number of vessels although registered in other countries using the Port of Mombasa as the base port. According to the Seamen's Union and the Merchant Shipping Superintendent's records, there are approximately 3,500 ratings while officers total only 39. See tables 3.3 and 3.4.

Table 3.3 Officers in Kenya (1999)

LEVEL	DECK OFFICERS	ENGINEERS
Chief Eng./Masters	9	8
Class 2 & 3/Mates	7	10
Cadets	2	3
Total	18	21

Table 3.4 Ratings in Kenya (1999)

AT SEA		JOBLESS
Foreign going	Coastal	
<20	<400	More than 3000

In neighbouring Tanzania the situation is not so much different in terms of number of seafarers, although they have a registered fleet and the fact that there exists a maritime college. In numbers, there are approximately 4,000 ratings registered by the union, Tanzania Association of Seamen Union (TASU), while the number of officers is around 300.

In the informal maritime sector in the region, the dhow community cannot be left out as they operate a large number of small vessels, estimated to be 1,200 with 14,000 seafarers. These seafarers have no maritime qualifications although they play an important role in the economy of the countries in the region.

This region has a number of lakes, such as L. Victoria, L. Tanganyika, L. Turkana, among others. These lakes are mainly used for transport and fishing purposes. For example, Lake Victoria is very important for transportation and trade among the three countries, Kenya, Uganda and Tanzania. The lake has long been known to have quite a number of mariners due to the fact that a number of ships (ferries) and fishing vessels operate here. It is also important to note that the first, although unsuccessful, maritime training centre in the region was established at this lake, in Kisumu. Currently the seafarers in the lake do not attend any formal training but follow a kind of an informal apprenticeship through family backgrounds. Although STCW 95 is not applicable legally in this lake, it is still desirable to raise the standards of safety.

3.3 BENEFITS OF HAVING MARITIME TRAINING IN KENYA

From the analysis of the seafarers in the world, Kenya and the region, there is justification for a greater number of trained qualified manpower in the market to curb the shortfalls seen. In addition, there are other reasons, which are of direct benefit to Kenya as a developing country if maritime education and training were to be implemented.

The unemployment rate in the country has been on the rise. There are no job opportunities because there are no vacancies in the already exhausted traditional career fields or the unemployed lack qualifications. With the introduction of a properly defined maritime education and training system in Kenya, it means more career paths and therefore opportunity for graduates from schools.

The public universities, which are supposed to absorb the qualified secondary school graduates, have lost their glamour due to their stiff entry requirements and frequent closures. Prospects of unemployment have demotivated students leading to a drastic reduction in applications for admission. This absorption of students into the public universities does not mean that there are places for all. According to the chairman of

the universities' Joint Admission Board (JAB) Prof. Raphael Munavu (Daily Nation, 2000), only 35,480 out of 169,357 or 21 per cent of the students who sat the 1998 Kenya Certificate of Secondary Education (KCSE) applied for university admission. Of these, 30,243 qualified but due to lack of places in the public universities, only 8,150 or 4.8 per cent of the total number of graduates were admitted. The remaining are to look for alternatives in either private and foreign institutions or local middle-level colleges which for sure are not enough. In this case new focus will be in order, such as the maritime education and training.

The local levels of maritime services will be boosted, as it is evident that there are reasons to address the manpower needs and requirements to take care of the rapid growth and development. In some areas the need to train a workforce that meets international standards such as the revised International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention) is important. Safety standards and competency levels would also be raised. Disasters like the Mtongwe Ferry in Mombasa, where over 300 people died in 1994, marine (environmental) pollution and other safety considerations would easily be taken care of.

One of the vital roles of education is of economic benefit to a society. According to the Education Minister, Kalonzo Musyoka (Daily Nation, 2000), education is now a major foreign exchange earner. Foreign students enrolled in Kenyan schools and universities have earned the country some Ksh. 1 billion (US\$ 13.5 million) in 1999. It is generally believed that:

Kenya still has some of the best educational infrastructure in East and Central Africa. Only South Africa has better and more institutions than Kenya in the region. The much-maligned sector is attracting students from the three East African states, and countries like Somalia, Eritrea, Sudan, Ethiopia and others

where universities and training institutions have collapsed due to civil wars....

The result is that Kenya has become the centre of higher education in the region, a role that was enhanced by the establishment of the Commission for Higher Education in 1985. .

(DailyNation, March 2000)

The above information definitely encourages the establishment of a model maritime training institution. It will obviously cater for the region just like the other already existing institutions.

The other issue, which has been realised, is that the government is losing millions of dollars through students who travel abroad for higher education. In fact, it is estimated that some US\$ 200 million is spent annually by parents and organisations to train Kenyans abroad. This money could be utilised locally if the local universities and colleges had more places and career paths. Taking an example of Kenya Ports Authority (KPA) whereby it spends a lot of foreign exchange to train its pilots and marine engineers.

In 1989, KPA sponsored eleven candidates who were to be trained to become marine pilots. In their training, they attended a Pre-sea course at Bandari College, the rest of the training is done abroad in institutions such as Regional Maritime Academy in Ghana, Arab Maritime Academy in Egypt and South Tyneside College in United Kingdom. The trainees are yet to be of service by year 2000, still being under training. Therefore, the establishment of a maritime training institution will definitely save this hard-earned finance which Kenyans are spending in terms of fees and allowances.

As already indicated above, saving costs and readily available opportunities for the people in the region will be of benefit. For instance, in early September 1999, fourteen Tanzanian seafarers were to take part in a six-month training programme in Durban, South Africa from October the same year. The training was a pilot project of the International Transport Workers' Federation, which aims at improving employment prospects for African seafarers by upgrading their skills. The offer to the Tanzania Seamen's Union was as a result of having 4,000 Union members who have not taken part in the newly STCW 95 courses. This is because Tanzania's only training school, the Dar Es Salaam Maritime Institute (DMI) has been unable to adequately comply with the Convention, according to the Union Chairman, Mr Said el-Mazrui, as reported in *The EastAfrican* weekly newspaper of 8th September 1999. This programme could have as well been conducted in the region, if a proper and suitable maritime training establishment was available.

The Philippines and other countries from the Far East are considered as the major world suppliers of seafarers. This does not mean that Kenya is denied the opportunity to be among these top suppliers of manpower. To be a supplier of seafarers means international job opportunity for Kenyans and therefore foreign earnings so long as proper legislation is enacted. This could be achieved of course by setting a high standard maritime training for seafarers at the various levels, that is both officers and ratings.

Other areas of benefit could be in the fields of shipping agency and clearing and forwarding disciplines, which are currently conducted in an unacceptable and unrecognised system. Establishing this maritime training system means a proper curriculum and therefore a standardised way of certification and validity of the courses offered.

The output from this maritime training would mean a more efficient and effective workforce would be established in the various professional jobs in the industry such

as port, shipping and seafaring. This would of course lead to Kenya's vision of becoming a newly industrialised country by the year 2020.

3.4 DIFFICULTIES AND LIMITATIONS

The difficulties and limitations for Kenya will be the financial aspect or funding, human resource (qualified personnel), and sea-training or practice as evidenced in the request for assistance from IMO by KPA. (Copies of IMO correspondence and IMO TC Circ.5 dated 9 May, 1991 are attached in Appendix A).

The other difficulties and limitations include the deployment of trained persons, policies, type of curriculum and facilities among others. These are some of the issues expected while coming up with the requirements for model Maritime Education and Training in Kenya for the East Africa region.

The creation of an effective infrastructure for the outreach and improved standards means a great deal in overcoming these identified difficulties and limitations. In the following chapter, the author looks at the identified requirements for a model maritime institution in the region.

CHAPTER 4

REQUIREMENTS FOR A MODEL MET INSTITUTE IN KENYA FOR EAST AFRICA

A model is an abstraction of reality that, if it is good enough, allows us to understand (and sometimes to predict) some of the dynamics of the system that it represents. Models are seldom right or wrong; they are just more or less useful for examining different aspects of organisational functioning.

Birnbaum, Robert (1988), pg.83

From the previous chapters it was observed that there is need to establish Maritime Education and Training in Kenya which could serve as a model for East Africa. Therefore, the author looks at the requirements for this institution, which could be used as guidelines.

4.1 STRATEGIC PLANNING

In order to have a realistic model, there is need to develop a strategic plan or strategic formulation. This is one of the two components of strategic management, the other being strategic implementation. The author uses the approach in figure 4.1 to develop the model maritime institute's mission statement, analyse the strengths, weaknesses, opportunities and threats (SWOT) and strategic objectives, which would serve as guides to other requirements. These other requirements include administration and organisation, academic curriculum, personnel, facilities and technology and quality standards system.

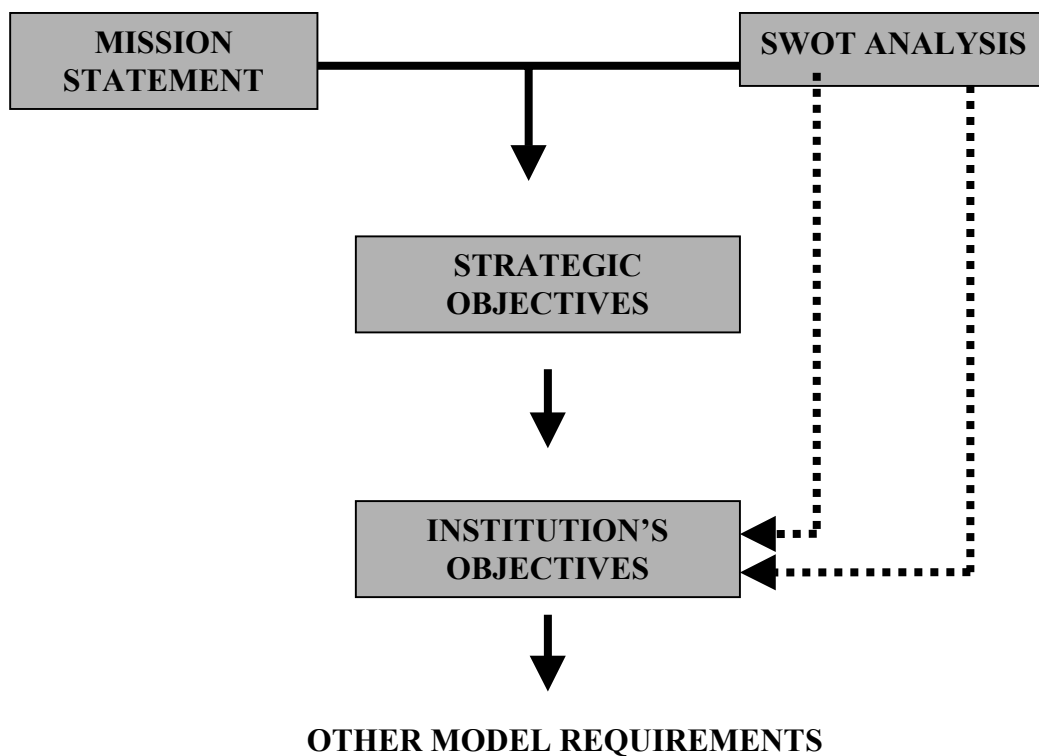


Fig 4.1 Strategic Planning leading to the model requirements.

(Source: Muirhead (2000).

4.1.1 Mission Statement and Goals

With respect to the identified needs of the MET institution in Kenya, the mission statement should be broad enough to reflect the trend of events and provide the vision of the future. This statement becomes a control document that aids to achieve the other requirements. The statement should be:

As a model for maritime education and training in the region, the institution is to play an effective role in the development, research and expansion of opportunities and promote the highest practical standards for Kenyans and the international community in careers in the maritime industry.

In particular, the institution should:

- Provide advanced education and training aimed at producing mature and conscientious graduates with the ability and desire to contribute to the well-being, advancement and development of fellow citizens and the country on the basis of a national philosophy of mutual social responsibility.
- Respond to, and fulfil the needs of, the Kenyan community, and continuously serve as a model in the region in maritime education, training, research and development.
- Collaborate with other maritime education and training institutions and the maritime industry in the region and the world.

4.1.2 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis.

In undertaking this SWOT analysis, the author has selected the existing maritime institution, Bandari College (Kenya Ports Authority's College), in order to scan the existing and possible competitive environment. This type of analysis focuses on two essential aspects:

- An institution's strengths and weaknesses, which determine its ability to compete in its area of operation. This makes up the internal environment.
- Opportunities and threats in the marketplace that are of relevance to the institution's operations. This is the external environment.

It should be noted that the scope of this SWOT analysis is focussing on issues, which are for the development of a model institution in the East Africa region. The summary of the analysis of Bandari College is illustrated in figures 4.2 and 4.3.

Internal Environment Aspect	Institution's Strength	Institution's Weaknesses
1. <u>Efficient Economic Resources.</u>	<ul style="list-style-type: none"> • Kenya Ports Authority sponsorship for capital investment • Recognised by the IMO 	<ul style="list-style-type: none"> • Few commercial courses • Student population limited • Insufficient marketing of college activities • Does not offer STCW mandatory certificates
2. <u>Financial Capability</u>	<ul style="list-style-type: none"> • 95% KPA source • 5% Other sources 	<ul style="list-style-type: none"> • Insufficient budget to have capital works and development accounts • Budget and expenditure is controlled by KPA • Lack of effort to seek external funding
3. <u>Organisational</u> Policy Management Structure Industrial Relation	<ul style="list-style-type: none"> • Single campus near port • A department of the port authority under the Human Resource Division • Good relation with the shipping fraternity 	<ul style="list-style-type: none"> • Not autonomous • Lacks policy control, KPA dependant - making it a long chain of command
4. <u>Political</u> Government Policy Regulations	<ul style="list-style-type: none"> • KPA links 	<ul style="list-style-type: none"> • Lacks direct act of parliament
5. <u>Social:</u> Graduates Employees Other	<ul style="list-style-type: none"> • 90% of students are already employed • Staff drawn from KPA • Utilises the KPA staff welfare facilities 	<ul style="list-style-type: none"> • Shortage of professional staff
6. <u>Technical</u>	<ul style="list-style-type: none"> • Capable to adjust to technology changes 	<ul style="list-style-type: none"> • Limited due to bureaucracy effects

Fig. 4.2 SWOT Analysis: Internal Environment.

Source: Muirhead (2000) as modified.

External Environment Aspects	Market Opportunities	Market Threats
1. <u>Efficient Economic Resources</u>	<ul style="list-style-type: none"> • Access to port facilities • Needs exists in the maritime sector as observed • Expansion of training services • Growing market for graduates 	<ul style="list-style-type: none"> • High initial training costs • Lacks optimum number of students per course • Existence of other traditional disciplines
2. <u>Financial Capability</u>	<ul style="list-style-type: none"> • Could attract funds from other sources 	<ul style="list-style-type: none"> • Industry is not investing funds in maritime training
3. <u>Organisational Policy Management Structure Industrial Relations</u>	<ul style="list-style-type: none"> • A national maritime centre • Preferable institution by maritime sector employers • Approved by Directorate of Industrial Training (DIT) 	<ul style="list-style-type: none"> • Dar Es Salaam Maritime Institute in Tanzania • Bandari College in Tanzania • Lacks autonomy
4. <u>Political Government Policy Regulations</u>	<ul style="list-style-type: none"> • Under KPA Act and therefore control 	<ul style="list-style-type: none"> • Lacks independent Act of Parliament
5. <u>Social:</u> Graduates Employees Others	<ul style="list-style-type: none"> • Well located campus-near the Port overlooking the gateway to the Port of Mombasa 	
6. <u>Technical</u>	<ul style="list-style-type: none"> • Modern building structures workshops, mock-hutch, etc 	<ul style="list-style-type: none"> • Lacks training vessels, dedicated marine training facilities

Fig 4.3 SWOT Analysis: External Environment.

Source: Muirhead (2000) as modified.

From figures 4.2 and 4.3, the author has assumed each element equal to one point, then a summary of the strengths, weaknesses, opportunities and threats could be shown in the form of a pie chart in figure 4.4. From this, can be seen the factors which will have direct and significant impact on the strategic objectives and therefore the model institute.

Strengths = 12
 Weakness = 12
 Opportunities = 11
Threats = 10
 Total points = 45

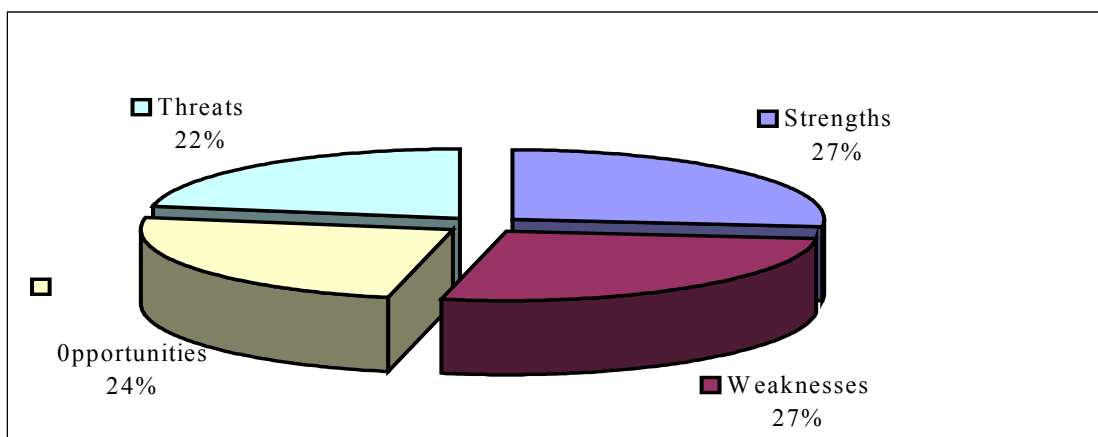


Fig. 4.4 Summary of the factors having the most direct and significant impact on Bandari College to be considered in the model institution.

From the summary of the SWOT analysis, it can be observed that the institution has a balanced internal environment of strengths and weaknesses. This is interpreted by the writer that there is need to look at strengthening through the reduction of these weaknesses. By doing so, the college's ability to compete will rise.

The marketability seems to be favouring the college, having more opportunities than threats. There is still need to look into the possibilities of creating more opportunities

and handling the threats accordingly. This could be done by having a wider scope in the programmes (portfolio).

4.1.3 Strategic Objectives based on the mission and SWOT analysis

In order to produce a more efficient and effective organisation, specific strategic objectives are required to generate measurable outcomes that the institution intends to achieve. From the mission statement created and the current environment within which it should operate, the author sees the following objectives to be essential:

- To provide internationally recognised maritime education and training programmes, including short courses and award certificates, diplomas and degrees.
- To establish a set up which would be a yardstick as a model maritime centre in the region.
- To create an establishment having its own policies for administration, finance, recruitment of staff and set quality standards as an autonomous corporate body.
- To create a close liaison with the maritime industries enabling the college to respond readily on demand.
- To continuously develop courses and have a dynamic curriculum development set up which could adapt to the challenges of changing technology.
- To flexibly structure its courses to be equally suitable for school leavers and experienced mature entrants willing to upgrade their qualifications.

With the mission statement, goals and strategic objectives set, it is now possible to look at other requirements for the model institution in Kenya for East Africa.

4.2 ADMINISTRATION AND ORGANISATION

The development of the character of any college or institution depends on its organisation and administrative structure as well as the foundations laid down in the first years by both staff and students. The author gave consideration to various types of physical design for an institution, other MET programmes in relation to the philosophical framework, national and international ethos, educational objectives and models of administration and management that would enable the college to develop its own unique character.

Administration is a service process. It has no right to exist for its own sake; therefore, this model administration ensures maximum development of every trainee enrolled. A good administration is very often described in terms of efficiency, whereby leading authorities hold that the most important aspects of the administration process are decision-making, communicating, morale-building and initiating change.

Therefore, the question is how this can be achieved in the model MET.

Before answering this question, there is need to look at the reasons for having the administration in the first place.

In the college, there would exist students, lecturers or instructors, the library and other facilities, which are considered the nucleus of any institution. This means a large complex structure to support the central activities of teaching and learning, this being the justification for the existence of administration of the college.

Since administration exists for serving to enhance the academic program, it needs to be academically oriented. This could also be achieved best when personnel and financial operations are effectively co-ordinated.

In addition, administration aids in the planning. Data must be collected, digested, developed and updated to ensure the institution will run at maximum efficiency to enhance the academic program by utilising economy of operations. In order to take care of the above, the model administration organisation of this MET institute should constitute the following four elements:

- Academic affairs – handling institutional and academic programs.
- Student personnel service – health and welfare of students.
- Business affairs – financial, plant and personnel management.
- Development and public relations – fund raising, external affairs, alumni affairs.

To handle these major areas of decision-making, communicating, build morale and initiate necessary changes, there is need to understand the extent to which one can identify the relevant variables, and the looseness or tightness of their relative importance in the organisation structure.

As a framework for vertical control and horizontal co-ordination of the institute, important dimensions need to be provided by the organisational structure. These dimensions include job specialisation, departmentalisation, chain of command, authority and responsibility, line and staff authority, and span of management. The following is the author's way of looking at the organisational structure for the model.

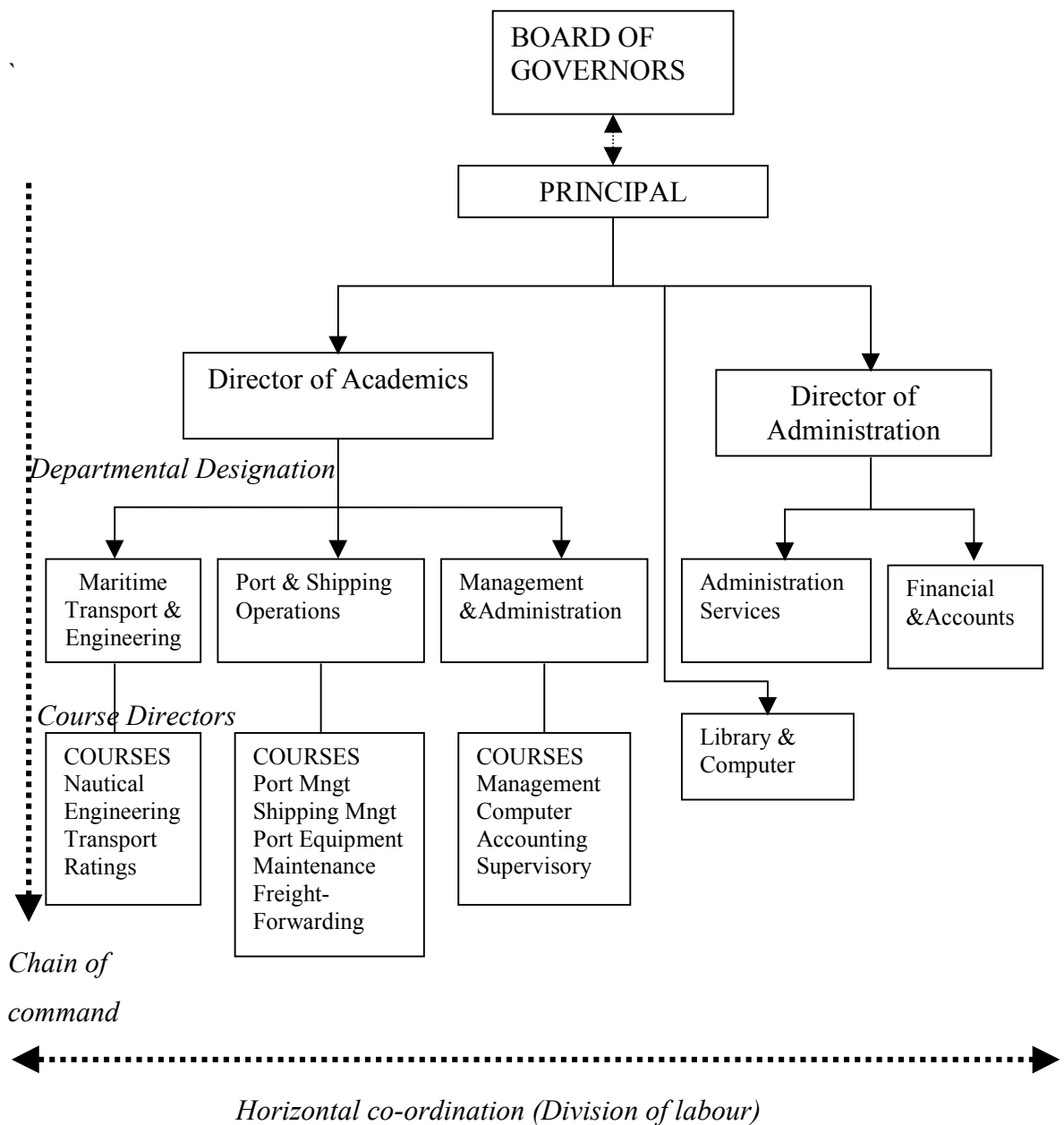


Fig. 4.5 An Organisational Structure for the model MET in Kenya

This organisational structure only illustrates the essential functions in the model, which will form the foundation.

The Board of Governors (BoG) forms the institute's governing authority. The board's main functions include supervisory, regulatory, control and monitoring of

finances and responsibility in formulation of policies. The members should include representatives from the Ministry of Transport and Communication, Ministry of Education, maritime industry, Port Authority, Clearing and Forwarding Association, Directorate of Industrial Training, while the Principal is an ex-officio to the board.

From this organisational structure, the four elements constituting the model administration organisation mentioned earlier are taken care of from the Principal's span of management.

The Director of Academics handles the Academic Affairs through the Heads of Department, while the Director of Administration takes care of the students' personnel services, business affairs and development and public relations through the Heads of Department. The non-academic administration and the academic community should be integrated through the horizontal co-ordination as indicated in the organisational chart in figure 4.5.

Several committees at different levels are to be established dealing with curriculum development, examination board, student affairs, and staff among others to facilitate the running of the institution.

As compared to the current Bandari College organisational structure, this allows an easy and faster decision making process by officers who are directly involved in the running of the institution.

4.3 ACADEMIC CURRICULUM

Curriculum is considered the core substance in a learning institution as it can include content, aims, goals and objectives, learning activities and evaluation procedures. Although educators often have different perceptions as to how it should be defined,

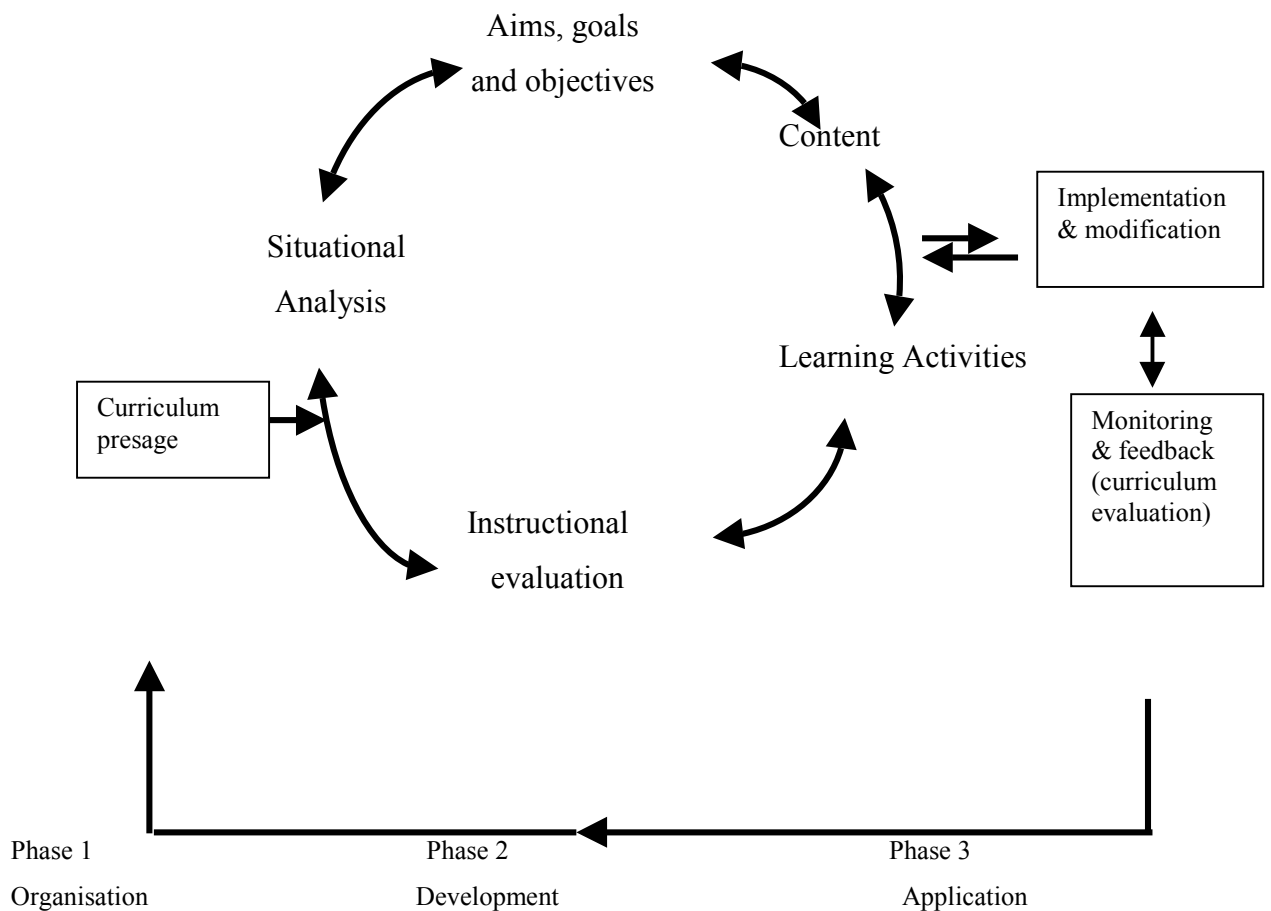
the following is the best compromise as adapted from Print (1993, 9): That curriculum means:

All the planned learning opportunities offered to the learners by the institution, and the experiences learners encounter when the curriculum is implemented. This includes those activities that educators have devised for learners as represented in a written document.

From the definition, it can be seen that a curriculum contains the following key elements:

- Planned learning experiences;
- Structured educational institution/programs;
- Documented processes and procedures; and
- Outcomes resulting from implementation.

Given the above brief explanation about curriculum, a number of scholars including Tyler, Taba, Wheeler, Nicholls, Walker and Skibeck have come up with several models. This is due to the relationships between curriculum elements, their order and their exact nature in the curriculum process. However, after a thorough consideration of the various models, the author is compelled to subscribe to the one developed by Print (1993) which is shown in Fig. 4.6. This is because it has a wide range of application, which could cope with the broad mission statement and the objectives formulated.



Source: Print, M (1993) Pg.84.

Fig 4.6 Model of curriculum development to be adapted.

From the model, there are three sequential phases – organisation, development and application, which are considered to form the basis for curriculum development.

The organisation phase involves a formalised procedure of curriculum presage whereby participants (curriculum committees or developers) will look at:

- Who will be responsible for developing it;
- their backgrounds
- and the forces that have shaped their thinking.

This is important as the selected committee will influence the shape of the curriculum outcomes and therefore affect the nature of the curriculum. The group here will comprise the school staff, course department, and professionals from the industry among others.

In the development phase, the group follows the cyclical procedures of the curriculum elements in the model (figure 4.6) beginning with situational analysis; aims, goals and objectives; content; learning activities; evaluation and then continuing on to situational analysis again.

The third phase, application incorporates three sets of activities, which include implementation; monitoring and feedback; and the provision of feedback data to the presage group.

In following the above generic curriculum design and development procedure, all the training activities should be presented in the following layout:

- Title of the curriculum unit;
- Context;
- Aim, goals and objectives;
- Content;
- Learning activities; and
- Mode of assessment of learners.

This will create an effective learning situation that will lead to high quality standards.

4. 4 PERSONNEL

The effectiveness of an institution essentially depends on the efficiency and quality of its staff and especially the academic staff. This is also highlighted in the STCW Convention Regulation 1/6 requiring parties to ensure that instructors and assessors are appropriately qualified and experienced.

This Human Resource domain also embraces staff planning, recruitment, selection, retention, appraisal, control and staff development. Appropriate policies need to be in place for an independent and effective control of personnel in any successful institution.

In ensuring growth and proper policies for the academic staff, an Academic Staff Development Committee should be established as part of the institute's management and organisation. This committee will be headed by the Principal, and the members being the directors, both the academic and administration, all the heads of academic departments and at least one senior lecturer from each department. The committee will be responsible in establishing, maintaining and continuously reviewing upcoming issues concerning the academic staff for an effective maintenance of the learning process in the model institute.

For the staff's planning for example, a proper student-staff ratio needs to be established and maintained relative to the various specialised fields' requirements. This also leads to the minimum and maximum number of hours a lecturer is entitled to have per a particular period. A summary of some of these requirements is given in tables 4.1, 4.2 and 4.3 showing the number of staff required in relation to the number

of students, while table 4.4 indicates the number of hours per week depending on the level, that is a senior lecturer, lecturer or an assistant lecturer. The heads of departments should be responsible for overseeing that these demands are met. This should be in a manner consistent with their conditions of employment, and maintaining a reasonable balance for lecturers between work carried out in school or elsewhere.

Table 4.1 Required ratios and number of lecturers and students for Maritime Transport and Engineering Department.

Section/unit	No. of lecturers	No. of students	Required ratio staff: student	Initial No. of students	Initial No. of lecturers
Nautical	Snr Lect. 2	90	01:10	15	1
	Lecturers 4				1
	Asst.Lect. 2				2
Engineering	Snr Lect. 2	90	01:10	15	1
	Lecturers 4				1
	Asst.Lect. 2				2
Ratings	Snr Lect. 1	60	01:12	20	1
	Lecturers 2				1
	Asst.Lect. 2				1
TOTALS	21	240	01:10.6	50	11

Table 4.2 Required ratios and number of lecturers and students for Port and Shipping Department

Section/Unit	No. of lecturers	No. of students	Required ratio staff: student	Initial No. of students	Initial No. of lecturers
Port Operation	Snr Lect. 2	120	01:20	75	1
	Lecturers 2				2
	Asst.Lect. 2				2
Shipping Operation	Snr Lect. 2	90	01:18	60	1
	Lecturers 2				2
	Asst.Lect. 2				2
TOTALS	12	210	01:19	135	10

Table 4.3 Required ratios and number of lecturers and students for Management and Administration Department

Section/unit	No. of lecturers	No. of students	Required ratio staff/student	Initial No. of Students	Initial No. of Lecturers
Management & Supervisory	Snr Lect. 1	180(+60)	01:50	180(+60)	1
	Lecturers 1				1
	Asst.Lect. 2				2
Finance	Snr Lect. 1	15(+60)	01:40	15(+60)	1
	Lecturers 1				1
	Asst.Lect. 0				0
Computer & Information	Snr Lect. 1	45(+90)	01:15	45(+90)	1
	Lecturers 1				1
	Asst.Lect. 0				1
TOTALS	9	240(+210)	01:35	240(+210)	9

Table 4.4 Number of lecturer contact hours per week

Level	Hrs per week
Snr. Lecturer.	12 – 15
Lecturers	15 – 18
Assistant. Lecturer.	18 - 24

KEY

15(+60) The number in brackets indicates the additional number of students from other departments. This means they are already accounted for in the figures provided in the other programmes.

Looking at the recruitment of staff, the primary aim should be the appointment of suitably qualified Kenyans. This however is unlikely to be possible at times nor would it necessarily be in the best interest of the institute. Expatriates with acceptable qualifications and experience should be carefully selected and then appointed in areas where there are no adequately qualified Kenyans. To maintain a creditable academic image both nationally and internationally, all appointments should be given based on merit. The Board of Governors together with the Academic

Staff Development Committee or a special committee comprising senior staff should participate in the selection and recruitment of the new appointees.

As the institution is to continuously develop courses and have a dynamic curriculum development set up, it leads to an intellectually demanding and onerous task which calls into play all the lecturers' competency and skills. Its success depends on the ability of the lecturers to handle the curriculum development processes, as well as having pedagogic skills and other relevant professional experiences. This needs to be enhanced through a clearly established staff development programme as a matter of top priority. This will lead to a continuous increase in the efficiency and effectiveness of the staff already serving as well as newly appointed.

Proper supervision and participation within an agreed framework for the appraisal of the performance of staff who teach at the institute should be observed. The staff should have access to advice and training appropriate to their needs, in accordance with laid down policies of the government or responsible authority for the development of staff.

To encourage retention of staff in this field where there are highly lucrative alternatives, attractive terms of service would be ideal. The terms of service should not only include competitive salary scales, procedures for promotion, job security and adequate academic facilities, but also the more important aspects of staff welfare. For this reason, there should be an attractive housing policy, comprehensive medical care for staff and immediate family among others. The facilities at the institution should cater for proper academic activities and growth of the staff.

4.5 FACILITIES AND TECHNOLOGY

In order to facilitate the different academic activities and achieve the set training objectives, there is need to have the appropriate facilities and equipment as required.

The author has chosen Bandari College as the basis for identifying the requirements for facilities and technology. The question to be asked is what training facilities and technology are required for an effective infrastructure for outreach and improved standards.

In this model, the author looks at the policies, which should be used in providing or establishing the type of facilities and the relevant technology. The buildings for a maritime education and training institution must be adequate and appropriate for the type of activities. They should be furnished and serviced according to their specialised activities. Effects like weight of equipment, vibrations and transmission of power should be taken into consideration and proper strengthening and reinforcements of the workshops.

Training facilities are ever a nightmare in any institution's budget, often costing a fortune to developing countries. This means under utilised facilities should be avoided. Therefore, it is important for all the acquired equipment in the institute to be used fully and appropriately. In order to do this, the equipment to be bought needs to be prioritised according to several conditions as laid down by a committee. These conditions could be curriculum requirements, regulations in place for example STCW, funding, frequency of use, expertise available in handling the facilities among others.

While handling the facilities there is need to look at the effects of technology on maritime education and training, which according to Angas, G. (Seaways, October 1999) could be looked at from two perspectives. The technology of the environment, which refers to the knowledge and skills that a person needs in order to be able to perform his or her job functions effectively. This enables the institution to see that the facilities acquired meet the existing practical technologies within its environment. By using this perspective, one can develop the functional competencies required and hence produce training needs analysis.

The other perspective referred to is pedagogic technology. This is the technology in use in order to transfer knowledge and skill from those who have it to those who want/need it. It includes the environment within which it could take place such as the classrooms, bridges, machinery spaces and simulators.

These two perspectives should enable the concerned to come up with the necessary principles in identifying facilities that would demonstrate functional competence such as the control of a piece of equipment or a ‘full mission’ process. This will lead to building appropriate facilities for developing more methods of transferring knowledge and skills.

One other important facility is the library. As the heart of any training institution, this library should be the centre of maritime information. The catalogue should be computerised as any other modern library, supported by a qualified library staff to handle the information technology.

Apart from maritime books, relevant and important subscriptions should be available, which could cater for the type and level of curriculum offered. Being a maritime institution, IMO publications and model courses should be available. In order to support the objectives of the curriculum of the various courses, there should be a clear policy indicating the liaising between each user and the librarian for regular upgrading of the library stock.

As these facilities represent a major investment in the education and training for onshore and offshore maritime industries, it is important to ensure that latest equipment and techniques are available. The facilities could also be utilised by students from other institutions forming a maritime training centre within this model institute in the region.

4. 6 QUALITY STANDARDS

One of the main tasks facing maritime education and training institutions as a result of the revised STCW Convention is to establish a quality standards system. This involves undertaking a self-evaluation of the procedures and processes in place in the institution that contribute to the education, training and assessment activities.

In this model, the author uses the guidelines as provided in *Guidelines on Quality Assurance*, by Higher Education Quality Council, 1994 and selectively adapts some aspects from lecture notes on *Quality Standards Systems* (Muirhead, 2000). These guidelines are to provide the framework for quality assurance and control as a requirement for the model institution and are used, elaborated and adapted accordingly.

These essential quality standards will be applied to policies and to management and control functions and activities. The mission statement, goals and objectives already set should be clearly understood by the management, teaching and administration personnel. This is to provide direction to the curriculum, functions and activities, and assemble and organise the necessary resources to achieve, and continue to achieve the defined objectives. As an example, the policy towards the achievement of the objectives of the institute as derived from the strategic planning should be:

The institute is committed to a policy of providing recognised MET programmes of the highest standards and quality training through meeting obligations and requirements of the industrial and international standards such as the revised STCW 1978 Convention.

Some of the basic functions and activities for this institution's quality standards system are as follows:

The first function relates to the quality system coverage of academic and administrative structures. This involves an establishment of clear management, organisation, lines of responsibility and the procedures and processes for an institute. The other structures are the staff and facilities resources. For the case of this model, these structures have been defined on the requirements in this chapter. These structures are to be enhanced by establishing respectively, policy making committees.

The second function relates to the quality control functions of teaching, training examination and assessment activities. These activities are to be clearly stated in the developed curriculum for each course. In the developed curriculum, issues on:

- Learning and performance objectives;
- Policy and procedures for student admission;
- Curriculum content: knowledge, understanding and skills;
- Assessment and examinations and skills acquisition tests;
- Resource availability and allocation;

need to be identified and incorporated in the courses accordingly.

The third function relates to the internal review process. This monitors how the institute achieves the set objectives and how effective are its quality control procedures. In this process, the periodic external quality evaluations are arranged through:

- Planning, design, presentation and evaluation of programs;
- Teaching, learning and communication activities;
- Selection and approval of teaching staff, examiners and assessors, including qualifications and experience criteria;
- Instructional techniques and delivery systems; and
- Evaluation of student performance and progress.

Finally, an independent external evaluation (audit) could be undertaken in a systematic and independent examination of all the quality activities, but not the validity of the defined objectives.

The external evaluators could come from the Directorate of Industrial Training (D.I.T) or the Kenya Institute of Education (K.I.E) as chosen or identified by the Ministry of Transport and Communication. This is to encourage or have impartial and independent status of the evaluation process.

In conclusion, this chapter has put in place the main requirements to form a maritime institute, which could be seen as a model for the East Africa region. The author has come up with the requirements from what is on the ground (current MET status, need for maritime training Kenya and strategic analysis of Bandari College) and what is expected of a model maritime training institution. Now, the author in the next chapter looks at the institution programmes' portfolio and its funding.

CHAPTER 5

PROGRAMMES AND FUNDING OF THE INSTITUTION

From the strategic planning, the author concluded that there is need to strengthen the marketing of the Bandari College through creating opportunities. This is possible through satisfying the public preferences and needs which could lead to greater social and economic benefits for Kenya. With attractive Maritime Education and Training programmes in the model institution, it means opportunities for both Kenyans and potential employers. This could be achieved by having what is known as ‘program diversity’ in academic systems, which has become an important goal of higher education recently.

According to Dill (2000), the term diversity has been emphasised with regard to varieties in the organisation or products of higher education: differences among the programs or services provided by academic institutions, and differences among the type of institutions themselves. (Goedegebuure, Meek, Kivinen & Rinne, 1996). Having created an institution with departments covering both onshore and offshore maritime disciplines, the model will have both institutional and program diversity. The major distinction between the two (institutional and program diversity) as described by Dill (2000) being;

- Institutional diversity: in size; in type or mission; in program profiles; in type of control (public versus private); in location.
- Program diversity: in orientation (theoretical/applied; research/vocational); in quality; in forms of program delivery.

This chapter highlights some of the proposed program portfolios and the various aspects in the funding of the model institution in Kenya.

5.1 PROGRAMMES

The administration and organisational structure developed as a requirement of the model institution, provides some guide to the type of programmes or courses which could be run. The academic departments include Maritime Transport and Engineering, Port and Shipping Operation and Administration and Management. This does not mean that there are no linkages between the departments as the horizontal co-ordination strength of the institution's organisational structure set ensures the possibilities. The author will briefly look at the proposed programme portfolios from each department accordingly.

5.1.1 Programme Portfolio

In this programme portfolio, the author describes the range of courses the institution is to conduct with respect to the outcomes from the previous chapters and considering the effects of diversity. The outcomes include needs of training, objectives and goals and overcoming the weaknesses and threats from the SWOT analysis while encouraging the strengths and opportunities observed.

Maritime Transport and Engineering Department

The department of Maritime Transport and Engineering mainly shall handle courses directly related to the onshore activity. This focuses on the education and training of mariners as in the case of many other traditional maritime academies. The department should be divided into three sections, namely Nautical Studies, Marine Engineering and Ratings.

Table 5.1 Maritime Transport and Engineering Department programme portfolio.

Course/programme	Duration	Certificate of Competency	Remarks
Nautical			
Diploma in Nautical Studies	3 years	officer of watch	plus 18 months guided sea-time
Certificate in Pre-sea Training (Deck)	1 year	safety certificate(Deck)	plus 6 months sea-time prepares for Diploma in Nautical Studies.
Coxswain Certificate	1 year	ferry operator	plus 6 months sea-time
Engineering			
Diploma in Marine Eng.	3 years	officer of watch	plus 12 months guided sea-time
Certificate in pre-sea Training (Engine)	1 year	safety certificate	plus 6 months sea-time prepares for Dip. in Marine Eng.
Cert. in marine fitting and plant maintenance	1 year		plus practical in a dockyard
Ratings			
General purpose seaman	1 year	certificate	plus 12 months sea service for general operation in ship
Basic Seamanship (Deck)	1 year	certificate	plus 12 months sea service
Ship mechanic (Engine)	1 year	certificate	plus 12 months sea service
Short/Other Courses			
Advanced fire prevention and control	1 week	certificate	mandatory for second - mate
First Aid at sea	1 week	certificate	
Proficiency in survival craft	1 week	certificate	
GMDSS	3 weeks	certificate	

The training of ratings for both deck and engine room could be classified according to previous seagoing experience; upgrading levels of skills training required; and departmental specialisation. The programmes should be practically oriented with

adequate levels of hands-on training. The academic and theoretical contents of the courses should be kept to an absolute minimum, taking into consideration the applicability of the knowledge and skills gained.

PORT AND SHIPPING OPERATION

The Port and Shipping Operation Department should focus on the offshore training activities for both the port and shipping industry. For administrative purposes, the department could be divided into two, Port Operations and Shipping Operation.

This is the department, which holds some of the marketable courses such as the Diploma in Clearing, Warehousing and Freight Forwarding (DCWF). The course targets in-serving managers, supervisors from the industry and university graduates interested in joining the industry.

The other programmes are to be developed in consultation with the port authority requirements, that is, tailor made courses. Table 5.2 shows a summary of the programme portfolio for this department.

Table 5.2 Port and Shipping Operation Department Programme portfolio.

Course/programme	Duration	Remarks
Port Operations		
Diploma in Port Mgt.	3 years	school leavers and port operators
Certificate in Port Operation	1 year	structured for port operation assistance
Container Terminal Operations Cert.	6 months	
Portworkers Development Programmes (PDP)	6 months	covers port supervisory and dockworkers
Cert. in Port Equipment Maintenance	2 months	for port technicians in engineering Depts. e.g. mechanical, electrical & marine
Ship Operations		
Diploma in Shipping Mgt.	3 years	incl. foundation diploma in shipping (FDS)
Cert. Shipping Operations	1 year	incl. FDS, school leavers (KCSE)
Others		
Diploma in Clearing, Ware-housing & Freight Forwarding. (DCWF)	1 year	must have a diploma or FCMS and working experience. offered in conjunction with KCFWA.
Foundation Certificate in Maritime Studies (FCMS)	1 year	school leavers

MANAGEMENT AND ADMINISTRATION

The Management and Administration department shall continue handling short modules in support of the other academic departments. This is from the fact that most of the programmes at both Diploma and Certificate levels have an element of management, supervisory or computing and finance as an important part of their curriculum.

In that case, the other academic departments will concentrate on the professional curriculum part of the programmes while incorporating or requesting for necessary/specialised modules offered in this department. Table 5.3 highlights some of the programmes.

Table 5.3 Management and Administration Programme portfolio

Course/programme	Duration	Remarks
Management/Supervisory		
Management Development Programmes	2 modules	management staff (module equals 1 week)
Supervisory Development Programmes	2 modules	supervisory staff
Industrial Relations	1 week	for union leaders and management staff
Finance		
Cert. In Port/Shipping Financial Management	6 months	for both port staff and shipping companies
Computer & Information Systems		
Introduction to Computers	4-10 weeks	duration differs depending on the entry qualifications or level
Cert. in Computer Oper.	6 months	for both school leavers and workers.

5.2 FUNDING

A sound funding methodology is required for the institution to achieve a prominent role in the emerging knowledge- based economies and societies as a model. This will promote excellence in all the activities in the institution’s mission, through the rewards of quality.

Based on the assumption that funding methodology is particularly suited to influence institutional behaviour, the implementation should be regarded not only as a means to achieve an efficient allocation of resources, but also to enhance the institution's impact. In this case therefore, a diversified financial source base would be ideal while looking at both capital and recurrent funding.

5.2.1 Capital and Initial Funding

The building and financing of the institution would be an expensive undertaking for Kenya. At the same time, all the requirements pointed out regarding curriculum, staff, administration and programmes cannot be translated into reality until the required financial resources are provided to meet both the basic capital needs and initial recurrent costs. Since the institution is to benefit the current and future generations of Kenyans and the world at large, the people (citizens), maritime industry, the government and all stakeholders should contribute their resources to a common goal. This could be done in the same spirit, which has inspired local communities to contribute to primary and secondary education as well as the *Harambee* Institutes of Technology in the task of funding.

As the cost of a new educational institution could be high, Bandari College should be improved to establish the model institute. This will reduce the capital expenditure, and leave only the remaining issue of installing specialised equipment such as simulators. As suggested earlier in the equipment review, the purchasing and installation should be organised through a panel (committee) of users (lecturers/instructors). This is to encourage adequate consultations in order to set high standards and keep low costs.

As a model and a distinctive institution in the field of maritime education and training, attention should be given to methods of financing, patterns of institutional

design and the importance of curriculum to national development and international requirements.

5.2.2 Recurrent Expenditure

In order to widen the base to cover the recurrent costs of the institution, the author believes that it should not be the sole responsibility of the government but all the beneficiaries including students and the industry. Therefore, the maritime industry should play a bigger role and should be encouraged by the institute's management.

In preparing the recurrent budget, a range of activities to be performed should be identified and then budgeted separately in order to maintain better control over the expenditure of funds. These separate budgets should include:

1. Instructional budget – staff salaries, administrative salaries, teaching equipment, staff benefits and research (if necessary)
2. Library budget – staff, materials and new acquisitions.
3. Staff development budget - Costs of training staff to provide needed and continuous development.
4. Students' affairs - accommodation (housing) costs, food costs, sports and recreation costs.

Since the most important activity of the institution is the teaching of the developed curriculum, then the basis for projecting recurrent expenditures should be the costs of instruction. Other expenditures such as administration, library development and student affairs are to be considered as functions of the primary task, which is teaching. These facts will develop a good approach for calculating the financial needs for recurrent operations of the model institution.

The estimation of costs could either be “per student per unit cost” or on a course by course basis. Furthermore, such budgeting procedures permit closer monitoring of curriculum and keeping of instructional programmes on a cost-efficient basis. This

cost-efficient approach should be strengthened by well-designed internal budgeting procedures that would give close attention to financial transfers within the institution and therefore demand adequate justification for all transactions. This will ensure that the institute operates at high standards as desired.

5.2.3 Sources of Revenue.

The basic sources of revenue for the institute should be of a diversified nature. This means it could include government grants, students' fees, local authority and donations, while the maritime industry could provide funds through the construction of new facilities, equipment, books and provision of scholarships to students.

Since the institution is for the benefit of the country, tax exemption on donations like the public universities would be ideal. Also, a maritime training levy could be established and be levied on freight earned by every shipowner trading with or through Kenya. This levy could be collected by shipping agents and paid to a "Maritime Training Fund" through the Kenya Revenue Authority's Customs Department or the Merchant Shipping Superintendent's office special freight levy. The special freight levy is normally based on the manifested and actual tonnage of cargo loaded or unloaded in Kenya.

International support from or through the UNDP/IMO could be requested in the form of technical and financial assistance. This will encourage the finding of new ways of funding and support of the institution. The institute should strengthen contacts with other UN agencies, the World Bank, the Regional Development Banks, the European Community, Japan International Co-operation Agency (JICA) and other bilateral donors with the view of attracting additional resources.

Adoption of income generating activities by offering short courses and hiring of facilities among others would widen the financial band for the institution.

In this chapter, one can conclude that there is need to have within the organisation structure the availability of expertise in both the programming of courses and finance. The staff development plan discussed earlier should therefore provide for the development of a body of staff with the identified expertise. Apart from the staff, proper linkages and co-operations with other bodies and institutions in the region are of paramount importance in the success of this model maritime education and training institution. The next chapter looks at these external linkages and co-operation for those roles.

CHAPTER 6

EXTERNAL LINKAGES AND CO-OPERATION

Considering the number of players in the Maritime Education and Training environment, there is need to have a sound policy on the external linkages and co-operation with other institutions and organisations. These include the related government ministries, industries (maritime and others), colleges and institutions in the region and the world at large.

6.1 MINISTRIES

The Ministry of Transport and Communication should be charged with the responsibility to develop standards and approval of training schemes, and evaluation and certification services. These responsibilities are to ensure compliance with the Kenya Merchant Shipping Regulations (1989) and the set international standards as recognised by the government of Kenya.

The Ministry of Education would be linking the institute to the Kenya Institute of Education (K.I.E) and the Kenya National Examination Council. This is for the facilitation and recognition of the developed curriculum and the examination processes. The involvement of this ministry is to ensure that the certificates offered are on equal level with the existing ones from the national polytechnics and colleges.

The constant linkages from the ministries would be maintained by having representatives in the Board of Governors. Chief executives or directors from the maritime administration and education would be suitable in this policy-making organ of the institution.

6.2 MARITIME INDUSTRY

A good relationship between the institution and the employers (maritime industry) is important. Therefore, more emphasis and involvement is required to develop a smooth working partnership with the employers. Such partnership and co-operation will provide the scope for more work-based learning, with the assurance that employer needs are met. Some of the advantages and benefits are:

To employers (the industry):

- Avoidance of duplication in course development
- Quality assured through an independent agency
- Availability of recognised awards

To the institute:

- Better understanding of educational and training needs (particularly in respect to competencies for employability and standards).
- Insights into the operations of partners in either private or public organisations and updating to new technologies and ideas.
- Possible research links with employer organisations.
- Increase student numbers and fee income (leading to investment in new courses and acquisition of facilities).
- Availability of professional resource personnel on topical issues through lectures and consultations.

Through these links with employers in the maritime industry, the institute will seek to arrange work placements for students, helping them to acquire skills and competencies.

6.3 PORT AUTHORITY

As observed in the previous chapters, the development of the model institute centres around the existing Bandari College, which is fully owned by the Kenya Port Authority. This implies that there should be a well defined linkage policy established between KPA and the institute in the provision of full or part cost-sharing in funding, especially at the initial stages. This is with the view that the institute would self-finance its operations at a later stage.

6.4 COLLEGES AND OTHER INSTITUTIONS

6.4.1 Kenya

In Kenya, the colleges and institutions, which would have some mutual interest in the various programmes, include:

- the national polytechnics – Mombasa, Kenya and Eldoret polytechnics.
- the public universities - Jomo Kenyatta University College of Agriculture and Technology (JKUCAT), University of Nairobi and Moi University.
- Institutions – Kenya Marine and Fisheries Research Institute (KEMFRI)

The co-operation between the institution and the others in the country would range, depending on common interest, on such matters as exchange of personnel, student utilisation of equipment (sharing) and comparative analysis of related programmes.

6.4.2 Regional

Being a model institution in the region, it is important for it to have proper linkages with other colleges and institutions especially in the maritime education and training matters. The main institutions in the region include the Dar es Salaam Maritime Institute and Bandari College (Dar es Salaam, Tanzania), Cape Technicon in South Africa and Malawi Marine Technical College. In encouraging these linkages, the institute should play an active role in the existing Association of African Maritime Training Institutes (AAMTI) by form of contributions to its affairs.

In the co-operation with the maritime institutions in the region, the following activities could be conducted:

- Mutual agreeable exchanges and visits by faculty/departmental members and campus visits by each other's students.
- Exchanges of information of mutual interest in matters such as curriculum, training, facilities and methods of instruction.
- Exchanges of scholarly papers and publications when published by staff and students.
- Holding of seminars and workshops regularly on a rotational basis.
- Exchange of academic staff for mutually agreed periods, whereby, during which the visiting staff would assume lecturing and related responsibilities in the host institution.

Having this co-operation, it will promote the role of maritime education and training in the economies of these countries in the region and in the world in general.

While concentrating on becoming a model institution, it would be of benefit if a co-operation is found in the form of liaising with well-established and recognised maritime institutions in the world. The colleges could include Australian Maritime

College, Arab Maritime Transport Academy in Egypt and established UK maritime institutions. This is because of the educational systems in these countries, which have similarities to the one in Kenya.

6.5 MET SYSTEM HARMONISATION AND CO-OPERATION IN THE REGION

The maritime industry being a global activity, has created the need to harmonise the several set of standards involving the concerned parties. In the process of harmonising training standards, the STCW Convention was adapted, forming an important step towards the global harmonisation of maritime education and training.

The process of harmonisation becomes easier if there exists an element of commonality among those concerned. In this respect, the concerned countries, according to the author, should be Kenya, Uganda and Tanzania which form the East African Co-operation and to incorporate South Africa and others at a later stage. The common grounds in this case include language and some element of similarity in their education systems, which, however, keeps on widening with time.

Whilst the STCW Convention provides a general outline on the minimum requirements for the certification of ships' officers and crews, the region's harmonisation should deal with more specific terms such as:

- Curriculum
- Certification and examination
- Recruitment processes and setting of standards in the hiring of graduates.

Programmes, such as the Portworkers' Development Programmes (PDP) developed by UNCTAD, have already set the pace in the provision of standardised training in the ports. The programmes are run in Bandari College, Mombasa and Bandari College, Dar es Salaam.

On regional co-operation, the recently re-established East African Co-operation (EAC) comes in handy. In its development strategy as provided in the East African Development Strategy (1997-2000), one of the objectives is to establish an internationally competitive single market and investment areas in the region. This incorporates free cross border single market and goods, services, and factors of production, namely labour and capital. In effect, it will promote economic growth and development in the region, thereby creating employment and uplifting the standards of living of the people.

The other area in the development strategy includes both human and technological capabilities in East Africa. These two areas aim at building capacity for sustainable development in the region.

The above policy guidelines or objectives of the East African Co-operation allow the possibilities of a smooth linkage of human resources and utilisation of each other's facilities (equipment) in the maritime education and training in the region. This will lead to avoidance of duplication, unnecessary competition and maximise mutual benefits.

This concept of harmonisation in MET could be extended through collaboration with other African regional organisations. The regional organisations include the Common Market for East and Southern Africa (COMESA), Inter-Governmental Authority for Development (IGAD), Port Management Association of Eastern and Southern Africa (PMAESA) and Southern Africa Development Community (SADC).

The idea of regional co-operation is fully supported by the International Maritime Organisation through its Technical Co-operation Division (TCD), whereby, the TCD activities of concern to education and training include:

- The development of national and regional maritime training institutions.
- Establishment of regional associations of maritime training academies.

- Establishment of the three global training centres; World Maritime University (Malmo, Sweden), IMO International Maritime Law Institute (Msida, Malta), IMO International Maritime Academy (Trieste, Italy).

To further encourage regional developments, IMO has established two regional co-ordination centres in Africa. One is in Kenya (duty station, in Nairobi) for the Eastern and Southern Africa Sub-region while the other Ghana (duty station, in Accra) for West and Central Africa (Anglophone) Sub-region.

On the issue of harmonisation, the IMO model courses take a lead. As there are a number of courses developed specifically to harmonise the minimum standards of competency expected from certified seafarers. The model courses are set with respect to the minimum training requirements of the STCW Convention.

From the discussions in this chapter, it can be seen that there are different ways or routes and alternatives in which harmonisation (of programmes and certificates) and co-operation could be conducted. It is therefore the responsibility of the sitting management of this model institute together with the maritime administration to see that the institute is linked all round.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

The maritime education and training sector in Kenya requires a great deal of development and improvement. The development aspect concerns the MET system touching both education and training, examination and certification processes. This system mostly refers to the onshore (seafarer) education and training, which is affected by the international standards such the revised STCW 78. The revised Merchant Shipping Act of 1983 has not indicated the examination subjects for any of the certificates of competency, or periods of sea service required before sitting for any examination. This may have been caused by the long system in enacting a law through the parliament or it is subject to unawareness of the responsible persons in the system. In the mean time, Kenyan seafarers are disadvantaged by not having either requisite training or holding international certificates.

Regarding improvements with respect to the existing Bandari College, there is a clear need for reorganisation in order to meet the requirements on management and organisation, curriculum, personnel, facilities, technology and quality standards as identified in chapters 4 and 5 for it to become a model institution. While the college enjoys the support from its parent organisation, KPA, it lacks autonomy in diversifying its training activities in general. Bandari's modern infrastructure, which could allow modification and improvement to provide new programmes and to achieve the set objectives in the model-MET institution, is still under utilised. This is further pulled down by lack of qualified mariners (instructors to be) in Kenya, which could be termed as a handicap.

The creation of this institution would mean promoting human resource development in the maritime industry by providing skilled manpower for the market within and outside the East Africa region. Despite the difficulties and limitations expected such as funding and sea-training, the benefits tend to be higher as indicated in this paper. The benefits identified include employment, creation of new careers, increased safety standards and absorption of qualified secondary school graduates. These benefits justify the establishment of the institute as it leads to both direct and indirect effects on the Kenyan economy on a positive note. Chapter 3 has shown that there is a shortfall of officers and the majority of ratings are unqualified in the world fleet, which has led some developed countries such as Norway to support maritime institutions in the developing countries. This does not close doors to newcomers so long as there is a well-focused approach. As a leading higher education provider in the region, Kenya stands a chance to become a supplier of skilled maritime manpower if given a back up in terms of funds and other support such as expertise and deployment openings for its graduates.

Regular and systematic recruitment of untrained potential seafarers and the deployment of trained seafarers are to be considered essential components of the inputs and outputs of this model institution. This means a reputable and well-organised and efficient manpower employment agency, which is crucial to the success of the institution, is required. The agency should have a worldwide reputation and connections for easy deployment.

Regarding funding, generous offers and assistance from suitable donors are available so long as the government gets involved in identifying. An example of such an offer is one by the Islamic Republic of Iran as expressed in an IMO circular, TC 34/INF .2 dated August 1990, offering training places on board one of their future training ships. Copies attached hereto as appendices B and C.

Despite the encouragement from the IMO and the re-establishment of the East Africa Co-operation, the regional co-operation in the MET issues might be difficult. This could be possibly due to the difference in the education and training policy in these countries and strongly on the aspect of competition among the institutions. The element of pride also adds salt to insult if no proper policies are laid down with respect to the level of co-operation basing it on the principle of mutual benefit.

Finally, if this institution were to be established, then it requires the full support from the government and all the stakeholders. This is from the fact that there lacks a proper backing from these authorities in recognising the importance of an MET system and institution, which should offer diversified programs in the country and the region as a whole. Matters related to maritime education and training have not been taken seriously at the ministerial level, mainly left as a Kenya Ports Authority responsibility. Somehow, it has also not been considered as a priority in the government's National Development Plans. It is high time the concerned and Kenyans in general wake up and open this new avenue while looking forward to becoming an industrialised country by the year 2020.

7.2 RECOMMENDATIONS

As a result of the foregoing study, the author strongly recommends that the following actions be undertaken:

- Through the Merchant Shipping Superintendence, Kenya should restructure the examination and certification processes to an internationally recognised format.
- The Government of Kenya should enact legislation to ratify the revised STCW Convention.
- The Ministry of Transport and Communication should consider having a proposal on the development of the MET institution in the National Development Plan.

- The Kenya Ports' Authority's Bandari College should be utilised for the establishment of a model-MET institution in Kenya for East Africa.
- The institution should utilise the existing IMO model courses and other validated training materials available.
- The Government and interested parties should initiate co-operation and harmonisation of maritime education and training in the East Africa region.
- Generous offers, funds and technical assistance should be sought from suitable donors.
- Maritime manpower employment agency should be established in Kenya.

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APPENDIX A

INTERNATIONAL MARITIME ORGANIZATION

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IMO

TC/Circ.52

9 May 1991

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ASSISTANCE IN PLACING CADETS ON BOARD SHIPS FOR THEIR-SEA GOING TRAINING

Note by the Secretariat

The Secretary-General has received a request from the Managing Director of the Kenya Ports Authority for assistance from IMO in securing sea-going berths for six deck cadets on board ships owned and operated by Member States.

The six cadet officers have completed eighteen months' pre-sea training at the Regional Maritime Academy in Accra, Ghana, and require twelve to eighteen months of programmed supervised training at sea. It would be highly desirable to have their training begin in June 1991.

In the spirit of technical co-operation, Member States are accordingly invited to examine the possibility of providing sea-going berths for these cadets. The Secretary-General would be most grateful to receive details of assistance which Member States can provide in response to the request from the Kenya Ports Authority.

APPENDIX B

INTERNATIONAL MARITIME
ORGANIZATION



TC 34/INF.2
31 August 1990
ENGLISH ONLY

TECHNICAL CO-OPERATION
COMMITTEE - 34th session
Agenda item 9

IMO

OTHER MATTERS

Note submitted by the Islamic Republic of Iran

Attached, for the information of the Committee, is a note submitted by the Islamic Republic of Iran concerning the training ship Chods.

W/4195e*

For reasons of economy, this document is printed in a limited number. Delegates are kindly asked to bring their copies to meetings and not to request additional copies.

APPENDIX C

TC 34/INF.2

- 2 -



ISLAMIC REPUBLIC GOVERNMENT
OF IRAN
PORTS & SHIPPING ORGANIZATION

No: 1/758

D : 22.APR.1990

Mr. C. P. Srivastava

Emeritus secretary general of IMO

And chancellor of the World Maritime University

It is my great pleasure to refer to your kind letter of Dec.28,1989 which was written after your short stay in the Islamic Republic Of Iran, your visit to Shahid Rajaei port complex and meeting with high ranking officials of the Government of Islamic Republic Of Iran .

I take the opportunity and reciprocally convey to you my profound gratitude together with the deepest appreciation of the PSOS personnel for your warm compliments and kind words.

I wish as well to explain very briefly the objectives of the training ship ghods that you yourself inaugurated during your visit to Bandar Abbas since the attempt is somehow related to maritime safety and training and also accords with the ideals of IMO. please make appropriate arrangements the matter to be communicated to the member states, maritime safety committee as well as other committees and sub committees of the International Maritime Organization.

The specification of the training ship ghods

Length overall:	70 M
Width:	13.70 M
Draught:	4 M
Power of engine:	2X1564 H.P
G.R.T.	2450 Tons

751 Enghelab Avenue Tehran, Iran. Cables: Banader Telex: 0212271 BNDR IR Tel: 837041-9



ISLAMIC REPUBLIC GOVERNMENT
OF IRAN
PORTS & SHIPPING ORGANIZATION

The ship is accommodated with the following:

Library

Laboratories, training instruments and facilities.

Marine engineering workshop

30 rooms for officers, cadets, petty officers and other members of training experts.

Three classrooms of about 40 square meters each.

Each classroom is provided with blackboard and arrangements for audio-visual presentation.

The said training ship not only could facilitate and provide preparatory courses on board and sea services for students and cadets of training centre and maritime academies but also could navigate from the port of origin which is Shahid Rajaei port, to all near or distant ports located in the Persian Gulf and sea of Oman which are lacking maritime training facilities, and by temporary or long time berthing (depending on the duration of training) will carry out different training programs for the personnel of the mentioned ports by the instructors on board the ship.

Also I should mention here that one of the advantages of this concept is the considerable reduction of training cost, because the establishment of new training centre ashore due to nature of maritime training and its infrastructure is very costly and expensive, such a mobile training centre could be a solution to improve and building up of this kind of training system in the developing countries.



ISLAMIC REPUBLIC GOVERNMENT
OF IRAN
PORTS & SHIPPING ORGANIZATION

The training ship ghods will as well render services to the Middle Eastern and east African nation after being fully equipped and required experience gained.

May the almighty Allah bless you with health, happiness and success.

Best regards

Mohammad Madad

Vice Minister Of Roads & Transportation

and

Managing Director of P.S.O.

