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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**AN ANALYSIS OF LEADERSHIP EDUCATION
AND TRAINING IN MARITIME EDUCATION AND
TRAINING INSTITUTIONS**

By

YUSUKE MORI

Japan

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 AFFAIRS

(MARITIME EDUCATION AND TRAINING)

2014

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.

Signature: 

Date: *19th September, 2014*

Supervised by: Michael Manuel

Associate Professor, World Maritime University

Assessor: Clive Cole

Associate Professor, World Maritime University

Co-assessor: Jamie Veiga

Senior Project Officer, European Maritime Safety Agency

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ABSTRACT

Title of Dissertation: **An analysis of leadership education and training in
maritime education and training institutions**

Degree: **Master of Science in Maritime Affairs**

In 2010, amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) 1978 were adopted in Manila. These amendments introduced several new requirements including a requirement for seafarers of setting ranks to be trained in leadership. Currently a number of courses have been established in various Maritime Education and Training Institutions (METI) with a view to fulfil this requirement for leadership training. However, it would seem that there is significant room for improvement. This dissertation is a study on the leadership education and training in METI. The study focuses on philosophical approaches to leadership training. An initial literature review focuses on leadership definitions, core skills and development processes in general and in the maritime context in particular.

The study also presents questionnaire and interview results regarding respondents' perspectives on leadership and the philosophical approach of leadership education and training. It identifies the problems being faced due to widely varying perspectives of leadership and the associated necessary skills.

Through the data analysis and literature review, the study finally proposes philosophical recommendations on leadership training.

KEYWORDS: leadership, MET institutions, STCW Convention, skills, education, training

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List of Abbreviation

CRM	Crew Resource Management
CoC	Certificate of Competency
DPA	Designated Person Ashore
ECDIS	Electronic Chart Display Information System
FOPM	Fleet Operating Procedure Manual
HELM	Human Element, Leadership and Management
IMO	International Maritime Organization
JAS	Japan Air System
IMaREST	Institute of Marine Engineering, Science and Technology
ISF	International Shipping Federations
ISM	International Safety Management Code
LAMS	Leadership And Management School
ILO	International Labour Organization
LMX	Leader-Member Exchange Model of leadership
MAIB	Marine Accident Investigation Branch
MCA	Maritime and Coast guard Agency
MET	Maritime Education and Training
METI	Maritime Education and Training Institutions
MRM	Maritime Resource Management

NIST	National Institute for Sea Training
OOW	Officer on Watch
OPRF	Ocean Policy and Research Foundation
SQEMS	Safety, Quality and Environmental Protection Management System
SQMM	Safety and Quality Management Manual
STCW	International Convention on Standards of Training, Certificate and Watchkeeping for Seafarers, 1978 as amended
STW	IMO subcommittee on Standards of Training and Watchkeeping
USCG	United States Coast Guard
WMU	World Maritime University

Chapter 1: INTRODUCTION

The shipping industry has been growing for many years. Today, without the shipping industry, world trade and the world economy as we know them, would be non-existent, even impossible. On the other hand, as indicated by the International Maritime Organization (IMO), the shipping is probably the most international and one of the most dangerous of industries (IMO, 2014a). Developing international regulations that are followed by all shipping nations has been recognized as the best way to improve safety at sea. In addition, the safety and security of life at sea, protection of the marine environment and more than 90% of the world's trade is dependent on the professionalism and competence of seafarers. This dependence of world trade on the shipping industry implies that maritime accidents have a significant impact on industries and the environment. IMO was established in 1948 (the original name was the Inter-Governmental Maritime Consultative Organization, but the name was changed in 1982 to IMO)

to provide a machinery for cooperation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade; to encourage and facilitate the general adoption of the highest practicable standards in matters concerning maritime safety, efficiency of navigation and prevention and control of marine pollution from ships (IMO, 2014b, paragraph 2).

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), which is one of the key conventions of IMO, was first adopted in 1978. This Convention was to establish a global standard of training, certification and

watchkeeping. The first major revision was undertaken in 1995, response to the need to bring the Convention up to date and in response to critics who pointed out the many vague phrases, which resulted in different interpretations being made. In 2010, the Manila amendments to the STCW Convention and Code were adopted, marking a further major revision of the STCW Convention and Code. The amendments are again aimed at bringing the Convention and Code up to date with developments and to enable them to address issues that are expected to emerge in the future (IMO, 2014c). There are numerous amendments, which take account the latest technical developments required for onboard ship operation, such as the use of the Electronic Chart Display and Information System (ECDIS) or the need to give more emphasis to environmental management. Moreover, the amendments include new training requirements related to competencies in leadership, teamworking and resource management (ISF, 2011). The accident of the 'Bow Mariner' pulled the trigger for the need for leadership training for seafarers. The investigation report of that accident, indicated that there was evidence of lack of cohesiveness between three Greek officers, and the other officers and crew who shared a different nationality (non-Greek). In addition, several survivors stated that the Greeks treated other members with disrespect and constantly threatened them with being fired (USCG, 2005). Notably, through this incidents and analysis, Australia, New Zealand and the Institute of Marine Engineering, Science and Technology (IMaREST) made a proposal to address requirements on leadership and communication skills in the IMO Standards of Training and Watchkeeping (STW) subcommittee at the subcommittee's 39th meeting - STW 39 (IMO, 2007). This subcommittee agreed with the proposal on addressing new requirements including those for effective communication and leadership skills. Finally, IMO decided to put in place new requirements for leadership training for the seafarers at the operational and management levels. These requirements were incorporated in the STCW Code A-II/1 and A-II/2 of chapter II (IMO, 2011). Consequently, leadership training has become mandatory for all seafarers at the operational and management levels. MET institutions have established leadership training in order to fulfil the requirement.

For instance, the United Kingdom established Human Element Leadership and Management training to fulfil these requirements (Warsash Maritime Academy, 2014). The Swedish Club Academy also established Maritime Resource Management course, which include the leadership development (The Swedish Club Academy, 2014). These are relatively short courses, typically covering one week. In addition, many other MET institutions have provided leadership training for many years. However, assessment for competence of leadership is still under development in many jurisdictions (Murata, 2011). According to Grey (2012),

... one of the subjects we tackled was this issue of management and leadership, which now features in the aftermath of the Manila amendments to the STCW requirements. It is no longer something that can just be left to luck and that process of osmosis, with administrations charged with ensuring that both are taught and indeed assessed in an objective fashion. It is an important element in ensuring that the human element features more robustly in the regulatory regime (Grey, 2012, paragraph 10–11).

The STCW Convention does not seem to take personal development into account for leadership training, despite leadership experts' view of personal development as the foundation for effective leadership work (Kuh, 1995, Murphy & Johnson, 2011). The IMO model course, which was designed by working group formed by Global MET, is aware of this deficiency and works to ensure there is at least some recognition of this concept in the course (Haughton, 2012). As indicated then, Grey notes the importance of leadership training, a position further augmented by Haughton who argues for the recognition of personal development in leadership training. All this shows that leadership training may be said to be still under development as far as Maritime Education and Training is concerned. It is the aim, therefore of this work to explore practices of leadership training and the philosophies of leadership on which they are based. The work also aims to explore perceptions of what constitutes effective leadership training in different jurisdiction. It is intended that these analyses will be done through researching the methodology/methods by which seafarer education and training in leadership is supported and evaluated by

maritime stakeholders such that its effectiveness can be determined. The objectives required to achieve these aims, therefore, are:

1. To define leadership training in Maritime Education and Training.
2. To investigate models of leadership training in different jurisdictions and industries.
3. To evaluate the models found from objective 2.

1.1 Research questions:

1. How do Maritime Education and Training Institutions in different jurisdictions approach training for leadership?
2. How do other industries train operational personnel for leadership?
3. What factors influence the use of models and what are the outcomes for optimum MET leadership training?

1.2 Methodology:

These research questions will be addressed with the following methodological procedures,

- a) Identify an appropriate sample of jurisdictions (national contexts) and industries

Firstly, appropriate jurisdictions and industries will be identified in order to collect samples of leadership philosophies and training models. Both jurisdictions and industries will be identified in accordance with possibility of access and reliability.

- b) Develop questionnaires

Secondly, questionnaires will be developed in order to collect detailed information on leadership philosophies and training models. Questionnaires will be written in English.

c) Administer questionnaires and interviews via email, telephone, and face-to-face means

Thirdly, the formed questionnaires will be administered and interviews carried out via telephone and, if possible, face-to-face.

d) Analyse relevant documents/curricula

Finally, any relevant and available documents and/curricula on leadership training in the field of MET will be analysed.

Chapter 2: LITERATURE REVIEW

2.1 Leadership studies and development

The concept of leadership and its manifestations in different contexts – national, organizational and institutional has attracted significant research (Cole & Shreeves, 2004; Zaccaro & Klimoski, 2001). Definitional issues for leadership may be said to have been addressed at all levels by three approaches. The first of these approaches is the ‘trait leadership’ approach that sees leadership as originating from inherent traits of individuals i.e., the subscription to the notion that leaders are borne and not made (Williams, 2013). The second approach is the ‘behaviourism’ approach that focuses on behaviours of leaders. Subscription to this approach implies the acceptance of the possibility of leadership skills being learnt (by anyone, whether with particular inherent traits or not). Finally there is the contingency approach to leadership which, adding to the behavioural approach, posits that no particular set of leadership behaviours/skills may be said to be optimum. Rather the appropriateness of the skills/behaviours is context-dependent. Leadership behaviours – according to this approach – are only optimum when they resonate with the particular context (Nakamura, 2010).

Trait leadership study is the study which has been researched for the longest period and is based on the belief that great leaders could possess some common individual talents and traits. Leaders possess physical and/or personality characteristics by nature, that allows them to be successful in influencing the other. The measurement items of individual talent are height, weight, appearance, health state, mental state, adaptability, creativity,

communicativeness etc. (Hato, 2008). However, these research efforts could not be said to have reached a consensus in that the relation between leadership and individual talent is still not viewed as being very strong (Stogdill, 1974). Behavioural leadership is the study based on the theory that leaders can be “made” by individuals being educated and trained in optimal/necessary behaviours for leadership. In other words, the quality of leadership (which depends on the specific behaviours of leaders, can be transferred through training, and that those individuals do not need to have specific innate traits. More contemporary leadership study approaches include, Leader-Member Exchange (LMX) theory, Path-Goal theory, Attribution theory and Transformational Leadership theory (Hato, 2008).

2.2 Definition of leadership

According to Jeffery (2007, p.23) “because leadership is defined by the circumstances in which it is practiced and by the people who practice it, academics have been unable to reach common agreement on exactly what leadership is”. With the existence of over 400 definitions of leadership (Stogdill, 1950, p.3; Richards & Engle, 1986, p. 206; Hemphill and Coons, 1957, p.7; Drath & Palus, 1994, p.4; Rauch and Behling, 1984, p.46)¹, it appears that Jeffery’s observation remains a valid one today. However, one definitional

¹ Leadership may be considered as the process (act) of influencing the activities of organized group in its effort toward goal setting and goal achievement.

Leadership is about articulating visions, embodying values, and creating the environment within which things can be accomplished.

Leadership...is the behaviour of an individual when he is directing the activities of a group toward a shared goal.

Leadership as the process of making sense of what people are doing together so that people will understand and be committed.

“Leadership” is defined as the process of influencing the activities of an organized group toward goal achievement.

aspect that appears to be commonly accepted is the recognition that leaders cannot lead without followers to follow. There is a mutually dependent relationship between leader and followers and it is only in this context that leadership can exist. The role of leader depends on the led. Jeffery (2007) thus defines leadership as being about persuading followers to work together in the most effective manner to achieve the shared vision. Similarly, Takeda and Nonaka (1983) see leadership as “the art, science, or gift by which a person is enabled and privileged to direct the thoughts, plans, and actions of others in such a manner as to obtain and command their obedience, their confidence, their respect, and their loyal cooperation. Simply stated, leadership is the art of accomplishing the Navy’s mission through people” (Takeda and Nonaka, 1983, p.3). In the same vein, the IMO model course on leadership and teamwork defines leadership as “a process whereby an individual influences a group of individuals to achieve a common goal” adding that “leaders carry on this process by applying their leadership knowledge and skills” (IMO, 2014d). Similarly, Cooper (2008) defined the leadership as being about creating circumstances to lead others to consistently deliver high levels of performance.

The many definitions of leadership make it difficult to settle on one optimum definition. However, it may be concluded that leadership comprises a number of elements, an important one being the need to define and discuss leadership in the context of followership.

2.3 Leadership styles

According to the Silva (2014), there are differences within academia regarding the variety of styles of leadership. Some researchers believe that leadership style is essential further noting that the best style is not static but should be adapted to the situation. On the other hand, others believe that changing leadership style is impossible or should be avoided (Lewin, Lippit & White, 1939; Likert, 1967). Moreover, some even believe that the most important thing is not the style but the essence of leadership. There are also different opinions about the subject between academia and the wider industry and organizational

life. For instance, some researchers believe that leadership style focusing on task is better than leadership style focusing on employee (Mitchell, Biglan, Oncken & Fiedler, 1970), leading to the development of different models of situational leadership (Hersey, Blanchard & Johnson, 2001). On the other hand, most people in business tell you that leaders will not succeed without devoting much attention to both task and the employee (Silva, 2014). As such, style of leadership is also controversial both in the literature and in the practical organizational setting.

For the purposes of this study the ten popular styles of leadership as indicated in the IMO Model Course on Leadership (IMO, 2014d) will be used.

The following are the ten popular leadership styles chosen for the purpose of this study.

1. Autocratic leadership

According to the Cooper (2008), autocratic leadership is controlling, and telling workers and/or followers what and how to do things. If it is used over time, it causes lack of trust and respect and prevents workers from thinking creatively and taking risks, and creates conditions of fear through critical feedback. This style generally neither motivates workers positively nor increase loyalty (Cooper, 2008). On the other hand, Autocratic leaders provide clear expectations for what needs to be done and clear division between their followers. This could be best applied to the situation where there is little time for decision making with team, or leader is the most knowledgeable person in a group (Lewin, Lippit & White, 1939).

2. Bureaucratic leadership

Bureaucratic leaders work by following closely rules and procedure. This style is suitable for working in high risk environments, such as working with machinery, handling dangerous cargoes or working at dangerous heights (IMO, 2014d). On the other hand, the disadvantage of this style is that it is ineffective on teams or organizations that rely on flexibility, creativity or innovation (Leadership Foundation, 2014).

3. Charismatic leadership

A charismatic leader inspires enthusiasm and generates energy to lead others forward. In general, people tend to willingly follow this kind of leader. However, there is the risk that this style of leadership breeds inappropriate self-confidence and self-centeredness because followers believe that achieved success is highly attributable to the leader. A charismatic leader bears heavy responsibility, and there is a tendency for followers to leave things to the leader (IMO, 2014d).

4. Democratic or participative leadership

This type of leader invites members to participate in decision-making, even though they take responsibility for the final decision. Members can feel involved and respected and individual development is encouraged. Indeed, it takes time to reach decision. However, it is likely to result in a satisfactory outcome (IMO, 2014d). The disadvantage of this style is that this type of leader can appear indecisive or unwilling to make a decision and decision-making is time consuming (Anderson, 2011).

5. Laissez-faire leadership

The laissez-faire leader takes a back seat. They let their followers make their own decisions and give them freedom to work in the way they deem best. This can be applicable when leading experts and to facilitate creativity. However, it can lead to a lack of direction, a lack of urgency and followers frustration when overused (Cooper, 2008).

6. Task-oriented leadership

A task oriented leader focuses on tasks at hand, and all procedures necessary to achieve the task. This style of leader is less concerned about catering to employees and more concerned with finding progressive technical/operational solutions to achieve goals (Anzalone, 2014). A disadvantage associate with this style is that there is a possibility for

workers to have their motivation decreased if they feel powerless to control any aspect of their jobs (Benjamin, 2014).

7. People-oriented or relation-oriented leadership

According to Anzalone (2014), a leader with this style understands the importance of tasks, but also uses a tremendous time and focus on meeting the needs of employees involved in these tasks. This may include offering incentives, such as bonuses, providing mediation to deal with conflicts, spending individual time with employees to learn their strength and weakness, or just leading in an encouraging manner. A possible disadvantage is that if employees receive too much responsibility without management guidance, the decision making can be overwhelming (Pirraglia, 2014).

8. Transactional leadership

Transactional leadership motivates followers by appealing to their self-interest and exchanging benefits (Yukl, 2013). The transaction is that work will be done in return of payment and other rewards. The leader has a right to penalize followers who do not meet the particular standard. (IMO, 2014d). Transactional leaders can seem impersonal. The leader may see employees as completely replaceable, because the leader only focuses on the completion of tasks. Transactional leaders don't see employees as individuals with personal needs. As a result, moods, emotions and fatigue may become irrelevant to managerial decision making about productivity (Johnson, 2014).

9. Transformational leadership

The transformational leader can effectively inspire the followers with shared vision of the future and encourage enthusiasm for situations to be changed (IMO, 2014d). The transformational leader appeals to the moral values of followers by attempting to raise their consciousness about ethical issues (Yukl, 2013). However, this leadership style may lead to relying too much on emotion and passion and overlook truth and reality (Kokemuller, 2014).

10. Servant leadership

A leader with this style is often not formally recognized as the leader. When someone leads simply by meeting the needs of the team, he/she is described as a servant leader (IMO, 2014d). There are a number of disadvantages of servant leadership. One distinct disadvantage is the use of time. It takes time to implement this philosophy. Typically an entire organization has to undergo a paradigm shift towards servant leadership. It starts at the top of organization, but change has to be made all throughout the organization (Basinski, 2014).

2.4 Development of leadership in general

Is leadership trait-based or is it behaviour-based such that individuals can be trained to be “good” leaders? Avolio (1999) states that most psychologists believe that the qualities of leadership are innate and/or genetic, therefore, it is impossible to learn these qualities. Although there is no real agreement about this statement between all organizational, political, military, sport and business leaders, many of them believe that some of the knowledge and leadership skills must be obtained and developed in practice and should courageously be tested in real experiences (Silva, 2014). However, in the dominant academic view, it is thought that all the leadership skills can be obtained, maybe with the exception of intelligence. For instance, Bennis and Thomas (2002) surveyed 43 leaders and found that they became leaders after transformative experiences in their life. In addition, they could maintain their condition as leaders because of their adaptive capacity, capability of relation with others, confidence to do right thing, and sense of integrity. Similarly, Yukl believes that all competencies can be developed in several ways. He believed that leadership competencies can be developed in a number of ways, including formal training, development activities and self-help activities. The effectiveness of formal training programmes depends highly on how well they are designed: the design of the training should take learning theory into consideration, the specific learning objectives, trainees’ needs, practical considerations such as constraints and costs in relation to benefit.

Many types of training methods are used for leadership training, including lectures, discussions, role playing, behavioural role modelling, case analysis and simulations. In selecting a suitable method, it is important to consider the trainees' current skills, motivation and capacity to understand complex knowledge. The instructors should give ample opportunity to trainees to practice the skill they are learning during training and afterward. Active practice should include accurate, constant and constructive feedback to help them monitor progress and evaluate what they know (Yukl, 2013). In the same vein, Allen and Middlebrooks (2013) analysed the challenges of leadership education. One of the challenges is that the development of expertise is facilitated by real-time coaching. The swimmer, chef and medical doctor are privy to a great deal of real-time coaching that is lacking in most of leadership development programmes although it may be said to be one of the significant elements of leadership training. Another challenge (especially in the maritime industry) is with time. Most of leadership training participants, in the maritime context, engage in leadership learning in shore sessions e.g. short courses limited to only a few days. Rarely is such a programme a sequential progression of development. Leadership skills take time to be developed.

Despite all the challenges, however, it is agreed by many that leadership skills can be obtained through training and experience.

2.5 The leadership development process

Leadership development is a lifelong process and the necessary skills are not for senior management personnel only (see figure 1). Leadership skills are necessary for everyone who has responsibility for others. Human beings are keen observers and mimics. We learn by observing and replicating what we see around us, acquiring good and bad habits by watching and copying others (Jeffery, 2007).

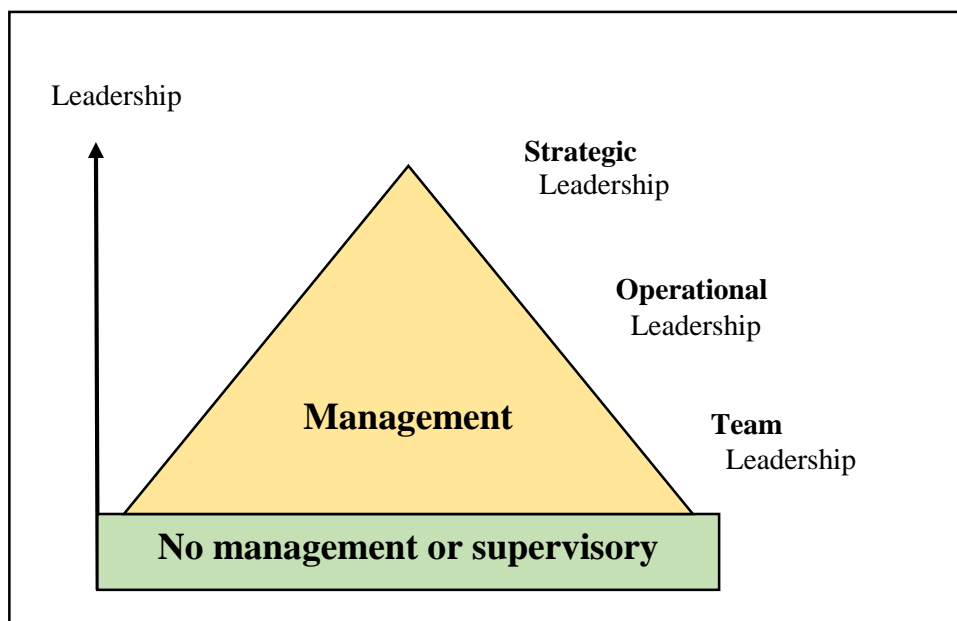


Figure 1: The leadership pyramid

Source: Jeffery (2007, p.10)

According to Bell (2012, p.458) “even the most experienced leaders should always expose themselves to new ideas, confront new challenges, and rethink their leadership style”. Robert (2005) states that it is becoming increasingly clear that experience is the best teacher of leadership development.

2.6 Leadership development in other industries

2.6.1 Military

In the United States, the Junior Reserve Officers Training Corps (JROTC) Program was established to:

prepare high school students for responsible leadership roles while making them aware of the benefits of citizenship. Classroom and outside activities, including service learning projects, become opportunities to acquire the knowledge, discipline, and sense of responsibility that are necessary to take charge of one's future. The result is responsible cadets who are sure of themselves, can think on their own, and can express their ideas and opinions clearly and concisely (Department of the Army, 2002, p.4).

The aims of this leadership education and training course are for participants/trainees to:

- graduate from high school
- be good citizens by knowing and exercising the rights, responsibilities, privileges and freedoms of good citizenship.
- gain leadership potential and the ability to live and work cooperatively with others; demonstrate leadership in situations involving conflict resolution.
- achieve positive self-esteem and winning behavioural concepts in a culturally diverse society.
- learn the ability to think logically and communicate effectively with emphasis on effective oral communication.
- learn the importance of diet and of physical fitness in maintaining good health and appearance.
- gain an understanding of the history, purpose and structure of the Army JROTC.
- acquire proficiency in basic military skills (such as drill and ceremonies, first aid and map reading) that are necessary for working effectively as a member of a team.
- learn the importance of citizenship through American history as it relates to America's culture and future from the revolutionary period to the present.

- learn about the dangers of substance abuse and the importance of mental management, including goal setting and positive self-talk.

(Department of the Army, 2002, pp.4-5)

The philosophy, aims and approach of the US Army JROTC, appears to be shared by many other military institutions worldwide.

2.6.2 Coast Guard

The United States Coast Guard has provided Leadership And Management School (LAMS) training. This training is used to prepare coast guard officers up and coming leaders. The week-long course is geared towards teaching both active duty and reserve Coast Guard officers and enlisted members in middle level management positions. The civilian employees and auxiliary members can also attend this training. USCG indicates that “The course develops skills in the following areas: communicating effectively, influencing others positively, creating an environment that motivates performance, getting the job done while taking care of subordinates, encouraging personal ethics, and promoting teamwork” (USCG, 2014a, paragraph 1). According to Wadlow (2007), the course focuses on communication and team building with putting the students into different scenarios requiring them to work together in order to accomplish their given tasks. In order to survive, the students are required to demonstrate teamwork to decide how to best use the provided resources.

The Coast Guard encourages personnel E-5 and above² to retake the training every three years in order to keep up to date on new leadership techniques and maintain leadership proficiency.

2.6.3 Aviation

Crew Resource Management (CRM) Training is one of the most essential training programmes in the Aviation industry. CRM training includes leadership and teamwork skills. According to the Civil Aviation Authority (2006), the objectives of CRM training are indicated as:

- a) To enhance crew and management awareness of human factors which could cause or exacerbate incidents which affect the safe conduct of air operations.
- b) To enhance knowledge of human factors and develop CRM skills and attitudes which when applied appropriately could extricate an aircraft operation from incipient accidents and incidents whether perpetrated by technical or human factor failings.
- c) To use CRM knowledge, skills and attitudes to conduct and manage aircraft

² The USCG has a ranking system that starts from E-1 through W ranks to O-11. 'E' stands for Entitled Rank, 'W' stands for Warrant officer, and 'O' stands for Officer. There are three categories for each title in E ranks - Seaman, Fireman and Airman. E-1 is title for Recruit, E-2 is Apprentice. E-3 is title for Seaman, Fireman and Airman. E-4 is Petty Officer 3rd Class, E-5 is Petty Officer 2nd Class, and then E-6 is for Petty Officer 1st Class. E-7 is for Chief Petty Officer, E-8 is for Senior Chief Petty Officer and E-9 is given for Master Chief Petty Officer of the Coast Guard. W-2 is for Chief Warrant Officer 2, W-3 for Chief Warrant Officer 3 and W-4 is for Chief Warrant Officer 4. O-1 is for Ensign, O-2 for Lieutenant, Junior Grade, O-3 for Lieutenant and O-4 is for Lieutenant Commander. O-5 is given for Commander and O-6 is for Captain. O-7 is for Rear Admiral, Lower Half, and O-8 for Rear Admiral Upper Half. O-9 is for Vice Admiral and O-10 is for Admiral (USCG, 2014b).

- operations, and fully integrate these techniques throughout every facet of the organization culture, so as to prevent the onset of incidents and potential accidents.
- d) To use these skills to integrate commercially efficient aircraft operations with safety.
 - e) To improve the working environment for crews and all those associated with aircraft operations.
 - f) To enhance the prevention and management of crew error

(p. 1 of Chapter 4)

CRM training can be defined as a management system which makes optimum use of all available resources to promote safety and enhance efficiency of flight operations. CRM is more focused on the cognitive and interpersonal skills needed to manage the flight. In this context, cognitive skills are defined as the mental processes used for decision making. Interpersonal skills are regarded as communications and behavioural activities associated with teamwork (Civil Aviation Authority, 2006).

Fukui (2007) notes that the necessary skills for CRM include 15 components as indicated in table 1 (see table 1)

Table 1: JAS CRM skills/elements

Communication	2 way communication	Appropriate communication
	Assertion/Inquiry	Challenge/question for safety
	Briefing	Share the plan and cognition
Decision making	Use of resources	Effective use of resources
	Decision	Appropriate decision making
	Critique	Review the decision and action
Team building	Climate	Build good team
	Leadership	Demonstrate leadership/followership
	Conflict resolution	Resolve the conflict

Situation awareness	Vigilance	Maintain awareness
	Monitor	Monitor the situation and share
	Anticipation	Prediction from the situation
Management of workload	Prioritize	Prioritize
	Distribute	Delegation of work
	Stress management	Stress management of team and individual

Japan Air System (JAS) CRM training is based on student-oriented training. The training tries to transfer 70% of the skills through traditional one-way education (with a trainer transferring knowledge to trainees who are relatively passive). For the remaining 30%, the trainee is expected to be more engaged at the affective level for behavioural and attitudinal change. In the latter context, the instructor is like a facilitator who makes students realize the importance of the relevant skills (Fukui, 2007).

2.6.4 Health Care

In the health care industry, it has been suggested to establish effective non- technical skills such as leadership training (Garman & Lemak, 2011). In the field of health care, the circumstances are quite unique compared with other industries, for instance, time pressure, the direct impact on human lives, the complexity of tasks and systems, decision-making with uncertain information, the need to work with personnel with different experience levels and the variability of team membership. Takahashi (2012) stated that the training to gain non-technical skills should take the same approach as that used for technical skills training. However in Toki's opinion, the health care industry does not have defined training programmes for developing non-technical skills (Toki, 2013). Maclearney (2006) also stated that although the health care industry does have a need for strong leaders at all levels, little is known about leadership development in the industry.

2.7 The difference between the situations of the maritime industry with other industries

Devitt and Holford (2010) suggested that international maritime industry has unique aspects which make it difficult to apply the concept of leadership training in other industries into the maritime context. The reasons he gives are indicated below;

- Development and maintenance of situation awareness on sea passages, differing from the regulation and control present within aviation.
- Ships' teams 'hand over' to each other at regular intervals and are augmented as required. This does not routinely happen outside the maritime industry.
- Communication, including the use of interventions and challenges. Ships' teams can more culturally diverse, with less utilization of standard communication phrases.
- Organizational, professional, departmental and national cross-cultural issues associated with the globalization of the maritime industry.
- Leadership and teamwork are impacted by the duration of the working relationship. The transitory nature of ships' crew, where teams are constantly changing due to leave rotations, can differ from other industries.
- Dynamic workload issues onboard a vessel operating routinely are influenced by external environmental factors, voyage duration, cargo operation and administration requirements and available support mechanism.

(Devitt & Holford, 2010. p.3).

2.8 The core of the leadership

In Cooper's opinion many things have to be done for one to become a brilliant leader. He sees adaption (as a chameleon) to changing contexts of people and situations as being critical to leadership. Brilliant leaders are also good communicators and build rapport with

team members, communicate the vision and expectations and providing feedback on progression. Furthermore, brilliant leaders are also results focused and objective. Leaders have to create the environment in which team members can perform at high levels. Results can only continuously be delivered through others if leaders are respected by team members who are prepared to follow where these leaders lead them (Cooper, 2008). Thus for Cooper, increased skills in adaption and communication are essential in the process of becoming a good leader. In the same way, and as indicated earlier, Takeda and Nonaka (1983) believe the essential skill needed for leadership to be the ability to build good relations with followers. Leadership is determined by the relationship between leader and follower. In order to gain leadership skills, individuals have to apply principles of leadership in relation to superiors, subordinates and peers in their daily relationships. In addition, leaders have to keep learning and practising continuously (Takeda and Nonaka, 1983; Nimura, 2012; Perruci, 2014). In fact, organizations which consider followership as an important factor for leadership have increased (Riggio, Chaleff & Lipman-Blumen, 2008).

In the maritime area, the UK Maritime and Coast Guard Agency (MCA) produced a guide in 2006 for leaders and senior officers in maritime industry. This guide includes keys and the best practices to improve the management skills, and was based on research which was carried out by Arthur D. Little Ltd in 2004 for developing a set of core leadership qualities for safety. The ten core qualities of leadership are:

1. Ability to instil respect and command authority

A leaders will be respected and command authority when the crew believe that the leader is willing to exercise the power vested in his/her position, possesses the knowledge and competence, understands the crew's situation and cares about their welfare, is able to communicate clearly and is prepared to act confidently and decisively.

2. Ability to lead the team by example

Leading the team by example results from a combination of two things: being seen to be practicing what you admonish and putting your position as key part of the team.

3. Ability to draw on knowledge and experience

Appropriate knowledge and experience are essential for effective leadership. This means in particular for safety: good knowledge of safety-related regulations, codes, experience and skills for technical, operational issues and people management.

4. Ability to remain calm in a crisis

Calmness in a crisis situation is a core requirement and will need other qualities, such as commanding authority and drawing on knowledge and experience. It is very important to have confidence and trust in the capability of crew and emergency preparedness.

5. Ability to practice tough empathy

Good leaders empathise realistically with crew and care intensely, but this does not mean they always agree with them. They practice ‘tough empathy’, which means giving people what they need, instead of giving them what they want.

6. Ability to be sensitive to different cultures

Good leaders are sensitive to the differences in the social norms of culture and value all crewmembers equally regardless their nationality. They know the different behavioural signals, and how to react to exert strongest influence.

7. Ability to recognize the crew’s limitations

Leaders are required to understand how operational and other demands are able to be met by the crew, to judge crew’s fatigue level and to take appropriate action if necessary.

8. Ability to create motivation and a sense of community

People are generally motivated by satisfaction or self-confident with completing a good job and the feeling of being a part of team. Leaders have a significant role for creating the environment that maintains and encourages this positive motivation. Demonstrating respect for staff and meeting staff's basic needs are the key part to maintain the motivation.

9. Ability to place the safety of crew and passenger above everything

The commitment from the leader is essential for good safety. Leaders are required to demonstrate their safety commitment clearly to their staff through the action.

10. Ability to communicate and listen clearly

Clear communication is essential for all levels of organizations. The key issue for master is encouragement for better two-way communication, balancing authority and approachability.

(Maritime Coast Guard Agency (MCA), 2011, pp. 8-27)

These ten core qualities are essential especially for leaders who work onboard.

In the maritime field, there were a number of accidents that may be said to have had the "lack of leadership" as a contributory causative factor. A few of these accidents are discussed below.

2.9 Maritime incidents caused by lack of leadership

2.9.1 Green Lily

In November 1997, the refrigerated general cargo vessel, Green Lily grounded off the Shetland Islands, after having sailed in severe weather. One winchman on a rescue helicopter was lost during the operation. The accident report indicates that:

The master received no external pressure to sail. He was aware that the vessel would be heading into adverse weather and that progress would be slow. He was also aware that adverse weather was forecast for several days ahead, and that if he chose not to sail, the vessel would be significantly delayed. When

sufficiently clear of the land, he intended to turn the vessel on to a more southerly heading to reduce the adverse effect of the wind on the vessel's speed.

In deciding to sail on 18 November, the master was optimistic that the prevailing and predicted weather conditions outside Lerwick would not unduly hinder the vessel's progress. He should have considered the worst predicted conditions and their effect. Although at least one officer was concerned about the master's decision to sail, no one openly questioned him. After clearing Bressay, the vessel was effectively hove to in south-east force 9 winds. The master recognised that the weather conditions were worse than he had expected and that progress would be much slower than he had hoped. He had the opportunity of returning to Lerwick but chose not to do so, in the hope that the weather would improve. Having decided to sail, his decision not to return to harbour was possibly influenced by his not wishing to be seen as having failed to consider the worst predicted conditions. The reluctance of anyone on board to question the master's decision to sail from Lerwick, and his decision not to turn back after realising he had failed to consider the worst predicted weather conditions, suggests an autocratic style of management. A less authoritarian style might have encouraged greater discussion of the issues and would have enabled decision-making shortcomings to be identified at the outset (Marine Accident Investigation Branch. (MAIB, 2000, p.43)

In this accident, the master's autocratic leadership style was arguably one of the significant factors leading to the accident. Even though he had an opportunity to return to Lerwick, he thought that the correction of the first decision might indicate failure. There was at least one officer concerned about master's decision but no one questioned him (MAIB, 2000).

2.9.2 Bow Mariner

On February 2004, the chemical tanker, Bow Mariner caught fire and exploded while the crew were engaged in tank cleaning. The ship sank off the coast of Virginia. The accident resulted in the loss of 3 crew and 18 missing persons with substantial spill of ethyl alcohol and fuel. A subsequent USCG investigation report (2005) indicates that:

contributing to this casualty was the failure of the operator, Ceres Hellenic Enterprises, Ltd., and the senior officers of the BOW MARINER, to properly

implement the company and vessel Safety, Quality and Environmental Protection Management System (SQEMS)” (p. 1).

Though there were a number of causes, shipboard culture might have had a significant influence on this incident. Section 2.1.1 of the Fleet Operation Procedure Manual (FOPM) describes the master’s authority as follows:

The master has full authority over all persons (personnel and passengers) onboard his vessel. The Master’s authority is not questioned and must be supported and maintained by onboard personnel. Orders must be carried out and obeyed as said, in letter and in spirit. Refusal to do so is grounds for prompt disciplinary action, including possible termination of employment (p.42).

Such absolute authority is not uncommon onboard vessels. Even many would say such authority is essential to maintaining good order and discipline, however, in the case of the BOW MARINER the distinctions between the Greek senior officers and Filipino crew were remarkable. Filipino officers were not allowed to take meals in the officer’s mess, were given almost no responsibility and were closely supervised in every task. Even though Section 2.4.2 of the FOPM describes significant duties for the second engineer, the assistant second engineer was told that he would be given job orders verbally daily and would have no administrative duties. The difference between the content of the SQEMS and actual practice on the BOW MARINER spread into even to deck department. The chief officer took all responsibilities for management and administrative duties himself, did not delegate or attempt to train the junior officers to perform any of the tasks. As a consequence the Filipino crew had little technical knowledge of their job, so that they failed to question unsafe action or procedures. The investigation report (2005) further describe the situation on board as follows:

One crewman said that the orders of the Greeks were “like words from God”. This lack of technical knowledge and fear of the senior officers explains why the crew did not question the master’s unsafe order to open all of the empty tanks; they either did not know about the danger or were not inclined to question the master’s order (p.43).

Notably the fear of the Greek officers spread into the galley as well. A messman reported

that the Greeks were verbally abusive to him and usually threatened to send him home if he did not work harder and faster. It is obvious that such fear can lead to a shipboard culture where safety takes second place to preserving individual livelihood.

The clearest evidence of the lack of cohesiveness among the crew of the BOW MARINER was their response to the explosion. While the official language used on the ship was English, the Captain and Chief Engineer were communicating in Greek when they gathered with the crew. One of the Filipino crew reported that they were simply waiting for someone to tell them what to do, however, those instruction never came. When the final blow came, the Captain ignored the Third Officer's question whether a distress signal had been sent. The investigation report concludes the section of shipboard culture with following statement;

Ceres officials have defended Captain Kavouras' actions and the crew's reaction after the explosion, citing emotional trauma triggered by the explosions, fire and immediate list. However, such trauma is expected and is precisely the reason that crews must be thoroughly trained and frequently drilled – so that they will react instinctively in an emergency just as they have been trained. The “trauma explanation” is also suspect given that far less experienced crewmembers controlled their emotions and reacted professionally. Captain Kavouras abandoned ship without sending a distress signal or conducting a muster, and left behind crewmembers he knew to be alive. Such conduct reflects his failure to conduct regular, realistic drills to prevent just such a reaction (p.43).

(United States Coast Guard (USCG), 2005)

2.9.3 Dole America

On November 1999, a Liberian registered refrigerated cargo vessel, Dole America, collided with the Nab Tower in the eastern approach of the Solent (see figure 2). According to the incident report,

the immediate cause of the incident was the master's inappropriate and unquestioned manoeuvring. As with most other accidents, there were a number of contributory factors with an error chain developing. The report indicated that “no discussions took place between the master and the second officer concerning the revised plan or the vessel's progress (p.17).

In addition, “the master and the second officer failed to work as an effective team, probably due, in part, to their differing nationality and social background, and to an autocratic management style” (p. 17). In this case, the master was Norwegian and the second officer was Filipino. It is probable that the different nationality and social background led to the failure of effective teamwork. In Section 4 of the investigation report there were two recommendations made, which relate to the management and teamwork as indicated as below:

Provide bridge resource management and teamwork training for its masters, deck officers and bridge watchkeeping ratings.

Consider the potential effect on bridge teamwork when appointing multi-national groups of masters, deck officers and bridge watchkeeping ratings to a particular vessel.

(Marine Accident Investigation Branch (MAIB), 2000. P.20)

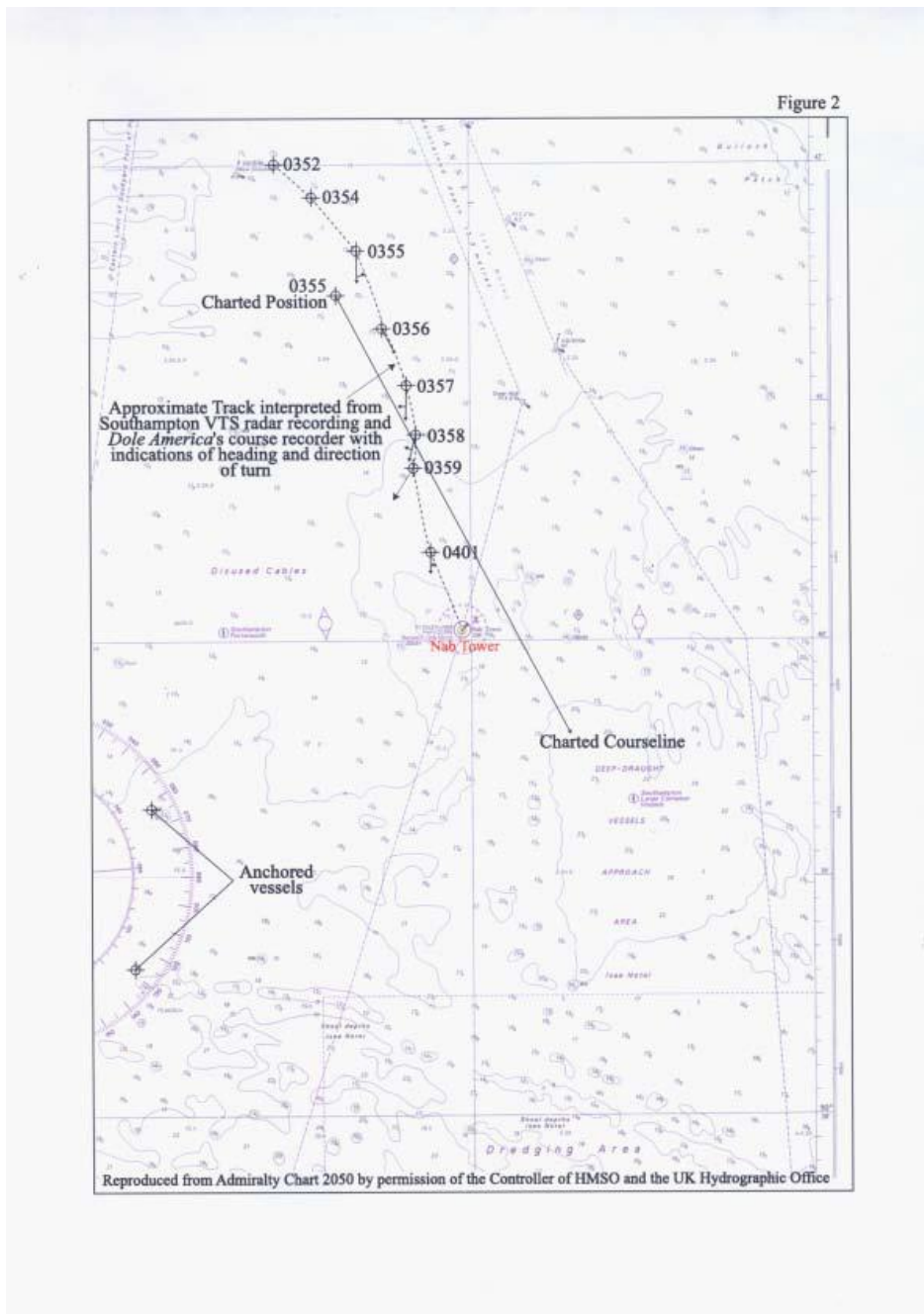


Figure 2: Accident area and track

Source; Marine Accident Investigation Branch (MAIB), 2000. Page. 4

2.9.4 Costa Concordia

On 13th January 2012, the Italian-flagged passenger vessel, Costa Concordia was navigating in the Mediterranean Sea with 3206 passengers and 1023 crewmembers on board. The ship collided with the “Scole Rock” off Giglio Island, then immediately lost propulsion and was consequently affected by a black-out. The ship heeled over to starboard and finally grounded at the Giglio Island. Even though SAR operation was conducted, the number of victim is 32 (26 passengers and 4 crewmembers) and 1 of these are still missing. According to the investigation report, despite the fact that there are a number of causal factors, the master’s lack of leadership was one of the most critical causes of the incidents (Ministry of Infrastructures and Transport (MIT), 2013).

The following text is quoted verbatim from the report:

The navigation phases before the impact are to be considered as a crucial aspect, because they relate with the causes originating the accident. In particular, the focus is on the behaviour of the Master and his decision to make that hazardous passage in shallow waters (Page 5).

After the casualty, caused by the Master in combine with his officers staff present with him on the bridge, the coordination lack in the emergency – due to not applying the related SMS procedures and not following these as the best guideline to face the serious event – resulted the main and crucial unsuccessful factor for its management. Master together with some of the staff deck officers, as well the Hotel Director, failed their role determining a fundamental influence for reaching the above mentioned fail. Moreover, spite off the DPA was continually warned about the serious development of the scenario (meanwhile the master was in the bridge, in fact their dialogue, started at 21 57 58 and finished at 23 14 34), he never thought (as declared during two interviews with the Prosecutor) to speed up the master to plan the abandon ship. This could represents an indirectly contributing factor, even if the Master minimized (till 22.27 hours) the information about seriousness of the situation towards the DPA. In fact, this last person should have speed up the master, at least in terms of his own moral obligation (page 8).

The above indicate how a lack of leadership or insufficient leadership can contribute to accidents and negatively affect the response to them.

According to IMO, “the safety and security of life at sea, protection of the marine environment and over the world’s trade depends on the professionalism and competence of seafarers” (IMO, 2014e, paragraph. 1). IMO adapted a resolution setting out its vision, principles and objectives for the human element. The human element is a complex issue that has influence on maritime safety, security and protection of marine environment involving all the aspects of human activities performed by ship’s crews, shore-based management, regulatory bodies and others. Since the 1980s IMO has gradually addressed the people involved in shipping in its work. In 1989, IMO adapted guidelines on management for the safe operation of ships and for pollution prevention, which later became the International Safety Management (ISM) Code. As such, IMO has focused on the human element as a major issue of maritime safety, security and pollution prevention (IMO, 2014c).

2.10 Background of STCW 1978 Convention

Until the 1970s, the standards of training, certification and watchkeeping for seafarers were established by individual governments, without acknowledgement of other countries, given that the ILO Convention 53 of 1936 was ratified by only 37 countries and saw 13 denunciations. Consequently, these standards varied widely, despite the shipping industry having already been recognized as an international industry. The STCW Convention was established in 1978, to standardize the basic requirements on training, certification and watchkeeping for seafarers at an international level. The Convention set up the minimum standards on training, certification and watchkeeping for seafarers that Party States are required to meet or exceed. However the STCW 1978 Convention was criticized by member states, for, among other things, having too many ambiguous/vague phrases, such as “to the satisfaction of the Administration”, which resulted in different interpretations being made. In addition, there was the need to bring the 1978 Convention up to date in the late 80s and early 90s. As a result, the 1995 amendments were adopted by a Conference. The 1995 amendments entered into force on 1st February 1997. One of the significant

characteristics of this revision was the division of the technical annex into regulations and the addition of a new Seafarers Training Certification and Watchkeeping (STCW) Code, into which the more technical standards were transferred. The Code has two parts, A and B, the former is mandatory and the latter recommendatory. The STCW Code provides for a competency framework in tabular format, which is intended to support the design and implement of seafarer training worldwide. These amendments make the more technical and operational requirements of the Code more accessible and moreover, makes the procedure of revising and updating more simple. Another major change was that Parties to the Convention are required to provide detailed information to IMO regarding administrative measures that are taken to ensure compliance with the Convention (IMO, 2014c). In 2010, the Manila amendments were adopted under a tacit acceptance procedure, marking a major revision of the STCW Convention and its Code. The amendment was intended to include all agreed changes since 1995, address new technology and inconsistencies in interpretation and update provisions. There was particular emphasis on improving the control and communication provisions in Chapter 1 (General Provisions) in addition to addressing the specific requirements of the offshore and short sea shipping industries. The amendment also has an overall commitment to be harmonized with the provisions of the Maritime Labour Convention, 2006. The amendment entered into force on 1st January 2012, and is currently ratified by 158 parties (IMO, 2011). Amongst the amendments adopted, there are a number of important changes to each chapter of the Convention Annex and Code. As indicated by the IMO (2014c), these include:

- Improved measures to prevent fraudulent practices associated with certificates of competency and to strengthen the evaluation process (monitoring of Parties' compliance with the Convention);
- Revised requirements on hours of work and rest and new requirements for the prevention of drug and alcohol abuse, as well as updated standards relating to medical fitness standards for seafarers;

- New certification requirements for able seafarers;
- New requirements relating to training in modern technology such as Electronic Charts and Information Systems (ECDIS) (sic);
- New requirements for marine environment awareness training
- New training and certification requirements for electro-technical officers
- Updating of competence requirements for personnel serving on board all types of tankers, including new requirements for personnel serving on liquefied gas tankers;
- New requirements for security training, as well as provisions to ensure that seafarers are properly trained to cope if their ship comes under attack by pirates;
- Introduction of modern training methodology including distance learning and web-based learning;
- New training guidance for personnel serving on board ships operating in polar waters;
- New training guidance for personnel operating Dynamic Positioning Systems and
- New requirements for training in leadership and teamwork

(IMO, 2014c, paragraph. 8)

In summary, the STCW 1978 Convention has been amended several times with a view to constantly improve safety at sea via optimum training of seafarers. The major amendments of 1995 and 2010 in particular incorporated new sets of requirements that have substantially upgraded the original Convention (Annex) and Code. In addition, this Convention is perceived as better tackling the human error concern.

During the process of amending of STCW Convention annex, Australia, New Zealand and the Institute of Marine Engineering, Science and Technology (IMarEST) indicated in the 39th session of the STW Sub-committee that research data on causes of maritime accidents, suggest that 70 – 85% of these accidents are caused by human errors. These errors could

be observed anywhere. It seems necessary for seafarers to gain soft skills, such as leadership skill and communication skill, considering that the ship environment may be multinational, multi-linguistic and multicultural, in order to help solve these problems. In fact, these factors are generally recognized as most critical elements for preventing accidents in other industries, such as the oil drilling industry, nuclear industry and the aviation industry (IMO, 2007).

With these concerns, Australia made proposals to introduce a new requirement labelled as ‘the minimum competence standard on communication and leadership’ in Chapter VI³. Regarding this proposal, Japan and other countries made comments as follow;

- Because the human element is common to both navigation and engineering, it is suggested to address a new requirement of training in Bridge Resource Management in chapter II⁴, Engine room Resource Management to chapter III⁵– Singapore.

- According to the statistics of maritime accidents, seafarers should be trained in the skills of communication and leadership. Therefore, this training is suggested to address the relevant requirements of Chapter VI¹ - Australia.

- Taking into account these proposals, it is suggested that chapter VI¹ is to be integrated as ‘the minimum requirement on Marine Resource Management, communication and leadership skill’ - India.

- Communication and leadership skills are necessary for the management level of STCW. It is suggested that the different language and culture issues should be included – The Netherlands

- The content of Chapter VI³ should not be expanded carelessly – Greece.

³ STCW Code Part A Chapter VI: Standards regarding emergency, occupational safety, security, medical care and survival functions

⁴ STCW Code Part A Chapter II: Standards regarding the master and deck department

⁵ STCW Code Part A Chapter III: Standards regarding engine department

According to the Maritime Human Resource Institute (2011), after the discussions, consensus was reached as follows:

- In the proposed contents, the training requirement for the main skill of leadership is added to Chapter II⁴ and Chapter III⁵.

- In the proposals, communication skill and other relevant skill should be added to STCW Code Part A-VI/1-4⁶.

- Communication and leadership skills, which are relevant for watchkeeping, are recommended to put into Code Part B Section VIII⁷.

- In the STCW Code Part A-II/1, A-III/1 and A-III/6: Controlling the operation of the ship and care for persons on board at the management level, ‘organize and manage the crew’ is changed into ‘use of leadership and managerial skill’, and addresses the items as listed below:

- Knowledge of shipboard personnel management and training

- A knowledge of related international maritime conventions and recommendations, and national legislation.

- Ability to apply task and workload management, including:

- .1 planning and co-ordination

- .2 personnel assignment

- .3 time and resource constrains

- .4 prioritization

- Knowledge and ability to apply effective resource management:

- .1 allocation, assignment, and prioritization of resources

- .2 effective communication onboard and ashore

- .3 decisions reflect consideration of team experiences

⁶ STCW Code A-VI/1-4: Specification of minimum standard of competence in personal safety and social responsibilities

⁷ Code Part B Section VIII: Guidance regarding watchkeeping

- .4 assertiveness and leadership, including motivation
- .5 obtaining and maintaining situation awareness
- Knowledge and ability to apply decision-making techniques
 - .1 situation and risk assessment
 - .2 identify and consider generated options
 - .3 selecting course of action
 - .4 evaluation of outcome effectiveness
- Development, implementation, and
 - (The Maritime Human Resource Institute, 2011; IMO, 2011)

2.11 Leadership training in maritime context

As the foregoing indicates, training for leadership skills has now been added to the requirements of STCW Convention 1978, as amended. The relevant amendments have introduced competence requirements for leadership and managerial skills at both the operational and management levels.

Jeffery (2007) states that leadership development needs to be blended with experience if it is to offer benefits to the maximum number of participants in any programme. In recent times, there are several learning materials available to seafarers such as those provided by the Nautical Institute and Videotel, mostly in the format of videos. However, if seafarers are really to benefit from leadership development, training should be undertaken using a wider array of delivery methods. The responsibility falls on maritime education and training institutions to take up effective leadership development in collaboration with the community of ship operators and their various professional bodies. Leadership skills should be a part of the STCW Convention for the future and an important feature of shore-based officer training (Jeffery, 2007). Wake (2004) further suggests that quality, safety and success are all interlinked; therefore, leadership training can be seen to be an investment with high value, if it reduces risk and results in reducing claims and adverse publicity from accidents. He believes that all crewmembers can be leaders in certain

situations and that all officers and senior ratings will regularly have to show leadership as well as technical skills.

The IMO model course on leadership and teamwork was published in 2014. This published model course indicates that differences of individual cause in different approaches to leadership. Even though some people possess leadership abilities in their nature, their leadership can be further improved through learning, especially through experience. Their learning progress may vary. In addition, the model course indicates below:

participation in the course will have raised awareness of the elements of leadership and teamwork, it will be through exercising leadership, observing others, participating in and building teamwork in the working environment, learning from the more competent and experienced people onboard, that competence in learning will develop.

(IMO, 2014d. p.24)

This suggests that leadership skills are arguably difficult to gain through short-term training programmes. Training for such skills are best undertaken with a long-term view that incorporates a continuous learning process through real life on-board or on-shore working experience. As Barnett (2011) notes, it must be appreciated that that junior officers need to understand the principle of leadership and how different style of leadership can be effective in different situations. These real life contexts are necessary to understand the principles of good communication as well. In addition, officers at the operational level need to develop practical strategies for assertiveness and good team working. At the management level, they need to demonstrate effective leadership behaviours. In order to have some confidence for displaying appropriate behaviour in real contexts, other learning and assessment approaches such as role-play, simulation or real experiences on board can be undertaken.

2.12 The challenge of the leadership training in maritime context

In research on non-technical skills at Warsash Maritime Centre, Barnett, Gatfield & Pekcan (2006) concluded that there is much space for maritime colleges to improve students' learning. Students need to be given opportunities to discover actively, not passively as only one-way recipients of lectures. Students also need to be encouraged and guided on the interpretation of experiences. Reflection of experience has a powerful effect on adults' learning. To quote them, "by encouraging our students to carry this process on beyond the conclusion of the course, we have the potential to get beyond the honeymoon period normally associated with training interventions and bring about lasting attitude, behaviour and cognitive change" (Barnett, Gatfield & Pekcan, 2006, p.10).

In the process of reviewing the STCW Convention and Code, there were comprehensive consultations within the global membership of the IMO. In spite of this (or perhaps because of this) the statements, definitions and competence criteria are quite broad; therefore, it allows IMO stakeholders to have different perspectives on what constitutes effective leadership and management. This might lead to a lack of consistency and ambiguity in interpretations, as well as too much flexibility that may result in the defeating of the objective of the competence measurement that STCW is intended to achieve. While leadership and team-working skills are required for both operational and management levels of the STCW, no distinction is made regarding the evaluation criteria for these two levels. Although there may be no differences between good leadership skill sets themselves at the management and operational levels, it would seem proper that different responsibilities are indicated for senior officers as opposed to those for junior officers (Devitt and Holford, 2010).

2.13 Human Element Leadership and Management (HELM) training

According to Warsash Maritime Academy, it is the first and currently the only training provider in the UK with MCA approval for its Human Element, Leadership and Management course at the operational level (Warsash Maritime Academy, 2014a).

The aim of HELM course is to improve the non-technical skills with recognising that such expertise is applicable both at sea and shore, furthermore, it is a part of the seafarers' life-long learning. The course fulfil the requirements of STCW and the minimising the risk of employers and owners. This MCA approved course offer the same fundamental principles carefully tailored to the course applicants who have experience and seniority (Warsash Maritime Academy, 2014b).

From the website of the Academy the following is a description of the Human Element Leadership and Management course as it is currently carried out,

This course is designed to meet the mandatory requirements for training in the human element, leadership and management at the operational level as set out in Regulations II and III of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) as amended. It provides students with an awareness and understanding of the key human factors influencing effective resource management.

Students will acquire and develop tools and practical skills to enhance their maritime resource management capability. This training is a prerequisite for a first Certificate of Competency (CoC) issued by the MCA meeting the requirements of Regulation II/1, III/1 and III/6.

The course will develop knowledge and skills to address:

- **Situation and risk assessment:** to understand the influence of a situation and risk assessment in the principles and practice of decision making at an operational level.
- **Situational awareness:** how to acquire and maintain situational awareness and increasing safety margins.

- **Communication:** how to recognize and apply best practice in communication, and be aware of barriers to communication and how these may adversely affect situational awareness.
- **Shipboard training:** to understand the aim of shipboard training, the principles of learning and methods of developing human potential.
- **Culture:** how to recognize and respond to cultural issues including cultural awareness and bias including national, organizational, departmental and personal cultural approaches.
- **Team working:** to recognize team working models and conflict management style.
- **Leadership and management:** to recognize and demonstrate effective leadership behaviours.
- **Workload management:** understand the concept of task and workload management and be able to apply it. Recognizing fatigue and stress in yourself and others, and developing strategies for dealing with them.

(Warsash Maritime Academy, 2014a, paragraph. 1- 4)

2.14 Leadership training at National Institute for Sea Training, Japan

The National Institute for Sea Training (NIST) of Japan was established in 1943 in order to provide on-board training for students from MET institutions in Japan and has over this period provided leadership training in various ways. Currently the components of leadership training are addressed during other training modules such as keeping a navigational watch, manoeuvring for entering/leaving port, bridge resource management (BRM), emergency response drills, seamanship and boat handling training. For instance, leadership skills are demonstrated in the navigational watch as effective communication during the navigational watch. In the ship manoeuvring training, students will be assigned as a role of Master, 1st mate and 3rd mate on the bridge, utilizing the real ship (training

ship) to practice the manoeuvring for anchoring and leaving anchorage. Through playing the role of Master, students can learn not only how to manoeuvring the ship, but also how to give orders and/or communicate with other officers as a leader in the navigational bridge. On the other hand, those playing the role of 1st mate and 3rd mate can learn how to support the master's manoeuvring and decision making. This can be seen as training in followership, which as discussed earlier may be considered key to leadership training.

In these modelled situations, communication should effective and clear, and effective leadership should be demonstrated together with effective decision making. Observations derived from these training sessions are the key input for evaluation, reflection and debriefing. In addition, evaluation on daily behaviours can be applicable to assess cadets' leadership and communication skills.

Chapter 3: METHODOLOGY

Following the literature review as discussed in the previous chapter and from the research questions, a questionnaire was developed to solicit data in regards to research objectives. To complete the fieldwork for this study a survey was conducted with two methods:

1. Semi structured interviews with instructors at MET Institutions.
2. Online questionnaire distributed to MET Institutions and seafarers.

Before developing the questionnaire, the author followed the procedure as indicated below.

3.1 Identify appropriate sample of jurisdictions (national contexts)

First, the author identified appropriate jurisdictions in order to collect the opinions and samples of leadership training models. The jurisdictions were to be identified in accordance with possibility of access. It was intended that the subsequent survey would solicit opinions from different regions, professions, and ages, therefore, the respondents of questionnaire had to have some variety in this respect. The respondents were randomly selected using networks available to the author, supervisor, and WMU colleagues. The administration of the survey was via the ‘snowballing’ method in order to extend the reach of the questionnaire to as many respondents as possible. Although this survey could have benefitted from having respondents from all over the world, there were practical challenges of time and access that made it unfeasible to reach all instructors of the world. Therefore, the author decided to randomly disseminate the questionnaire through different channels to the sample jurisdictions.

The channels were:

1. Through WMU students and graduates to the instructors of MET institutions, shipping companies.
2. Through MET institutions, shipping companies and WMU students to seafarers.
3. Through WMU field studies to MET institutions.
4. Through WMU faculty to MET institutions and shipping companies.

Responses were received from the countries shown in table: 2

Table 2: Countries of respondents

Europe	Bulgaria
	France
	Netherlands
	Romania
	United Kingdom
Asia	China
	India
	Japan
	Myanmar
	Philippines
	Vietnam
Africa	Egypt
	Ghana
South America	Argentina
	Peru

The diversity of the respondents is shown in figure 3.

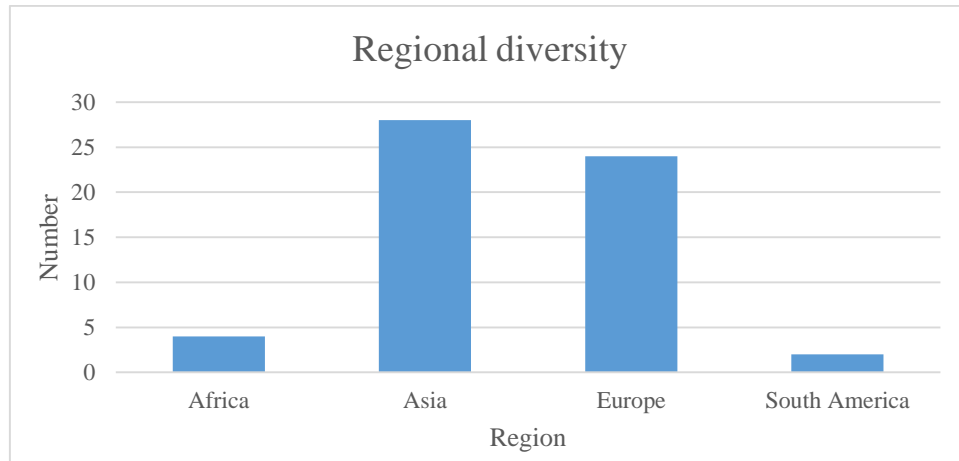


Figure 3: Regional diversity of the respondents

The questionnaire was target to three categories (occupational groups) of respondents, namely trainers of seafarers in MET Institutions, seafarers currently working at sea and students studying to become seafarers (who have never worked at sea).

As figure 3 shows, the resulting number of respondents was relatively limited, especially when considered in the context of regional diversity. However the author is of the opinion that this does not compromise the findings of this work.

In addition to the above, the author conducted two interviews with instructors in order to collect the detailed information on leadership training in two jurisdictions.

3.2 Develop questionnaires

Secondly, the author developed the questionnaires in order to collect opinions on leadership and detailed information on leadership training models. The author selected the method of quantitative survey in order to collect the data. A combination of open-ended questions and closed questions was established to know the perspectives of different personnel. Different questionnaires were prepared for the three different respondent

categories. The general overview of and information sought by the questionnaire is indicated below. Full details are appended to this text as Appendix A, B and C.

Section A – Demographics

For all respondents

Age, gender, nationality, rank on board,

Section B - Definition and philosophy of leadership in a shipboard context

For all respondents

1. Leadership definition
2. Rating (on a scale of 1 to 10) of the skills necessary for leadership on board ship.

Section C – Leadership required on board ship

For seafarers and trainers

1. Rating (on a scale of 1 to 10) of leadership styles on board ship
2. Opinion on the single most important attribute of leader on board ship.
3. Opinion on current leadership training for seafarers

Section D for seafarers - Training for leadership

For seafarers

1. Respondent's own training in leadership
2. Opinion on the element (component) of leadership that is most difficult to train in
3. Opinion on the three factors having the most significant influence on leadership skill development

Section D for trainers – Training for leadership

For trainers

1. Institution leadership training model
2. Qualification of instructors for leadership training
3. The number of students for the leadership training
4. The duration of leadership training
5. Assessment of trainee competence after leadership training
6. Opinion on the element (component) of leadership most difficult to train in
7. Opinion on the element (component) of leadership most difficult to assess after leadership training
8. Opinion on the three factors having the most significant influence on leadership skill development

The questionnaire was developed initially in a paper-based form, and then transformed into the electronic format. The author used ‘Google Forms’ because it is a quicker and easier way to collect data from different jurisdictions. The paper-based questionnaire was accordingly transformed into a Google Form questionnaire. The advantages of using the on-line questionnaire speed and ease of use for respondents which enabled them to send their responses online, and to have responses automatically saved to a cloud-based and password-protected Google Drive.

Semi structured interviews were designed with respect to the following:

1. Perceptions about the challenges of leadership on board ship
2. The philosophy of leadership in respondent’s country
3. The philosophy of leadership compared with other countries’ philosophy
4. The programmes offered in respondent’s country in general and their own institution in particular for training in leadership

5. The approach, content, qualification of instructors, etc. of programmes referred in Q.4
6. The factors that influenced the choice if the programmes in Q.5
7. Any other leadership training programmes in other industries e.g. medical, aviation.

3.3 Administer questionnaires

The questionnaires and interviews were administered via email, telephone, and face-to-face means.

After transferring all questions into google form, the questionnaire was sent to the all respondents. Anonymity and informed consent of the respondents was guaranteed via the design of the form and per the research ethics guidelines and procedure of the World Maritime University.

Interviews were conducted by telephone and face-to-face with Cox⁸ (telephone) and DeWitz⁹ (face-to-face).

3.4 Responses

In total 61 responses were received. Although the author expected more this is deemed to be a high enough sample size for valid conclusions to be drawn. It is felt that the number was limited particularly for institutions in the Northern Hemisphere because the timing of the research period (beyond the control of the author) coincided with the summer break for almost all such institutions.

54% of all responses were collected from trainers of seafarers. The main research target was to collect perspectives on leadership and also leadership training itself, therefore, the number of the responses from trainers was deemed sufficient to draw valid conclusions

⁸ Quentin Cox: Senior Lecturer at Warsash Maritime Academy. Master Mariner

⁹ Jarrod DeWitz: Lecturer at World Maritime University. Lieutenant Commander of United States Coast Guard

about the perspectives from different jurisdictions. Out of the 61 responses, some did not answer all questions and others did not give their opinions about some questions. The total number of responses with complete information was 58.

3.5 Analysis software

Answers to the open-ended questions in the quantitative analysis phase were analysed in the Qualitative Data Analysis (QDA) software, Atlas.ti version 6.0. The author used this software mainly for qualitative coding (i.e. exploring themes) of the answers to open questions in the questionnaires.

3.6 Research ethics

The research questionnaires and processes were approved by the WMU Research Ethics Committee per the requirements of the World Maritime University and of acceptable research standards. The interviews were conducted and voice-recorded with the informed consent of the two interviewees. Prior to the two interviews, the purpose of the interviews and use to be made of the data were made clear to the participants.

Chapter 4: FINDINGS AND DATA ANALYSIS

In total, 61 responses were received from 4 different respondent categories: trainers, seafarers, students and others. The number of respondents is indicated as figure 4.

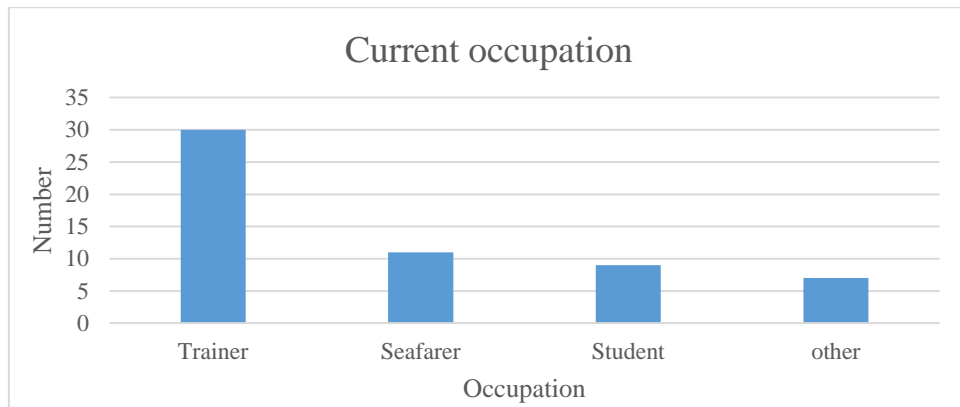


Figure 4: Number of respondents

The ranks (where relevant) of the respondents are shown as figure 5. In total, 41 respondents have a sea going experience.

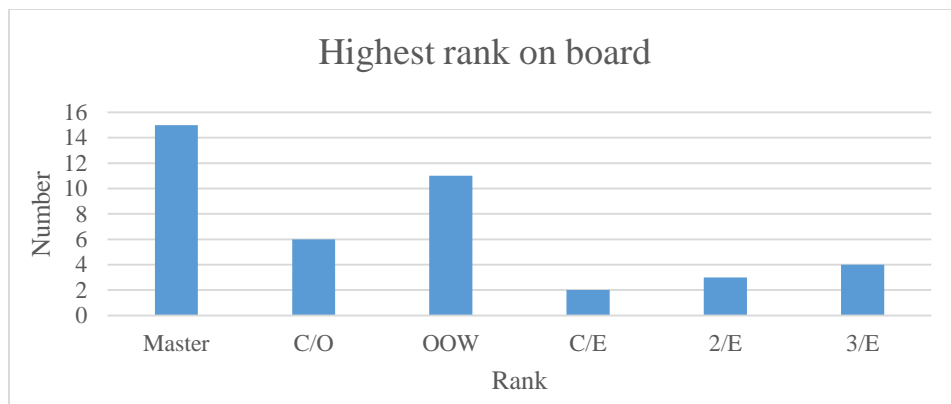


Figure 5: Rank of respondents

4.1 Impressions of adequacy of current leadership training

In the questionnaire, a question on the impression on current leadership training was posed. A total of 33 valid responses were received in respect of this question. The range of responses is shown in pie-chart form in figure 6.

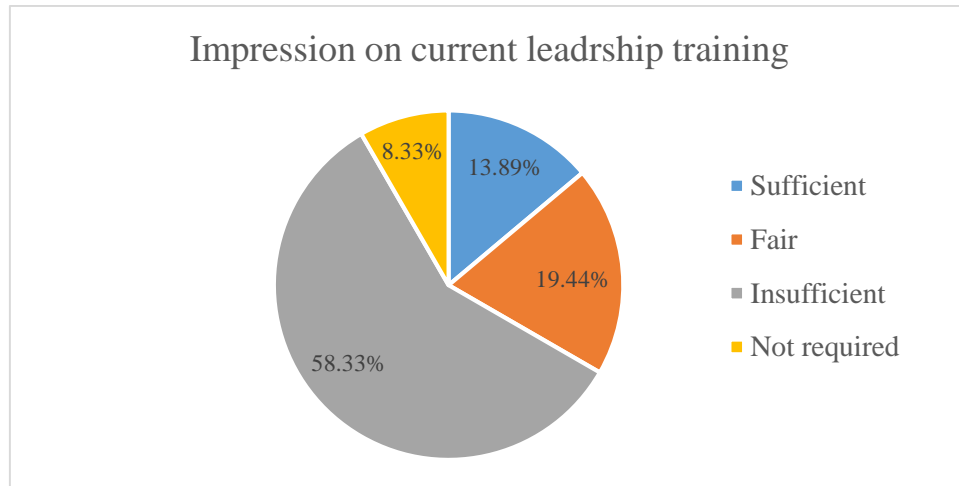


Figure 6: Impressions of adequacy current leadership training

From this data, it is noted that about 58% of respondents seems to think that current leadership training is insufficient. Comments given by these respondents include the following:

1. leadership skills can be learned by experience. It would be better if formal leadership trainings are introduced. I myself have learned through books, reading what the great leaders are doing, and how they became so effective (Philippines, trainer, 38, male).
2. more room for improvement (Ghana, trainer, 29, male)
3. weak and does not motivate people on board, specially towards the commercial aspect of shipping's objective in making the company a profitable enterprise (Philippines, trainer, 50, male)

As such, more than half of respondents seem to be not satisfied with current leadership training and that there is more room for improvement.

4.2 Leadership training methods in MET institutions

In respect of the question on how the respondent was trained for leadership (for seafarers) and how their institution conducted training for leadership (for trainers), a total 39 responses were received.

Per these responses, the author created two categories: exclusive structured training (the existence of stand-alone leadership training modules) and non-exclusive training (where there were no specific leadership training modules; leadership concepts embedded in other training modules).

Table 3: Methodology and duration of leadership training

Country	Training	Duration
British	Exclusive (HELM)	3 days (45 hours) stand-alone course
Bulgaria	Exclusive	45 hours
China	Non-exclusive	Three months
Egypt	Non-exclusive	1 hour per week
French	Non-exclusive	4 years
Ghana	Non-exclusive	4 years (includes 2 years of formal/structured para-military training)
India	Non-exclusive	-
Japan	Non-exclusive	4.5 years (at METI) /one year (at NIST)
Myanmar	Non-exclusive	45 hours/4 years

Netherlands	Exclusive (MRM)	2 weeks stand-alone course
Peru	Non-exclusive	5 years
Philippines	Non-exclusive	5 years
Romanian	not given	not given
Vietnam	not given	not given

As table 3 shows, three countries have trained using the exclusive approach (UK, Bulgaria and Netherlands). Other countries have offered training for leadership using the non-exclusive training.

Of the Philippines approach, for instance, a Filipino trainer (50, male) responded as follows:

1. The maritime curricula required by the government is 3 to 6 units of Leadership training subjects
2. The (1st year) Freshmen cadets take turns on a daily basis in executing and carrying out tasks given by the senior and/or sophomore cadets
3. The (2nd year) Sophomore cadets take turns on a daily basis in leading the Freshmen
4. The (3rd year) Senior cadets take turns on a daily basis in leading the Sophomores and Freshmen cadets. Students are also assigned to take turns to lead the class for a day on a regular basis to get a feel on how it is to lead a smaller group.
5. They stand watches in school similar to the watches on board.

In addition, a French trainer (58, male) described leadership training in France as,

1. 2nd year: classroom training about difference between a group and a team, and the benefit of the later (presence of a leader).
2. 2nd and 3rd year shiphandling simulator: implementation of basic leadership skills: share information, sea ahead and share out the tasks, give orders.
3. 5th year: - classroom training BRM (leadership on the bridge).
 - implementation on the simulator, bridge and engine-room: short debriefing on non-technical skills preceding the technical debriefing, build and maintain a team situation awareness, guide the work, ask and offer help if needed, learn how and when to debrief a job, etc.
 - leadership outside the bridge (general behaviour of the Captain, handle multi-cultural differences, etc.)

Apart from that specific training, we are trying to work out a way to implement these skills within the school life (more teamwork instead of individual work, force cadets into organizing themselves by giving them a heavy workload that cannot be satisfactorily handled individually).

Moreover, Japanese trainer (60, male) responded that they provide leadership training through subjects such as boat training (rowing and sailing) and BRM but skills are assessed thorough the observations in 4.5 years (whole studying duration at the University).

The above indicates some confusion/ambiguity at the global level as to the modes for delivering leadership training.

Similarly the data received in response to the question on the indication of leadership (53 responses) suggests that there are widely varied perspectives on leadership as indicated in figure 7.

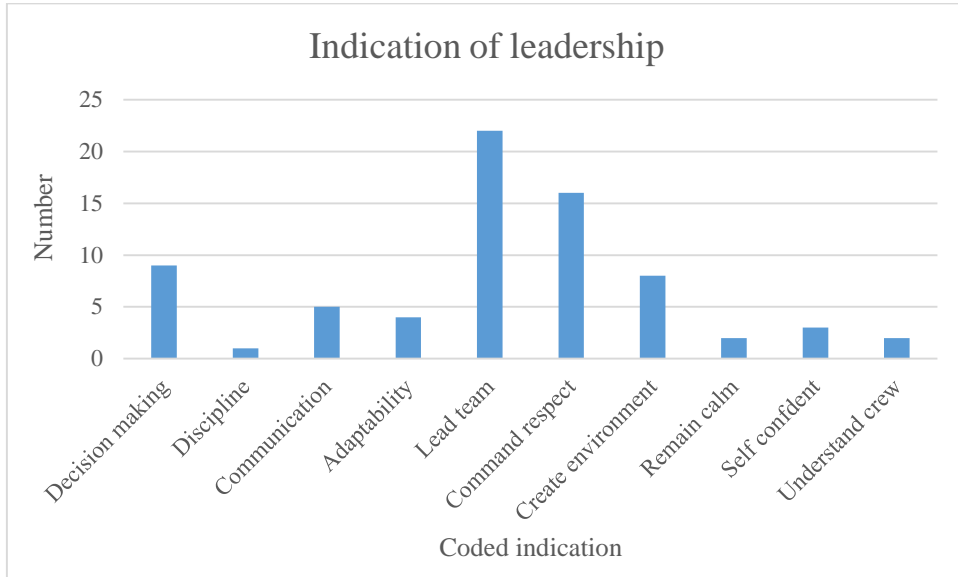


Figure 7: Indication of leadership onboard

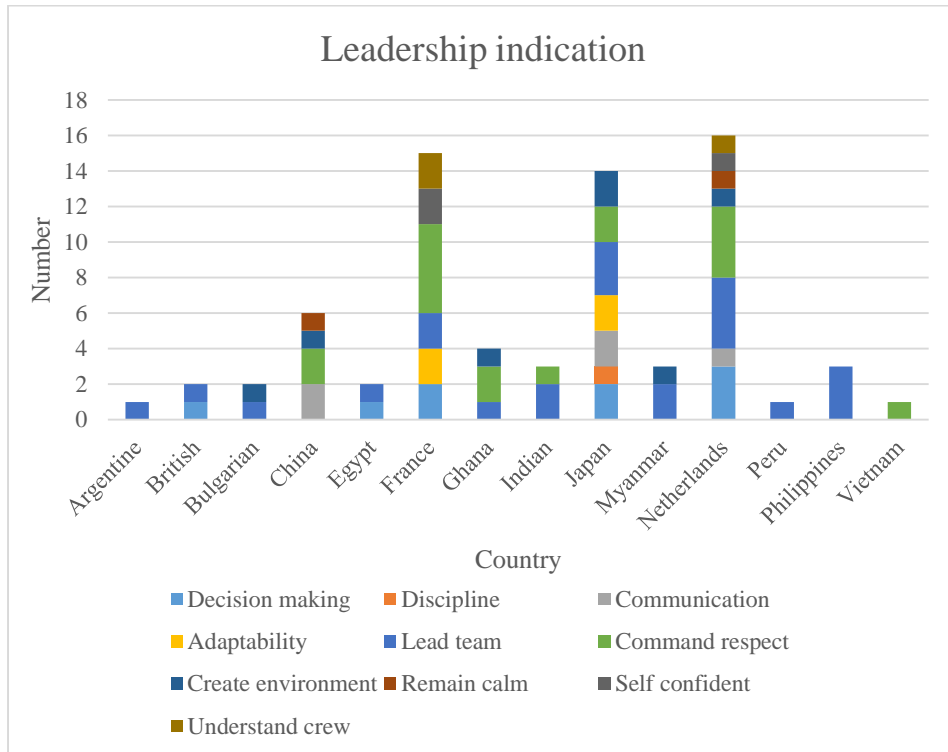


Figure 8: Leadership indication in different jurisdictions

The data, as presented in figure 8, does not support or negate the view that leadership perspectives vary with jurisdiction. This is perhaps due to the limited sample size. Other aspects of this research (interviews) and the literature suggest that while individual views of leadership may vary to some extent in specific nations, there is often a dominant view of leadership that affects how leadership training is undertaken.

A brief transcription of an interview with Cox (personal communication, August 19, 2014) where he indicates his perception of the philosophy of UK leadership training follows:

Well, The United Kingdom administration was very quick to incorporate the STCW requirement into own legislation. I think in some ways the philosophy is ... I'm inclined to say easier because the Western attitude, again we have just talked about this really; in UK people are very open about their thoughts, they work as a team, they respect senior officers, but they are very willing to speak and highlight any danger, any discomfort about situation, so incorporating requirement for UK seafarers to take this training is not a big challenge because UK seafarers on a ship are very willing to speak up if they doubt a decision. But of course this is one of the elements of leadership training, human element training that of course there are many different cultures in the world and different cultures respond differently to different situations, they respond differently to the same situation. So I think the philosophy in the UK is very clear, it's very straightforward and it's a lot easier to encourage people to behave in that manner than maybe other cultures where the respect for authority is unquestioning.

Well, I think that is so [in agreement with an interviewer statement that leadership training then may be easier in the UK because the trainees naturally work as a team]. I am not saying that UK seafarers make good leaders but I think they make good team members; they're willing to work as a team. In a sense, within a team, everybody feels equal and everybody understands their own responsibility to highlight danger. As I said, of course they all respect their rank structure and those

senior to them, but they also understand their own responsibilities as a team member.

As Cox indicates, different cultures may respond in different ways in different situation, and cultural differences may influence the philosophy of the leadership and its training methodology.

On the other hand, DeWitz (personal communication, September 2, 2014), in a reference to the general situation with respect to US seafarers, had this to say;

So, Unions are a very important aspect of US mariner but with that comes hindrances (negative attribute). So what the unions ... that first thing I would say comparing US versus foreign crew. [Unions] represent large groups. So, there is the “Masters Mates and Pilots” that represents the deck officers; and there is MIBA ... it’s for engineers (I have to look it up) ... that is the engineering union. And then there is also the labour union, like IOU, is generally for yard workers but they interact with ship’s crew. Then you have deck ... like deck hands that a part of unions. So everyone has their own group. Exactly [to interviewer’s assertion that these groups address welfare issues for members] ... and they also provide service and ... hiring. Generally a union has a pool of availability and ship owners will then go and hire directly from the labour unions as opposed to the individual. That is generally how it works for the US crew [that the unions participate actively in the placing of crew on board ship]. So the problems with that ... and they stemmed initially because they weren’t being used properly or protected [in regards to] their well-being and the safety onboard and thing like that, that as a group they can have advocate forward their members, which made unions very strong because everyone was a part of them. But nowadays you have competing demands, so you might have the deck side compete against the engine side and who prevails, who wins out is sometimes conflict. So to relate that leadership, when you are onboard, if you are crew member, who is a member of

the union and it's not within your union's specifications or job description, you may not do that even though the master of the vessel has asked you.

As such, many differences are found in the different jurisdictions on the perspectives of leadership.

4.3 The core skills on leadership

For the question on the importance for leadership on board, the respondents are required to rank 1 to 10 (where 10 is the highest value) on the most important ability of leadership. The abilities ranked highest (9 or 10) are indicated as percentages in figure 9.

15 abilities as indicated in the literature review.



Figure 9: The necessary abilities of leadership

From the responses on this question, the following four abilities were considered most critical for on board leadership (ranked 9 or 10):

1. Remain clam (69.49%)
2. Motivate crew (68.42%)

3. Ensure safety (66.67%)

4. Communicate clearly (57.89%)

In the same way, qualitative question are given to respondents (45 responses). The results are shown in figure 10.

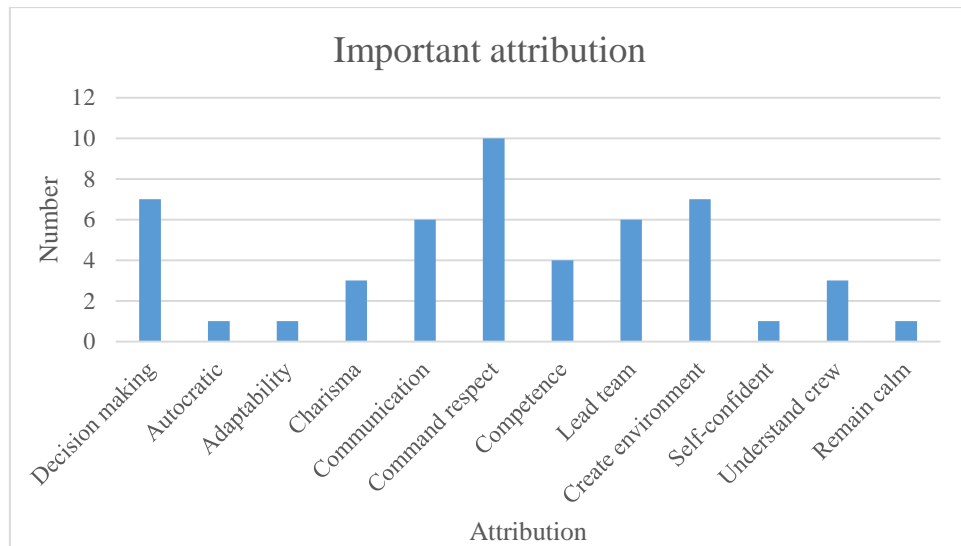


Figure 10: Important attribution of leadership

From this result, ‘Command respect’ gained the highest rank, in addition, ‘Decision making’, ‘Create environment¹⁰’, ‘Lead team’ and ‘Communication’ are also relatively in high rank.

Through the coding the data, these comments are indicated as necessary attribution of leadership,

Create environment:

¹⁰ Create environment; create the working conditions or environment where crew members can perform well give off their best performance.

1. Make the atmosphere that all crew can work as thinking about "One for all" (Japan, student, 24, male).

2. From my point of view, laissez-faire leadership style is the most appropriate one onboard because working onboard is team working and everybody there has to do their responsibility well. Everything onboard is limited and constraint, no extra man, no extra time. So, it will be the best if the leader onboard can lead his followers to work individually in their own (Myanmar, trainer, 35, female).

Lead team:

1. He can organize a good team, and they can have good team works, especially in the crisis (China, trainer, 30, male).

2. The ability to do the job yet team members feel the success as their own (Egypt, trainer, 34, male).

Communication:

1. Leader should communicate effectively. Leader also needs to lead team with regarding the team members' opinions and take right decision (Japan, instructor, 28, male).

2. Maintain good communication in the teams, the members to be fully in accord with the leader (Japan, trainer, 62, male).

DeWitz (personal communication, September 2, 2014) expressed his opinion about the most important skill for leadership as follows:

...But if I had to put one word for it, it would be communication. If you are able to communicate your idea, your goals ... if you are able to communicate effectively your idea with your subordinates or followers ... and then I think you are going to be successful.

From these results, ‘communication skills’, ‘motivating crew’ and ‘lead team’ seem to be critical abilities for leadership on board ship. From the interviews and literature it appears that communication skill is significant importance for leadership. Takeda and Nonaka (1983), Jeffery (2007) and Cooper (2000) all argues that essence of leadership lies in the relationship between leaders and followers. Communication may be viewed as the underlying mechanism for optimising these relationship.

4.4 The different perspectives of the necessary abilities of leadership at the operational and management levels.

The differences in response between seafarers with Master/Chief engineer background (management level) and others (operational level) are indicated in figure 11.

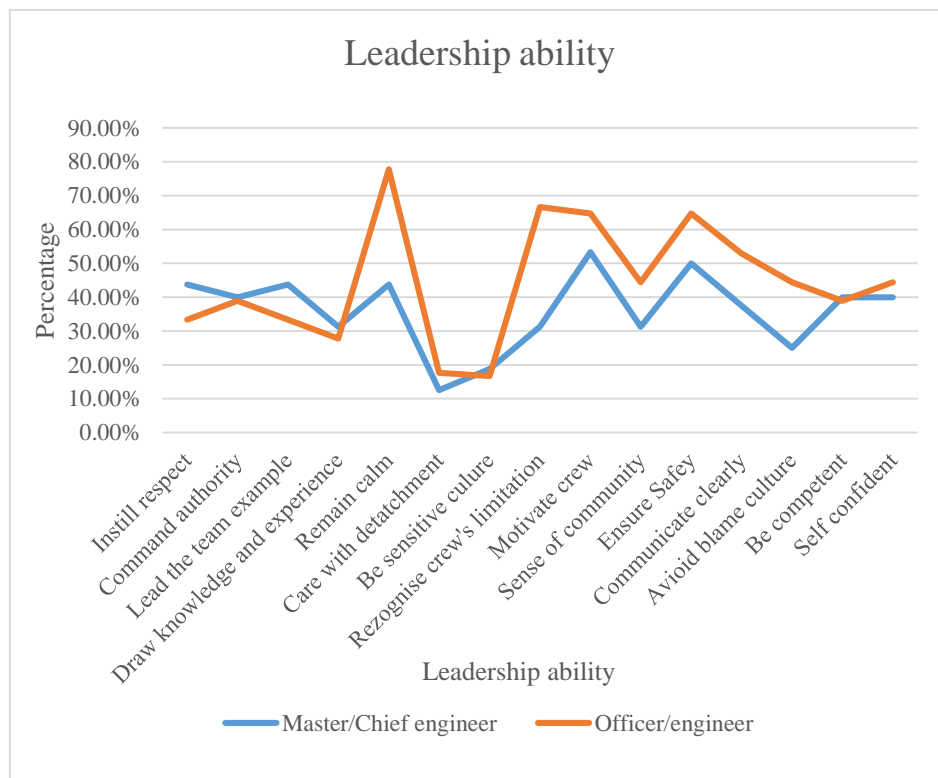


Figure 11: Responses for differences between the necessary abilities of leadership at the management and operational levels

As figure 11 shows, the variation in what the masters and chief engineers consider as significant leadership abilities is limited. In other words, the ranking of the abilities does not vary widely. Relative to this, the operational level responses show a wide variety with many more respondents indicating “Remain calm” as the most important ability, followed by “Recognize crew’s limitation” and “Motivate crew”.

This shows that management level and operational level have different perspectives on the relative importance of different leadership abilities. This is an interesting and important finding that should be considered in leadership training.

Cox (personal communication, August 19, 2014) alludes to the necessity of recognizing this difference in leadership training as follows:

Well, I think the emphasis for the operational level is to encourage people to speak up. As you say, leadership is really only one part of whole course. It's not just about giving people confidence. It's about making them listen, situational awareness, so maybe you could then say generally at operational level it is encouraging people to be aware of their responsibilities as a team member and also to speak up if they notice danger, and maybe at management level the emphasis is more on understanding that there is a team and being open to not criticism but open to questioning and an accepting information from different sources and different team members. So leadership is not just about being dictatorial and tyrannical; it's about being part of the team and it is about allocating resources appropriately it's about managing workload so you don't give one person too many tasks. So there is a lot to it and I agree ... it's not just about teaching somebody to be a leader and making them a natural leader. It's about leading a team and using the resources within the team effectively. It's not just about assertiveness. I think a lot of people think that leadership means assertiveness but that's not the case, it's a small part of leadership.

From these results, it can be said that the philosophies of leadership training for operational and management level need distinction.

4.5 The significant factors for developing leadership

43 Responses for question 10, in respect of the three most significant influences on leadership development, are indicated as figure 12.

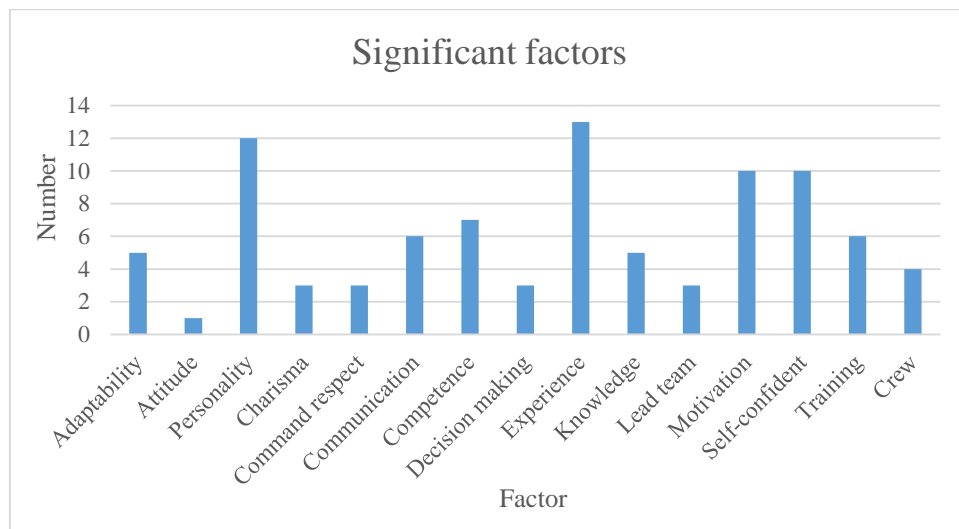


Figure 12: The most significant factors influencing leadership development

As the figure 12 shows, respondents think the most significant factors which influence the development of leadership skills are experience, personality, motivation and self-confident (top 4). It appears that people think leadership skill can be obtained mainly thorough experience. In the literature review, Silva (2014) states that real time experience is essential for developing leadership, and Yukl (2013) notes the importance of instructors giving ample time to trainees to practise skills. Jeffery believes that people learn by observing, watching and copying others. As Bell indicated “even the most experienced leaders should always expose themselves to new ideas, confront new challenges, and rethink their leadership style” (Bell, 2012, p. 458). It can be said that leadership training should be trained through experience and real time practice.

Personality is another highly ranked element for leadership development. This suggests that leadership development depends to some extent on one's own personality. In the literature, a number of people have the perspective that leadership can be obtained through the education and training (a subscription to the "behavioural approach" to leadership). However, the above suggests that innate personality (as suggested by proponents for the "trait approach" to leadership) can also influence effective leadership.

In response to a question on the duration of leadership training, Cox (personal communication, August 19, 2014) mentions the importance of and opportunity to create awareness in leadership training and suggests that such awareness creation need not be addressed over long periods

Well, it is [a 5 -7 day course being too short]. But I think the problem is with the mandatory course particularly of senior staff neither they nor their employers will be willing to put them through much longer courses and it's really ... I understand what you mean and I agree with you but it's really an awareness course, so if we put on a 5 day HELM course ... a management course ... we do not claim to be able to turn people from a shy, timid individual into a strong leader, but we can just give them a few clues about how to ... well to create a philosophy as we said earlier and I think that's really the objective and of course some people have those instincts naturally and some do not. So, we're not trying to change somebody, it's just giving them that awareness of the sort of qualities that are required. I agree with you that if you do want to change somebody it's would take months ... and that would be ... logistically that would be very difficult.

As Cox indicated, he also thinks that leadership training is the opportunity for trainees to realize the importance of leadership. Even though UK have provided HELM course as primary leadership training, they also provide BRM and coaching mentoring course (which is not mandatory, however).

This approach is similar to that in aviation. CRM training in the aviation industry is based on the philosophy of creating awareness and not necessarily transforming individuals into complete leaders over the short duration of the course.

Such short-term formal leadership training may therefore be indicated as the opportunity to create awareness and to increase the recognition of the importance of leadership and its effectiveness. However, in order to develop the full range of leadership skills, it is essential to have such a long-term experience approach and optimally to augment this with appropriate mentoring.

4.6 The difficult elements to train

The most difficult elements of leadership to train is indicated in figure 13. (44 responses)

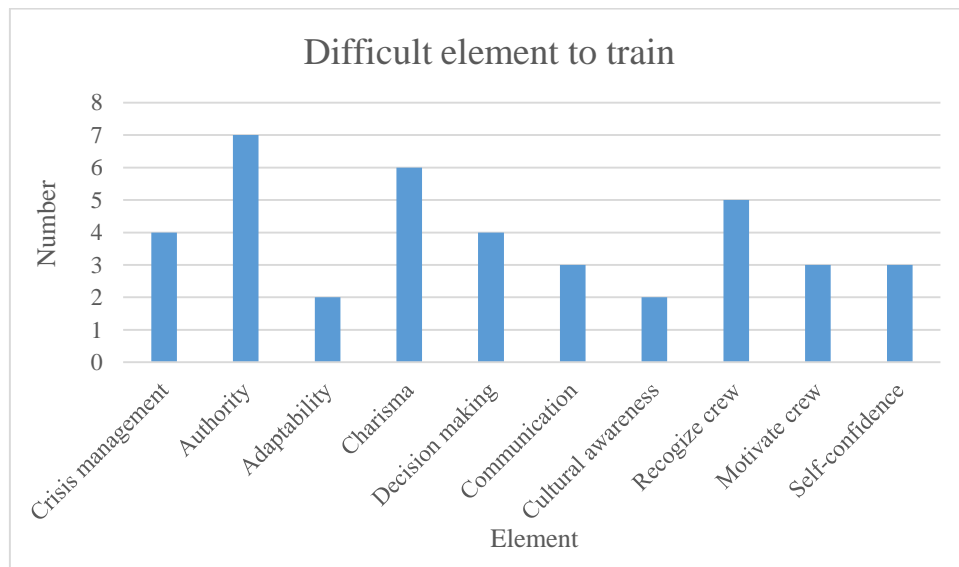


Figure 13: Difficult elements to train

As figure 13 shows “Authority” is the highest number of the respondents followed by “Charisma”, “Crisis management” and “Decision making”. Both of “Authority” and “Charisma” can be said that will be recognized with the result of the leaders’ performance. Therefore, it seems that many think these two elements are difficult to train. Romanian

trainer expresses that “A good leader must have some talents for this. Without these gifted talents you can create a leader by training but it will never be a very good one” (50, male). From these results, such authority and authority are seemed to be important elements on effective leadership, in the same time, they are seemed to be difficult to train.

According to Weber, Roth & Wittich, (1978, p.241) “the term “charisma” will be applied to a certain quality of an individual personality by virtue of which he is considered extraordinary and treated as endowed with supernatural, superhuman, or at least specifically exceptional powers or qualities”. However, Zenger, Folkman and Edinger (2009) determined that inspiring others is something that can and should be learned. The attributes and skills of inspiring others are learnable. Even the most critical characteristic of an inspiring leader, which is ability to make an emotional connection with a team, is achievable by building on strength in one’s own personality and approach.

From these indications above, it can be suggested that “charisma” (in other words the ability to inspiring others), which may be one of the most important elements on effective leadership, can be learned through training. In addition, the recognition of their own extensive experience can make leaders self-confident and furthermore make them appear charismatic in the eyes of their followers.

Chapter 5: RECOMMENDATIONS

The recommendations that follow in this chapter are based on the finding indicated in Chapter 4 and from the literature review undertaken. They relate to a philosophical approach to leadership training.

5.1 Training methods should be tailored for each region or jurisdiction

As the data analysis shows that different countries and/or different individuals have different perspectives on leadership and its training methodology. As has been noted, different cultures could respond differently in even the same situations. It can be suggested that each Party State to the STCW Convention as amended should build their leadership training methods by adapting global and regional perspectives to their unique socio-cultural contexts. This means that MET institutions should use the IMO model course as a guideline (as intended by the IMO), but should further establish an original long-term philosophical approach and the related training methodology all the time taking due cognisance of the nature of leadership on board ship. The MET institutions should take into consideration the cultural context in which they operate and also the influence of the differences between different nationalities.

5.2 Leadership training should take into consideration long-term personal development

Leadership training needs real time experience to develop. Jeffery (2007) notes that real time experience, coaching and mentoring are key elements for leadership development. The view of Haughton (2012) that the concept of transformational leadership underpins

contemporary mainstream leadership theory, further suggest that such elements are critical in leadership. However, “when it comes to this notion of ‘personal development’ [*via transformational leadership using coaching and mentoring*], we see a big black hole in the STCW” (Haughton, 2012, p.4). Leadership training such as HELM or MRM training can only give trainees the awareness of the importance of leadership and the realization of an individual’s own leadership qualities. In the leadership training in Aviation industry, CRM training is an opportunity to give trainees awareness of the importance of leadership (Fukui, 2014). Therefore, formal training, even short course, can offer a great opportunity to give trainees awareness of the importance of leadership. A long-term view of personal development and the short course awareness creating approach should not be mutually exclusive; a combination of formal training and real time experience can, more effectively, improve leadership training. It is here recommended that short-term formal education and training should be provided at the early stages of the training to give trainees the awareness of the importance of effective leadership, and then formal structures and teaching methods be put in place that give time to acquire, practice and demonstrate appropriate leadership skills through real time training. Indeed, coaching and mentoring are the significant elements for developing key leadership skills. Such structures should ensure that training instructors are able to give trainees appropriate feedback on their progress or the effectiveness of the relevant leadership skills. As the Swedish Club Academy (n.d.) suggests the importance of refresher training, it is recommend that refresher training be made mandatory via an appropriate legal instrument. Because leadership should be adaptable, and may be affected by the relation with leader and followers, refresher training is needed to help trainers situate their own experiences in the context of their evolving leadership learning. Even though one leader could successfully perform as a good leader in certain circumstances, he/she should adapt or change his/her leadership style in different circumstances. Substantial collaboration, communication and control between the maritime industry and MET Institutions is necessary to improve seafarers’ leadership skills via a long-term continuous learning approach. The critical nature of “transferring”

leadership skills through experience, real time coaching and mentoring, makes this collaboration necessary. Under the current situation - with the shipping industry seen to be facing a shortage of seafarers, ships having less manning requirements, faster promotion rates for officers - experience, real time coaching and mentoring seem to be far down the list of priorities. The importance of these factors should be recognized not only by the MET Institutions but also by each shipping company. Given the current situation, this calls for more research into how the relationship between MET Institutions and the wider industry could be improved.

5.3 Leadership training should focus on the relation between leaders and followers

Many authors have been shown to note that effective leadership depends on the nature of followers among other contextual factors. This suggests that optimum leadership training should take into consideration the perspective of followership as well. The requirements of the STCW Convention and Code, as amended appears to focus mainly on leadership qualities. It seems necessary for leadership training to complement this with a new approach. The Leader-Member-Exchange (LMX) modelling of leadership is a relatively new approach in leadership study. According to Kreitner and Kinicki (2008), the Leader-Member Exchange (LMX) model of leadership is based on the assumption that leaders develop unique one-to-one relationships with each of followers. Behavioural scientists call this kind of relationship a vertical dyad. The forming process occurs through leaders' attempt to delegate and assign work roles. Two types of leader-member exchange relationship can be evolved. One type is called the in-group exchange, in which leaders and followers develop a partnership characterized by mutual respect, trust and linking and a sense of common fates. Another one is known as out-group exchange which leaders are characterized as overseers who fail to create a sense of mutual trust, respect, or common fate. Research has shown that a positive leader-member exchange is positively associated with job satisfaction, job performance and trust between leader and followers (Kreitner & Kinicki, 2008). Even though the hierarchical structures are a strong aspect of the shipboard

organization, leaders need to understand their crewmembers by taking more empathetic positions. Without mutual respect and understanding, the leader may not achieve an environment where crew perform well. As noted by Takeda and Nonaka (1983), in order to gain leadership skills, individuals have to apply the principles of leadership in relation to superiors, subordinates and peers in their daily relationships. Similarly, Surugiu and Dragomir are of the view that:

Training leadership skills is a process that has extraordinarily great results starting with small steps. Being a leader on board is not an easy task but for such a leader being open to crew members and helping them to develop brings a great satisfaction. Increasing competitiveness on board depends on creating a climate of trust and confidence which strengthens crew cohesion and enhance work performance.

(Surugiu & Dragomir, 2010, p. 2).

These views from the literature have been augmented by the findings of this research. It is clear that most of the respondents think it is important to have an empathetic understanding of crew for effective team working. This new approach to leadership should be optimally applied in the maritime industry. Leadership training should focus on the importance of the relation between leader and followers.

5.4 The need for a distinction between leadership training for the operational level and for the management level

From the analysis of the collected data, there are differences in perspectives about the required attributes for leadership between the operational level respondents and management level respondents. This suggests that the notion of what constitutes “important leadership ability” differs based on rank. This finding about the perception of officers is supported by Barnett (2011) who similarly states that at the operational level officers are required to understand the principles of leadership and effective leadership styles. They also need to understand effective communication. Moreover, it may be the most important for operational level to develop practical strategies for assertiveness and

good teamworking. In past, there have been incidents where junior officers have been unwilling to suggest or speak up dangers to their seniors. On the other hand, senior officer need to actually demonstrate effective leadership behaviours. At this level, leaders need to be able to control their own emotions effectively, but also manage others, sometimes newly and dangerous situations. In the same vein, Cox (personal communication, August 19, 2014) states that the difference training approaches to operational and management level. In recognition of this difference, Devitt and Holford (2010) criticized the current situation noting that while leadership and team-working skills are required for both operational and management levels of the STCW, no distinction is being made in regard to the evaluation criteria for these two levels. Although there may be no differences between the good leadership skill sets themselves at the management and operational levels, it would seem proper that different responsibilities are indicated for senior officers as opposed to those for junior officers. It is here recommended that the requirements for leadership at operational and management levels (and by extension for the leadership training approaches, styles, content and methods) should be distinct from each other.

5.5 The necessity of leadership training for support level

If the importance of the relation between leaders and followers is acknowledged, then it may be suggested that leadership training is needed for crewmembers at the support level. IMO defines the support level as “the level of responsibility associated with: performing assigned tasks, duties or responsibilities on board a seagoing ship under the direction of an individual serving in the operational or management level” (IMO, 2011). According to Jeffery (2007), leadership skills are necessary for everyone who has responsibility for others. Jerry (2013) noted that a leader is to inspire and lead, while followers must be willing and able to be inspired and be led. In fact, as has been argued in this work, followership may be viewed as a part of leadership; followers must adopt some characteristic of leadership when embracing the role of follower and be able and willing to transition where required into appropriate leadership roles. According to Kline (2012),

leadership development programmes should focus on teaching both leadership and followership because leaders must model followership under certain situations. Most of people move back and forth between the roles of leaders and followers. Effective leadership development programmes can make followers to understand and pursue the leadership roles and acquire the necessary knowledge, skills and attitudes to serve and transform positively both of the organization and people in the organization.

As such, it is here recommended that the support level in maritime operations should also have leadership training commensurate with the associate roles.

Chapter 6: CONCLUSION

He who would learn to fly one day must first learn to stand and walk and run and climb and dance; one cannot fly into flying. Friedrich Nietzsche

6.1 Conclusion

Nietzsche's statement above indicates that the learning process is necessarily a step-by-step process. People cannot fly without learning stand, walk, climb and dance.

Through this research, the author has articulated a number of philosophical challenges facing current leadership training, and also proposed some recommendations for improving leadership training from a philosophical point of view. With the adoption and coming into force of the Manila amendments to the STCW Convention 1978, the requirements of leadership training have become mandatory for all seafarers at the operational and management levels. MET institutions have established various models of leadership training; however, these current leadership models seem to have more room for improvement. Reviewing the related literature, the author found that there is no consensus definition of leadership and that the development of leadership is also approached in diverse ways and from different perspectives. It is true that leadership skills can be obtained through education and training. However, this research has shown, together with the findings of others reviewed in the literature, that the development of leadership needs real time experience. Similar to the research on leadership training in other industries, it can be said that formal short-term leadership training in the maritime context would give trainees an awareness and realization of the importance of leadership and the principles of effective leadership. The maritime industry however has unique aspects as compared to other industries which should incorporate a long-term view in the consideration of leadership development.

The author conducted combined quantitative and qualitative research via the distribution of questionnaires to MET institutions and seafarers and interviews. Through the data analysis, the author found that many MET experts think the current leadership training approaches are inadequate for their intended purposes. Furthermore, the perspectives on leadership training seem to vary widely from one jurisdiction to another. It was determined through the research that core to leadership are communication and experience. Finally, these findings led to some recommendations in respect of the philosophical approach to leadership training in maritime education and training. Among other recommendations, it is proposed that leadership training should be tailored for each jurisdiction and context. Secondly, leadership training should take personal development over the long term into consideration. It is also recommended that leadership training should focus on leader-follower relationship.

6.2 Limitation of this study and further research

Arguably there are some limitations to this research. Firstly the validity of the findings would have been enhanced with a larger sample size in terms of scope of respondent profile and range of countries sampled. It is not felt however that the sample size obtained unduly compromised the findings of the research especially in light of their support by existing literature both for the maritime industry and other industries.

Secondly, this research focused on the philosophy on leadership training, not on leadership training operational methods and strategies as such. Further research will be needed to analyse the methods and tools for optimum leadership training.

In spite of these possible limitations of the study, it is hoped that these recommendations can bring about dialogue on the subject and ultimately a new approach to current leadership training in MET institutions. It is understood that leadership is emergent and complex especially in the maritime context. Leadership is also one of the most important elements for the safe operation of ships. It is therefore necessary that, despite its

complexity, the issue of leadership should be comprehensively addressed by the maritime community. Leadership training can make a significant contribution to safety, security and the protection of the marine environment and for the sustainability of the maritime industry. This work is a contribution in this direction and it is expected that further research will in future explore this area in a more in-depth fashion especially with reference to a wider sample and the practical analysis of leadership training methods and tools.

Word number: 17641 words

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Appendix A: Questionnaire to Instructors

Dear Instructors of Maritime Education and Training Institution

Research question on Leadership and its training

I am currently undertaking the Master of Science (MSc) programme in Maritime affairs at the World Maritime University specializing in Maritime Education and Training. As a professional, I work for the National Institute for Sea Training (NIST) in Japan as an instructor and 1st navigation officer of training ships.

As part of the MSc programme I am writing a dissertation on the Leadership training in the context of Maritime Education and Training. In order to analyze leadership education and training, I would like to seek your opinions on the definition of and training for leadership on board ships. I will be grateful if you could spare some time to complete the questionnaire attached herewith where it is relevant to your area.

Your valuable comments are very much appreciated. I would deeply appreciate your response as soon as possible giving the timelines for my study. Please do not hesitate to contact me for any clarifications.

I sincerely thank you in advance for your time and the sharing of your knowledge and expertise.

Yours sincerely,

Yusuke Mori

WMU, Sweden

Section A – Demographics

1. What is your age? _____ years

2. What is your gender? Male Female

3. What is your nationality? _____

4. What is your rank on board (*or your last rank if you are off the ship now*)?

5. How long have you been working on-board (Or had been working on-board) ?
_____years

6. During your time of working at sea have you worked on board ship with a multi-national crew?

Yes No

7. In which country have you had most of your work-related training (school)?

8. What the highest rank you have occupied on board ship?

Officer of the watch Chief Mate Master 2nd Engineer Chief Engineer

Section B – Definition and philosophy of leadership in a shipboard context

1. In your own words please indicate what you understand by the term “leadership” as applied on board ship?

2. On a scale of 1 to 10 (where 10 is the highest value) please rate the following with respect to importance for leadership on board ship.

A leader on board ship should be able to:

1 – 10

a. Instil respect

b. Command authority

c. Lead the team by example

d. Draw on knowledge and experience

e. Remain calm in a crisis

f. Care with detachment

g. Be sensitive to different cultures

h. Recognise the crew’s limitations

i. Motivate crew

- j. Create a sense of community

- k. Place the safety of crew and passengers above everything

- l. Communicate and listen clearly

- m. Avoid a blame culture

- n. Be competent in own knowledge area

- o. Be self-confident

Section C – Leadership required on board ship

Generally speaking the following leadership style exist

Autocratic	Leaders has absolute power over their followers
Bureaucratic	Leaders work “by the book”, closely following rules and procedures
Charismatic	Leaders inspires enthusiasm and generates energy in driving others forward
Democratic or participative	Leaders invite members of the team to participate in decision making, though they bear responsibility for the final decision
Laissez-faire	“let it be” Leaders leave their team members to work on their own
Task-oriented	Leaders concentrate on getting the job done, often in autocratic manner
People-oriented or relation-oriented	Leaders focus on organization, supporting, and developing their teams, as part of the team

Transactional	Leaders focus on performance, promote success with rewards and punishments, and maintain compliance with organizational norms
Transformational	Leaders effectively inspire their teams with shared vision of the future and encourage enthusiasm among the team for situations to be transformed
Servant	When someone leads simply by meeting the needs of the team, he or she is described as Servant leader

1. On a scale of 1 to 10 (where 10 is the highest value). Please rate the following with respect on the best leadership style on board ship

1 - 10

- a. Autocratic _____
- b. Bureaucratic _____
- c. Charismatic _____
- d. Democratic or participative _____
- e. Laissez-faire _____
- f. Task-oriented _____
- g. People-oriented or relation-oriented _____
- h. Transactional _____
- i. Transformational _____
- j. Servant _____

2. Please complete the following statements

1. In my opinion the single most important attribute of a leader on board ship is:
2. In my opinion current leadership training for seafarers is:

Section D - Training for leadership

1. How does your maritime education and training institution currently train students/trainees for leadership? Please indicate if no such training is done in your institution
2. What qualification is required for instructors/trainers involved in training for leadership?
3. How many students/trainees are trained the course as a class?
4. How long does leadership training take?
5. How does your institution assess students/trainees on leadership skill?
6. In your opinion, which element of leadership is the most difficult to train?
7. In your opinion, which element of leadership is the most difficult to assess?
8. In your opinion, which 3 factors are the most significant influence on leadership skill development?

Appendix B: Questionnaire to Seafarers

Dear Professional Seafarers

Research question on Leadership and its training

I am currently undertaking the Master of Science (MSc) programme in Maritime affairs at the World Maritime University specializing in Maritime Education and Training. As a professional, I work for the National Institute for Sea Training (NIST) in Japan as an instructor and 1st navigation officer of training ships.

As part of the MSc programme I am writing a dissertation on the Leadership training in the context of Maritime Education and Training. In order to analyze leadership education and training, I would like to seek your opinions on the definition of and training for leadership on board ships. I will be grateful if you could spare some time to complete the questionnaire attached herewith where it is relevant to your area.

Your valuable comments are very much appreciated. I would deeply appreciate your response as soon as possible giving the timelines for my study. Please do not hesitate to contact me for any clarifications.

I sincerely thank you in advance for your time and the sharing of your knowledge and expertise.

Yours sincerely,

Yusuke Mori

WMU, Sweden

Section A – Demographics

1. What is your age? _____ years

2. What is your gender? Male Female

3. What is your nationality? _____

4. What is your rank on board (*or your last rank if you are off the ship now*)?

5. How long have you been working on-board (Or had been working on-board) ?
_____years

6. During your time of working at sea have you worked on board ship with a multi-national crew?

Yes No

7. In which country have you had most of your work-related training (school)?

8. What the highest rank you have occupied on board ship?

Officer of the watch Chief Mate Master 2nd Engineer Chief Engineer

Section B – Definition and philosophy of leadership in a shipboard context

1. In your own words please indicate what you understand by the term “leadership” as applied on board ship?

2. On a scale of 1 to 10 (where 10 is the highest value) please rate the following with respect to importance for leadership on board ship.

A leader on board ship should be able to:

1 – 10

a. Instil respect

b. Command authority

c. Lead the team by example

d. Draw on knowledge and experience

e. Remain calm in a crisis

f. Care with detachment

g. Be sensitive to different cultures

h. Recognise the crew’s limitations

i. Motivate crew

j. Create a sense of community

k. Place the safety of crew and passengers above everything

l. Communicate and listen clearly

m. Avoid a blame culture

n. Be competent in own knowledge area

o. Be self-confident

Section C – Leadership required on board ship

Generally speaking the following leadership style exist

Autocratic	Leaders has absolute power over their followers
Bureaucratic	Leaders work “by the book”, closely following rules and procedures
Charismatic	Leaders inspires enthusiasm and generates energy in driving others forward
Democratic or participative	Leaders invite members of the team to participate in decision making, though they bear responsibility for the final decision
Laissez-faire	“let it be” Leaders leave their team members to work on their own
Task-oriented	Leaders concentrate on getting the job done, often in autocratic manner
People-oriented	Leaders focus on organization, supporting, and developing their teams, as part of the team
Transactional	Leaders focus on performance, promote success with rewards and punishments, and maintain compliance with organizational norms

Transformational	Leaders effectively inspire their teams with shared vision of the future and encourage enthusiasm among the team for situations to be transformed
Servant	When someone leads simply by meeting the needs of the team, he or she is described as Servant leader

1. On a scale of 1 to 10 (where 10 is the highest value) Please rate the following with respect on the best leadership style on board ship

1 - 10

- k. Autocratic _____
- l. Bureaucratic _____
- m. Charismatic _____
- n. Democratic or participative _____
- o. Laissez-faire _____
- p. Task-oriented _____
- q. People-oriented or relation-oriented _____
- r. Transactional _____
- s. Transformational _____
- t. Servant _____

2. Please complete the following statements

- 3. In my opinion the single most important attribute of a leader on board ship is
- 4. In my opinion current leadership training for seafarers is:

Section D - Training for leadership

1. How were you trained in leadership as part of your COC

2. In your opinion, which element of leadership is the most difficult to train from your experience?

3. In your opinion, which 3 factors are the most significant influence on leadership skill development?

Thank you very much for your time and input. If you have any other comments or input, please kindly note them below,

Appendix C: Questionnaire to students

Dear students

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I sincerely thank you in advance for your time and the sharing of your knowledge and expertise.

Yours sincerely,

Yusuke Mori

WMU, Sweden

Section A – Demographics

1. What is your age? _____ years

2. What is your gender? Male Female

3. What is your nationality? _____

4. What are you going to become for future? Navigation officer Engineering officer

Section B – Definition and philosophy of leadership in a shipboard context

3. In your own words please indicate what you understand by the term “leadership” as applied on board ship?

4. On a scale of 1 to 10 (where 10 is the highest value) please rate the following with respect to importance for leadership on board ship.

A leader on board ship should be able to:

1 – 10

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s. Draw on knowledge and experience

- t. Remain calm in a crisis

- u. Care with detachment

- v. Be sensitive to different cultures

- w. Recognise the crew's limitations

- x. Motivate crew

- y. Create a sense of community

- z. Place the safety of crew and passengers above everything

- aa. Communicate and listen clearly

- bb. Avoid a blame culture

- cc. Be competent in own knowledge area

- dd. Be self-confident

Section C – Leadership required on board ship

Generally speaking the following leadership style exist

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1. On a scale of 1 to 10 (where 10 is the highest value) Please rate the following with respect on the best leadership style on board ship

1 - 10

- a. Autocratic _____
- b. Bureaucratic _____
- c. Charismatic _____
- d. Democratic or participative _____

- e. Laissez-faire _____
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- g. People-oriented or relation-oriented _____
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- i. Transformational _____
- j. Servant _____

2. Please complete the following statements

- 5. In my opinion the single most important attribute of a leader on board ship is

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Thank you very much for your time and input. If you have any other comments or input, please kindly note them below,