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Promoting Common Safety Culture at Root Level

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ABSTRACT

Over the last three decades, the world merchant fleet has become significantly multilingual and multicultural in crew composition. Today, about 70% of the world's merchant marine vessels sail with a crew composed of several nationalities. At times, the crew mixture may experience behavioral problems both on and off duty that can affect ship's safety, pollution prevention and security aspects. Casualty investigators seldom study and analyze the interpersonal situations/relations in their investigations. Reports on role of the impact of human relations are almost non-visible. This paper seeks to provide awareness towards mitigation of human error in multinational environment by promoting an ***enforceable common safety culture*** *irrespective of the Nationality, Culture and Language.*

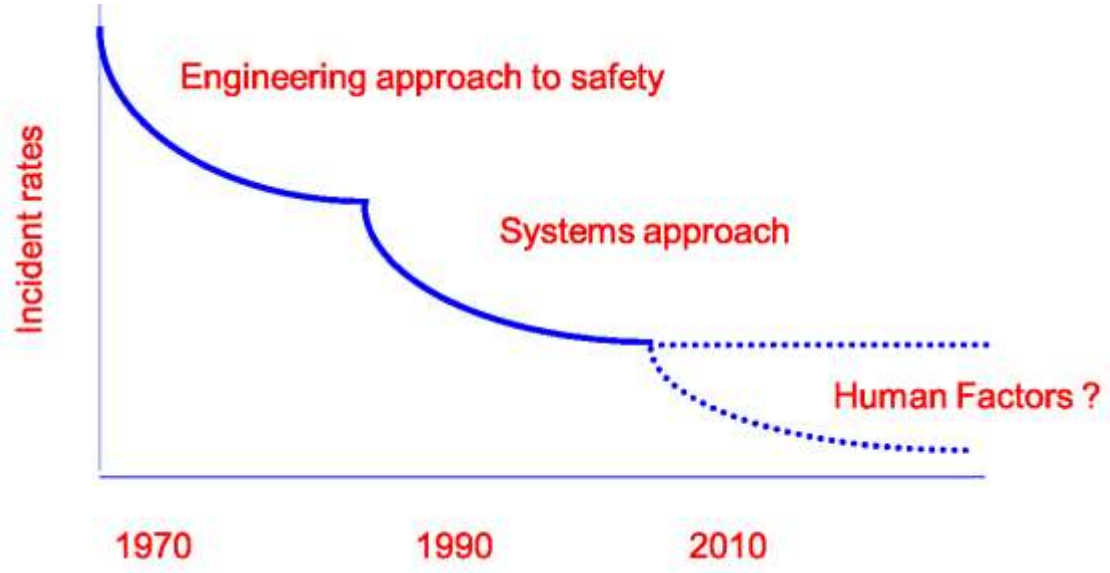
KEY WORDS: Human Error, Mitigation, Risk Management, Safety Culture, Safety Management,

INTRODUCTION

A. ARE HUMAN FACTORS REALLY IMPORTANT?

'Shipping industry recognises the importance that human factors can play in helping to avoid accidents and ill-health at work…. Up to 80% of the accidents are often attributed to human attitudinal factors.'

B. CAN RATE OF ACCIDENT KEEP FALLING?

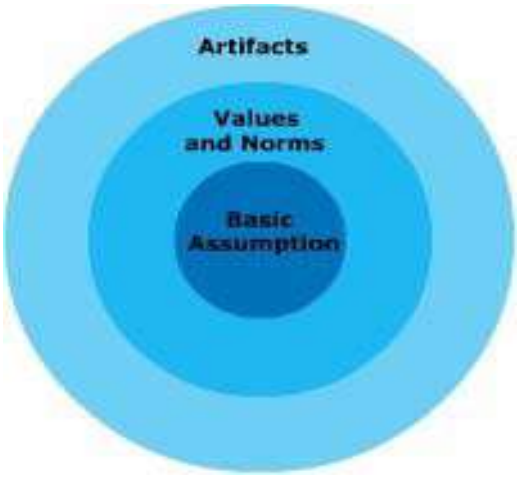


C. WHY IS CULTURE IMPORTANT?

Culture affects the way we feel, act, think and make decisions. Webster's Defines culture as-

"***The set of shared attitudes, values, goals, and practices that characterises an organisation***." Over the years it has been an on-going challenge for shipping companies to manage the task of remoulding and improving the safety awareness and understanding of their newly graduated seafarers.

Among many shipping companies there is a general perception that the task of improving seafarer safety and risk awareness is a competence development activity that could have been dealt with more efficiently at an earlier stage at best at their curriculum. In this respect imparting safety training at the maritime training institutions play an important role. There are 3 layers of culture, which can be compared to an onion. These layers are of great value when discussing safety culture. When you peel off the layers, you will gradually get to the core of a culture.



Artifacts and Behavior – 1st Layer

Explicit culture – Artifacts – is the observable reality of safety culture. These are the things you notice first. The moment you step on board a vessel or enter the office of any shipping company the visible products are: language (e.g. "When I'm busy, I sometimes make short cuts" versus "No matter what happens, I never make short cuts"), technology (e.g. technical facilities to ensure the control of safety hazards), products (e.g. safety posters), creations, clothing (e.g. personal protective equipment), stories (e.g. "The top management doesn't walk the talk" versus "The top management definitely walks the talk"). Artifacts are, in other words, visible evidence of a

deeper level of culture and are easy to observe, but can be difficult to decipher. Artifacts are the things, which puzzle newcomers in an organisation. These and many artifacts will – when applied properly - have a positive and supportive impact on the safety culture of any organisation.

Norms and Values – 2nd Layer

Norms refer to the group's idea of what is right or wrong. Safety norms can be expressed through written safety policies, rules, procedures, and regulations. Values, on the other hand, determine what is "good or bad". These are closely related to the ideals shared by a group. Our perception of right and wrong is based on our values. A culture is relatively stable when the norms reflect

the values of the group. When this is not the case, there will most likely be a destabilizing tension. For instance, in one culture, people agree with the value: 'Safety is essential to ensure a prosperous business'. Yet, the behavioral norm approved by the group could be: 'Safety is important, but if the ship is docked, we tend to forget about safety'. In such case the norm (what is said) differs from the value (what is done).

Basic Assumptions – 3rd Layer

A basic assumption is the core of any culture. They are the organization's unspoken and subconscious rules on how to act, think, and behave. The way we communicate safety, their perception of time, human relations, and actions are strongly influenced by our basic assumptions. Basic assumptions influence how we see or interpret things, how we react emotionally, and what deserves careful attention, among other things. Culture influences how we perceive the actions, thoughts, and behavior of other people. Two different safety cultures have two different interpretations. Using a safety harness when setting the pilot ladder may seem over-protective in one safety culture whereas in another safety culture, it is just a normal thing.

2. SAFETY MATURITY

A safety culture maturity model has been developed to assist Training Organizations and for Marine Institutes in:

i. Establishing their current level of safety culture maturity

ii. Identifying the actions required to improve their culture.

It is proposed that organizations progress sequentially through five levels, by building on the strengths and removing the weaknesses of the previous level. The safety maturity model has been used to assess in what areas the project partners can improve the learning conditions for the development of appropriate student safety and risk awareness. The descriptions below describe the 5 maturity levels.

3. SAFETY CULTURE MATURITY MODEL

a. **Risk Assessment and Awareness**

Implementation of a Risk Assessment Culture is a safety management instrument used to minimize the risk of personal accidents and damage to property in protecting any seafarer from getting hurt. It is a tool - when applied correctly and effectively – that is perceived as one of the most important proactive ways controlling and minimizing occupational hazards. It raises the risk awareness among those who are involved in the process and makes people stop and think. Due to the importance of the Risk Assessment
methodology it is pivotal for students to develop and embed an in-depth understanding of its use prior to the startup of any hazardous job task both at the training institution and on board.

b Safety Management

The term safety management refers to the maritime institute's ability to manage safety activities at a strategic, tactical and operational level .

i) Integrate safety training across subjects and departments

ii) Embed appropriate risk management principles in the training at the institute;

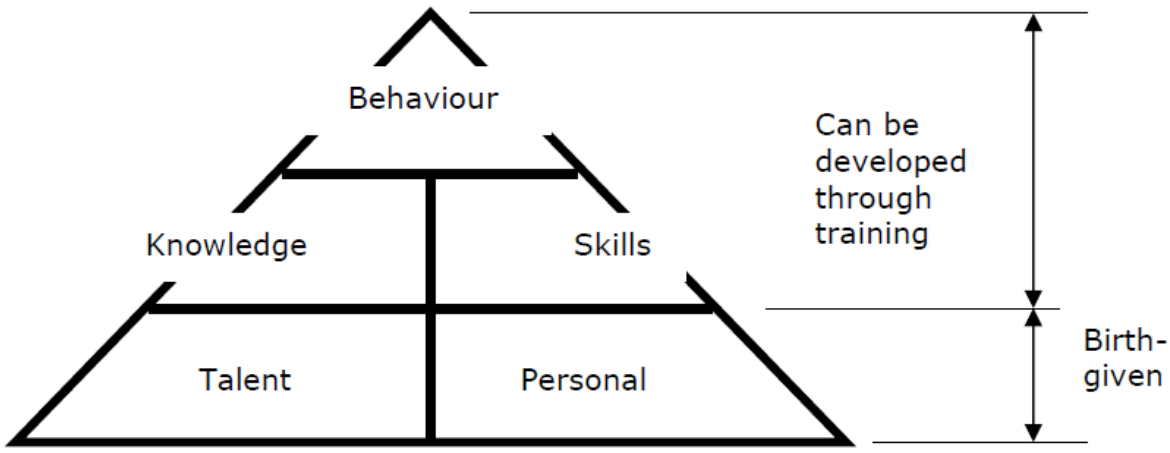
iii) Develop appropriate student safety behavior and understanding of their own roles and responsibilities.

iv) Ensure that the institute's safety policy is cascaded down through the ranks of the instructors and students

v) Align and communicate clear messages related to safety

vi) Communicate the schools' view on what safety competencies the students need to develop in order to become safety excellent seafarers.

vii) Communicate what has negative and positive effect on the safety culture.



The Competence Model

In short, the model illustrates which elements we as humans utilize, when we carry out any kind of work task. The task could be a specific job task, playing an instrument, raising a child or dealing with safety hazards.

A. Talent and Personal Characteristics

Talents and Personal Characteristics are considered as the underlying foundation of a person's capabilities. These characteristics are essential premises for a person's professional behavior and regarded as the fundamental elements for achieving professional success. Talents and Personal Characteristics are difficult to influence. For talent to be developed, an inborn aptitude is required. Correspondingly, personal characteristics are fundamental character traits that form your personality. These traits are established at conception or in the first years of a person's life.

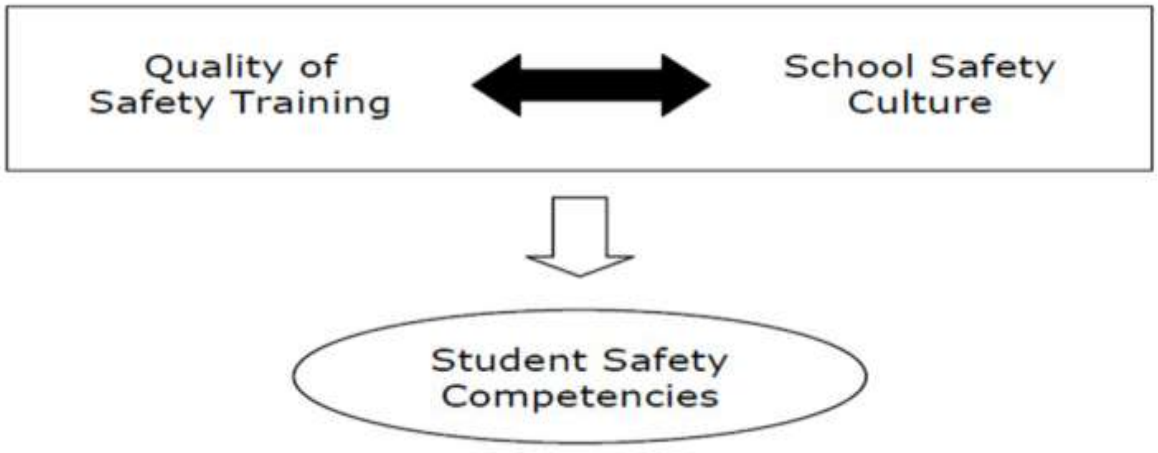
B. Knowledge, Skills and Behaviour

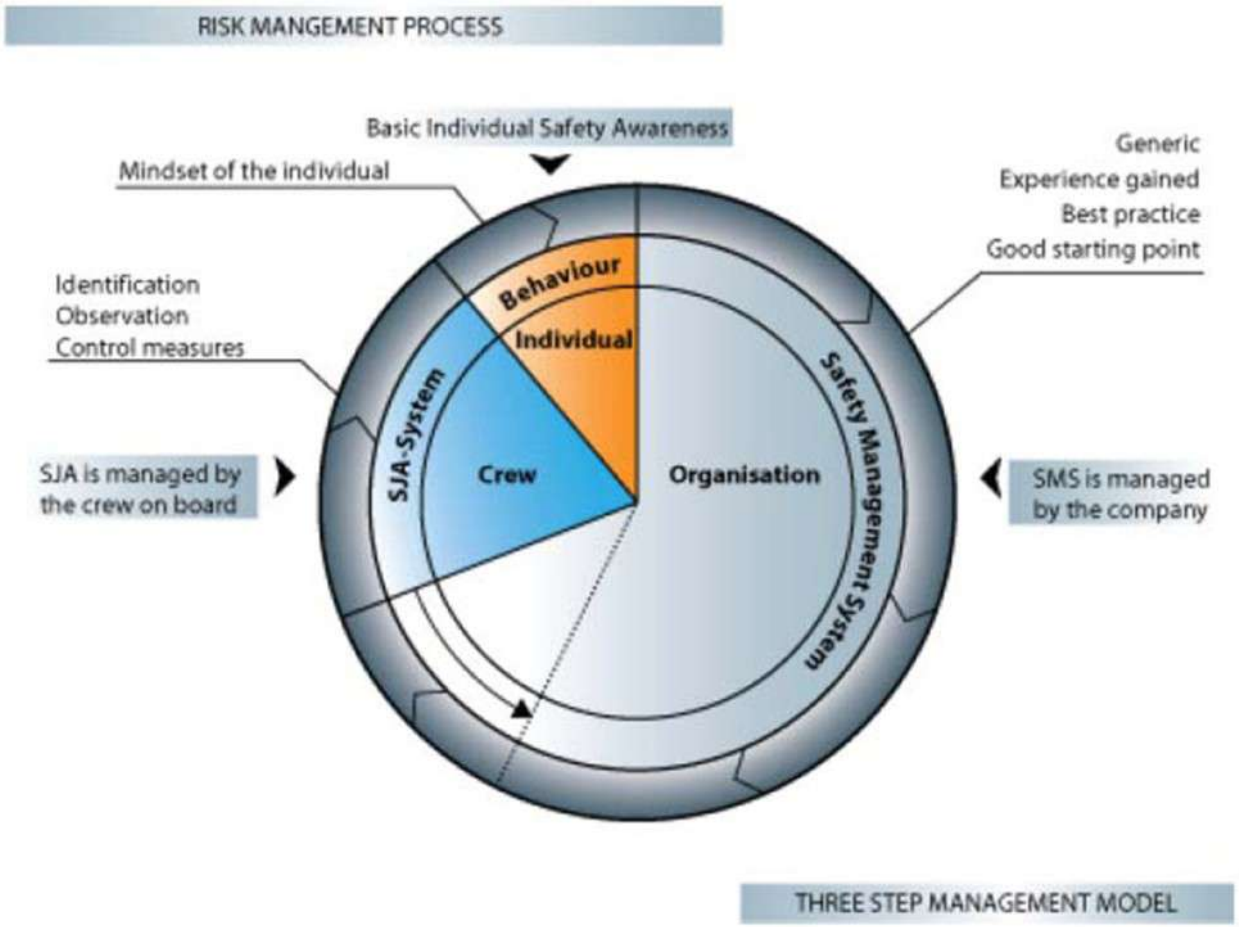
In extension of a person's talents and personal characteristics the total level of competence also relies on knowledge, skills and behavior. The combination of these competence components will decide a person's ability to manage and solve a specific job task. Competence is therefore result oriented, and the value lies in the action. The elements of competence composed of knowledge, skills and behavior are built on the individual foundation; behavior in particular is connected with personality.

Knowledge - Knowledge is information utilized in a competent way and is of value when put into practice through effective skills and relevant behavior. As a car driver you need to know the meaning of e.g. road signs, driving rules, speed limits, etc.

Skills – Skills represent the ability to per-form an act in real life and is often the result of persistent training. As a car driver you need to be able drive the car in accordance with the way it was designed and the facilities it has.

Behaviour - Behavior is the will and ability to act, which is adjusted and tailored to given situations and surroundings. Successful behavior demands reflection. As a car driver you need to be able to assess your actual driving in accordance with the weather conditions, traffic situation, etc. A safety culture is reflected in the behavior and actions of people. Since crew actions and behavior are closely linked to the idea of competencies it is important to assess how the specific competence development process is undertaken by those who have an impact on this process – the schools, its managers, facilities, instructor competencies, educational principles applied etc.





The Risk Management Circle

In this respect it is important not only to look at the training taking place during the class-room sessions. It is also important to assess to what degree the school's own safety culture impacts the safety competencies of the students.

Both factors will have a large influence on the students' safety competencies and these will, by the end of the day, have an impact on the safety culture of any shipping company they might work for. The Risk Management Circle illustrates the importance and interconnection of the three levels.

In order to embed a natural understanding of the crew and individual levels the present educational principles and training shall be to a higher degree arranged to support this learning process.

Today the main focus is at the organizational level – following procedures and orders. The Organizational level is basically regulated by Safety Management Systems guided by the ISM Code. Further, the tendency has been to regulate all details at Crew level by the use of the overall ISM management system, which then easily becomes cumbersome and heavy lacking operational efficiency and ownership at crew level.

As the Safe Job Analysis (SJA) principles (Risk Assessment) have been introduced in the recent years by the regulators, this concept should principally be the management tool at crew level at

the work places to minimize the risk of personal accidents and damage to property. In this context it is therefore important that the graduated seafarers have the in-depth understanding of these principles.

During one of the project group's inter-views with the students, one student clearly stated: "If all on board the vessel follow the rules, then we can avoid all accidents" This indicate the understanding that if the safety management system as well as the SJA System is "perfect" and covers all situations, we will avoid accidents.

Off course, in the perfect world, this may be true, but in reality we cannot foresee all situations and processes. Therefore "the individual" is shown in the figure indicating that the individual has the remaining part of the full circle in the risk management process. The challenge in this context is to equip and educate the individual to deal with his own situation and the related details, which are neither covered by the SJA nor the safety management system. It is in this area we see most of the personal accidents today, and it is therefore important that the candidate understand this and understand their own responsibilities.

The above statements indicate that we cannot solve all safety issues by regulations, rules and guidelines. This creates a challenge at institutions where a disciplined approach toward the students is dominant. A disciplined approach will precisely require rules and will drive a compliance culture.

Principally, a compliance culture must exist, but not without addressing the area and situations where rules are not adequate and maybe even lacking. Precisely in this area the individual must be able to handle the situation and consequently the institutions must develop processes in their education to fill this gap.

CONCLUSION

Existing type of training is not enough

Today most training, in the area of risk and safety management, is aimed at providing understanding of administrative processes, systems and tools. The candidate learns the importance of complying with rules and regulations and how these systems can support the safety efforts. How-ever very little learning efforts are made to pre-pare the candidate on how to deal with unexpected incidents, attitudes, and perceptions, or how to take responsibility when dealing with an area or situation not described in a procedure.

In this respect there is a need for training that would go beyond the traditional classroom training, if implemented in an optimum way, to focus more on the personal requirements to deal with multiple processes, collaborate with others, be put in situations where there is no straight for-ward answer or decision making with attention to the risk and safety management philosophies.

The opportunity for maritime academies to go on the forefront

With shipping companies taking steps to have the risk and safety management fully integrated in the whole business there is an opportunity for Maritime Academies not just to comply with demands as they are expressed, but to actually step in the forefront of this area.

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