



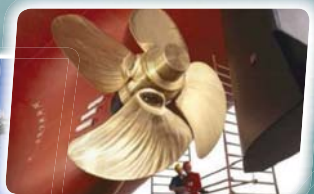
To promote, develop and support in the spirit of cooperation, the common interests of its members in all matters concerning the development and quality of maritime education and training.

NEWSLETTER

OCTOBER – 2013

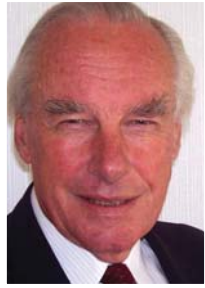
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TRAIN, TRAIN, RETRAIN, RETAIN!



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Editorial



World Maritime Day A Concept of a Sustainable Maritime Transportation System

IMO Secretary General Koji Sekimizu, in his Foreword to this IMO WMD document, writes "More than 1.5 million people are employed as seafarers and the vast majority of them are from developing countries. And, if the world economy continues to grow, more highly trained and qualified seafarers will be needed. To meet the demands of growth, more than 50,000 new seafarers are needed every year. Related activities such as shipbuilding, ship repair and ship recycling provide more jobs to people in developing countries and will contribute towards achieving the Millennium Development Goals." The document lists 10 Actions for a Sustainable Maritime Transportation System, which include the following:

Action 2 EDUCATION AND TRAINING IN MARITIME PROFESSIONS, AND SUPPORT FOR SEAFARERS with the following three goals:

- Goal 1** – A Sustainable Maritime Transportation System requires properly trained and educated seafarers. Such training and education should be based on, inter alia, the STCW Convention, and include refresher training and education upgrades, as necessary. Safety and environmental awareness should be the priorities. There is a need to develop capacity-building activities under IMO's ITCP, as well as coordination with ILO's Maritime Labour Convention, for maritime training and education.
- Goal 2** – The quality of life for seafarers at sea is important in order to maintain and develop the maritime transport industry as an attractive career option for talented professionals seeking a varied career involving both ship- and shore-based employment. The retention of qualified professionals is perhaps the greatest challenge for the sector ...
- Goal 3** – To underpin the continuous, global development of the maritime transport industry, non-seagoing maritime professionals must also be trained and educated, especially in the developing world. Professionals need training for legal, engineering, ship management and port careers. This can be achieved through maritime education and training and capacity-building at educational institutions.



A similar theme was expressed during the highly participative Sustainable Shipping Initiative Forum 'The Case for More Action' organised by the Forum for the Future in Singapore on 26 September.

GlobalMET took the opportunity to call for the Sustainable Shipping Initiative to include the development of MET as one of its objectives.

Clearly the situation with respect to much current MET is recognised; what is needed is more action to address the issues. GlobalMET's initiative in approaching the Asian Development Bank has resulted in the welcome Fisher Associates' Report commissioned by the ADB, which analyses the issues, and recommends four outcomes: 1 Policy and regulatory environment improved; 2 Partnerships strengthened; 3 Quality of MET improved; 4 Knowledge sharing strengthened; together with appropriate actions. The Report is available through the link on the GlobalMET website.

GlobalMET is striving to ensure implementation of the proposed ADB project 'Human Resource Development in the Maritime Sector in Asia and the Pacific' in accordance with the Fisher Report's recommendations and thereby generate more action to assist realisation of IMO's concept of a sustainable maritime transport industry.

Through collective action we can make a difference.

Rod Short
Executive Secretary

Considerations in Using Mobile Devices in Maritime Education & Training Virtual Learning Environments

by

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No matter how noble, graceful and powerful this free spirited horse in Figure 1 may seem—as the saying goes, you can lead a horse to water; but you sure can't make him drink! This analogy is even truer when it comes to implementing virtual learning environments (VLE)! My father says you just need to apply the right tool—putting it nicely of course!

When I first envisioned writing this particular article—it was to be primarily about mobile-learning (m-learning), about how mobile devices (md) “plug-in” to VLEs like Google Apps for Education (GAFE). In previous Globalmet articles, it was noted that GAFE provided a free virtual cloud computing environment and suggested how this might benefit institutions; e.g., provide the tools required for organizations to leap ahead with human capital development and learning initiatives; reduce the traditional burden usually associated with ICT (e.g., equipment, personnel and overhead) and make it possible for organizations to focus more on innovation, education and stakeholders.

This article discusses a very important piece on how to acquire the “optimum mobile device” to help take full advantage of the VLE; e.g., price points, internal and external memory, RAM, operating systems, battery issues, hot spots and the like. Another key point to make is that access to GAFE necessarily shouldn't require md or hot spots in order for learning to occur; all that is really needed is an account created and access via the internet;

how one gets there, while obviously important, shouldn't require md. Some md initiatives have been flipped to mean the downloading of e-books onto mobile devices along with course notes and investing large sums of money on hot spot infrastructure as a way ahead. This sounds more like capital budgeting rather than strategic planning, branding and positioning! Other tangent initiatives and costs can put one back in the same position as prior to GAFE; spending large sums of money on both hardware and ICT personnel; personnel to help maintain newly acquired WIFI hotspots (2G/3G)/WiMAX (4G) and mobile device equipment (The “G” referring 1st, 2nd, 3rd and 4th generation internet type access).

While specific objectives for the VLE and institutions are necessary—they are not necessarily in themselves sufficient to guarantee success. The real key may lie not only with skilful articulation of goals and objectives to the satisfaction of stakeholders (subjective); but, also whether or not the culture of institution has reached its “cognitive dissonance/liberation point” with the status quo and is ready for change and action.

Mobile devices (as depicted in Figure 2) are an important part of achieving previously stated goals for both VLEs and the institution (anywhere, anytime), however, they by no means dictate its course—they are but an end to a means! Important for MET in a VLE is the collaboration, interaction and synthesis of learning that is to occur. Could this happen better with md and additional access points in place? Absolutely!



Figure 1 - Saratoga Horse Racing Event, New York, USA. Copyright Digital Eye, LLC



Figure 2 - SMART Tab mobile device used for a VLE application.

Some quick and important things about mobile devices; the experience is a totally different one than PCs and laptops—a must try! For example, the way the keyboard can work is remarkable— using the Swiftkey Technology, one slides one's finger between letters to make words and sentences (the device tries to guess your word(s) before you complete it as it has acquired your vocabulary from use, etc.); and the many applications (Apps) are generally free or cost a couple of U.S. Dollars.

In the “mobile device world,” memory and battery are king! Lots of random access memory (RAM) is good (1GB or more). The Tablets will be cheaper with less memory, but don't compromise here because you have a price point shackled upon you! One shops for a device and say it has, 4GB or 16GB of memory— what kind of memory? Most likely the specification is referring to internal memory, but maybe nothing to do with RAM—extra space for making computations so the device doesn't have to wait as long. The RAM probably starts out at 512MB but after software is loaded from ROM (read only memory, in some devices) and uses RAM for computation and overhead—RAM is significantly reduced, say to 300MB or less. Years ago, ROM meant just that—today it sort of and generally means that (read only).

External memory, usually in the form of an external micro SD (T-Flash) card (extSD), can be up to 32GB-- but stay around 16GB or lower unless you have a branded device as some “unbranded

devices” may have trouble reading the micro SD and once bought, twice sold and one cannot return it to the dealer if it doesn't work; 16GB costs about USD15 and 32 GB USD30 (md can also use USBs). To get more RAM (virtual memory that appears and acts as RAM), one can “swap” extSD to help expand RAM and make the device run faster.

Battery power is on an even par with the importance of memory and measured in “mAh” or mili Amp hours. The batteries on most these md seem to last about 3-4 hours depending on what you're doing. This means that during the regular work day, power will be an issue. Fortunately there are many solutions—for example, buy a portable power bank that can charge the md when it's low on battery and one isn't near an outlet. Some can charge a device several times. A “typical” Tablet might be capable of about 2500-2800mAh and might run about 3 – 4 hours. Unbranded devices, while just as powerful as any branded device as far as software is differentiated only in memory and battery-- which help determine user experience; e.g., free of problems like loose charging connections and such. The power bank is the life line and if you're going to get one— get something like the Yoobao 15600mAh (only sold in certain markets) or as close to this as possible. This unit also has 2 USBs, night light and makes possible the simultaneous charging of two devices and/or run one's Broadband USB device while supplying a charge and running your Tablet (won't run the broadband if the md is fully charged, won't discharge). The lower mAh power banks only have one USB out. Not covered in this article are the many apps available and use on these devices; apps are really what make m-learning a leap ahead endeavour; they may be covered in future articles!

In conclusion, as one goes out to purchase their first md or Tablet—don't only just think of price point, but also memory and battery (new models can last several hours or more); so what might a reasonable md specification look like? At least 1GB RAM, 8 GB Internal memory (maybe ROM depending on the brand) and about 16 GB extSD; Mobile device Apps are only something like 5MB, 20MB or less in size and on the extreme 250MB or so; therefore, a 32GB extSD is very large—unless you're loading lots of videos.

Lastly, get the VLE user IDs and passwords into the hands of the users first and worry about md, mechanics and upgraded access later. This younger generation is very adept to technology and the net!



Maritime Operations in Arctic Ocean Region

Future Challenges and Opportunities

By

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The water connections linking the Arctic and the Pacific and Atlantic oceans are limited. The narrow and shallow Bering Strait (85 kilometer width; 30-50 meter depth) is the only link between the Arctic and the Pacific. There are more and wider passages between the Arctic and the Atlantic. Davis Strait between Canada and Greenland links Baffin Bay with the Labrador Sea and the North Atlantic. At its narrowest point Davis Strait is about 300 kilometers wide; at its widest it is over 950 kilometers. Between Greenland and Iceland lies Denmark Strait (290 kilometers wide at its narrowest). The widest passage is the Norwegian Sea at about 1,100 kilometers separating Iceland from Norway.

These water passages between the Arctic Ocean and its northern coastal seas allow exchanges of water vital to the Arctic's climate and marine ecosystems. By far the greatest exchange of water takes place between the Arctic and the Atlantic. Relatively warm dense salty water, as part of the North Atlantic Current originating in the Gulf of Mexico and Caribbean Sea, enters the Norwegian Sea continuing into the Barents Sea. This warmer water means that the Southern Barents Sea is not generally ice-covered, a significant factor in the regulation and control of marine traffic in this northwest corner of Europe that is by latitude located in the Arctic region.

After much mixing and cyclonic (counter-clockwise) circulation, cold, less salty water exits between Svalbard and Greenland and Greenland and Iceland. This exiting water consists not only

of the modified North Atlantic waters but, more importantly, continental river water from Eurasia, especially from the Ob, Yenisei and Lena rivers of the Russian Federation; freshwater from the Mackenzie River in Canada; and Pacific water which entered through the Bering Strait. The driving engine conveying the Pacific water and the river waters eastward is the Beaufort Gyre north of Alaska and western Canada. This gyre - a clockwise circulation of relatively fresh, less dense water - is driven by prevailing winds. When winds shift and the current lessens some water escapes and is caught up in the Trans Polar current, eventually linking with the outflow water into the Atlantic Ocean. Cold waters also exit from the Arctic to the Atlantic through Baffin Bay, Davis Strait and Hudson Strait.

More recently, we have learned that the Arctic is not as isolated from more heavily populated areas as was once thought and our modern civilization is having an impact on the Arctic. For example, industrial activities are responsible for the presence in the Arctic of many persistent organic pollutants and toxic metals that are neither produced nor used there, but rather are transported there through the atmosphere and deposited to land and water surfaces. This is of great concern to the Native and other residents of the Arctic, many of whom survive on wild plants and animals that may be contaminated with these materials.

Over the past two decades, a series of unusual changes have occurred in the Arctic that may be related to release of GHG (Greenhouse Gases) into the atmosphere by industrialized nations. Sea ice and permafrost are decreasing, precipitation patterns are changing, the air is warmer, and the intensity of harmful UVB radiation is increasing. In addition to posing





difficult challenges, and perhaps new opportunities, to people living in the Arctic, these changes may ultimately influence other parts of the Earth. Melting of Arctic sea ice and the Greenland Ice Sheet could increase sea level and change the strength of the global ocean circulation. Other changes in the Arctic Region could alter the relative amount of the Sun's energy that is absorbed, reflected, or radiated in the Arctic. Thus, the Arctic has the potential of providing unexpected deviations in the rate of "Global Warming".

Overall Role of AMSA Team

The AMSA is designed to be circumpolar in breadth and also to consider regional and local perspectives. The assessment's central focus is on ships: their uses of the Arctic Ocean, their potential impacts on humans and the Arctic marine environment and their marine infrastructure requirements. The AMSA does not place a primary focus on determining the operational and economic viabilities of specific marine routes within and across the Arctic Ocean.

The AMSA, led by Canada, Finland and the United States, reached out to a broad community, including the global maritime community consisting of shipping companies, ship designers, shipbuilders, ship classification societies, marine insurers,

non-commercial partnerships and shipping associations. With the support of the Permanent Participants (indigenous organizations) of the Arctic Council, town hall meetings were held in selected Arctic communities in Canada, Iceland, Norway and the United States to listen to issues and concerns about future Arctic marine activity. The AMSA Team is directly linked with experts of Protection of Arctic Marine Environment (PAME) for Marine Environmental Protection issues. Two additional Arctic Council working groups were also consulted:

- The Emergency Prevention, Preparedness and Response (EPPR) working group on spill response and marine infrastructure requirements; and
- The Sustainable Development Working Group (SDWG) on issues related to the Human Dimension.

Some Interesting and Notable Points

The Arctic Ocean is the least sampled of the world's oceans and many areas remain where few, if any, soundings have been recorded.

While Arctic navigation depends on other factors besides sea ice including economics, infrastructure, bathymetry, and weather, these projections are useful for strategic planning by governments, regulatory agencies, and the global maritime industry to assess spatial and temporal ranges of potential Arctic marine operations in the coming decades.

Maritime Navigation within and through Arctic Ocean passage would be an extremely interesting scenario where the traditional global maritime trade routes will be challenged for their viability, and, economy of various countries may have to go through lots of challenges.

The relevant technologies, innovation in maritime education and training (MET) for the future ships, seafarers and other stakeholders need to be evolved timely to address the challenges and reap the benefits of great opportunities in coming years, decades and centuries.



Navigation: Construing & Complying, What is the Root Cause?

By

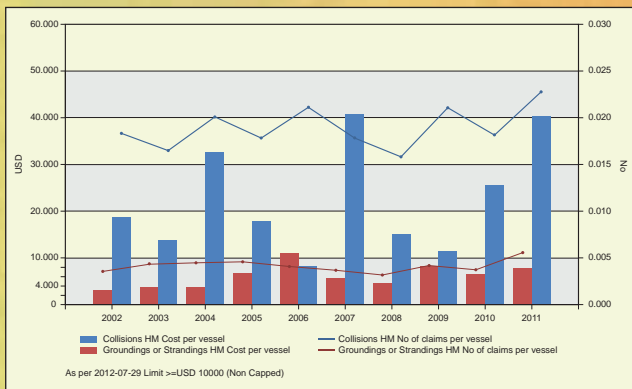
Capt. Yashwant Chhabra

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Associate Fellow of the Nautical Institute, and working as:
Manager – Training Standards, Anglo-Eastern Ship Management Ltd.



Every week you are sure to hear of yet another maritime collision or a grounding (stranding) which constitute the lion's share of the total statistics, the sad part is that the recent years have seen a rising trend on both counts. Statistics from The Swedish Club show this trend quite clearly:

Collisions and Groundings or Strandings



The Swedish Club report of 2011 states that of all claims over USD 10'000 in the last 10 years, collisions were 24%, contact damages 7% and groundings (stranding) 23%, that is 54% on navigational failures. Loss from each, a few million dollars.

In September 1992 in an article published in Seaways, Capt. Roger Syms proved, basis his surveys, that it is not lack of knowledge but improper interpretation or understanding of the rules and their application, I have taken the same cue in my work on the subject since January 1995 when I first read the article and saw the quiz used for this survey, in which I also answered several restricted visibility situations incorrectly, and I was the instructor for the 1st BTM course at Wallem Maritime Training Centre, Mumbai, then.

The STCW standards should have ensured absolute competency the construing and compliance elements, analysis proves most navigational incidents are not due to machinery failures but are usually blamed on the human element, the question is, is it lack of competency and/or it's proper application – a debatable subject. Standard P&I Club in its special report of 2012 states, **“it is strongly suspected that the role of the authorities in controlling the quality of navigational training/assessments is failing. The perceived navigational competence of seafarers is doubtful.”** And continues, **“Not fully understanding and complying with COLREGS is possibly a major cause of collisions. Though, all OOW's have indeed got a proper certificate of competency. However, evidence from many navigational incidents, suggests that many OOW's, including masters, appear to have a lack of understanding of or a disregard of the COLREGS”.** (International Regulations for Preventing Collisions at Sea, the convention of 1972, last amended in December 2009).

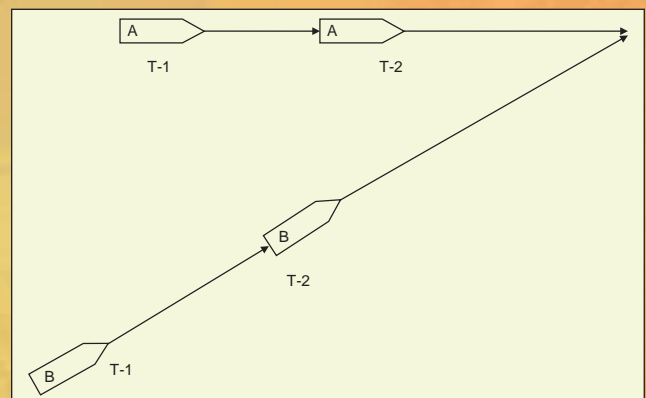
My own work on the subjects tends to prove what Standard P & I Club has stated, from improper education to substandard assessments, it is a vicious cycle of deteriorating navigational standards worldwide, leave alone over dependence on

automation where many a times an OOW does not even know the tolerance limits and limitations of equipment they blindly trust, or simply fail in, **“at all times maintain a proper look-out by sight and hearing”**. For COLREGS, the rules are committed to memory and reproduced verbatim, a major effort goes into learning and analyzing light and shapes, but in this process, the **‘construing’** element, so stated in Rule 2 is generally lost. That STCW Code A Section VIII/2 governs watchkeeping is unknown to the vast majority of navigators. And if **‘construing’** fails, then no amount of resource or other management techniques can guarantee **‘complying’**.

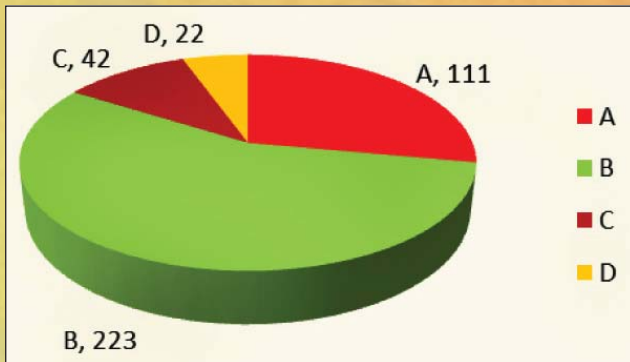
On preventing collisions, here is one example of a situation and the results obtained from surveys covering almost 400 certified navigators across the world from public workshops in the last 2 years.

Two power-driven vessels 'A' & 'B' are approaching each other as shown further involving risk of collision in good visibility, 'A' is steering East (090°). T-1 indicates the time and position when they first sight each at long range. At T-2 the range is about 8 miles, the compass bearing between them has remained steady as 194° - 014°. Both vessels are moving at full sea speed considered safe in the prevailing circumstances. Which of the following best describes the situation and the expected best action to avoid collision to be executed as the range reduces, assuming ample sea room and no other vessels in the near vicinity? (See diagram further below)

- 'B' is overtaking 'A' and thus 'B' is obliged to keep clear, 'A' to keep her course and speed;
- This is a crossing situation, 'B' to keep her course and speed as a stand-on vessel, 'A' is the 'give-way vessel'. 'A' should preferably make a large alteration of her course to starboard, initially to about 197° and keep slowly returning to port to her course but always aiming to finally pass well clear astern of 'B' such that 'B' can see only her red sidelight sector or her port side. Instead vessel 'A' may even alter by a large amount to port or may even reduce speed by stopping or reversing her means of propulsion, always complying with the applicable manoeuvring sound signals stated in Rule 34-a;
- Using Rule 2, 'special circumstances' and/or 'ordinary practice of seamen', both 'A' & 'B' to take action to keep clear of each other;
- Both vessel's to identify each other by AIS, communicate by VHF and then decide/execute the best actions between them.



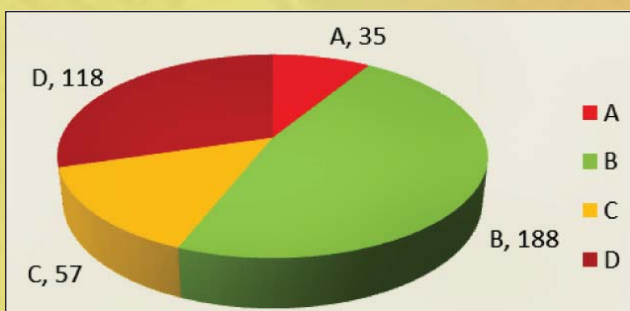
The results obtained have been as follows, of the 398 answers, 223 got the correct choice 'B', or 56%, but 44% were incorrect with 111 or 28% analyzing this as option 'A' or overtaking, options 'C' and 'D' are actually both absurd but have been chosen by 42 and 22 respectively, or 16%, these officers sail the ships.



In changing the situation and the options to restricted visibility:

As in the previous question, these two power-driven vessels 'A' & 'B' are approaching each other involving risk of collision but in restricted visibility and are not in sight of one another. They are at safe speed, engines ready for immediate manoeuvring (stand-by) and sound signals in restricted visibility prescribed in Rule 35 being complied with. Proper look-out is being maintained, the observations are being done by radar and all other available means. Which of the following best describes the situation and the expected best action to avoid collision as the range reduces assuming ample sea room and no other vessels in the near vicinity?

- 'B' is overtaking 'A' as is approaching from abaft the beam of 'A' and thus obliged to keep clear. 'B' should take early and substantial action to keep well clear, this being done then 'A' may continue to keep her course and speed as a 'stand-on vessel'.
- 'A' should alter her course to Port as 'B' is abaft her beam. 'B' should alter her course to Starboard as 'A' is forward of her beam and 'A' is not being overtaken by 'B'.
- This is a crossing situation, 'B' to keep her course and speed, 'A' is to give-way. 'A' should preferably make a large alteration of her course to starboard, initially to over 197° and keep slowly returning to her course but always aiming to finally pass well clear astern of 'B'. In view of restricted visibility it should be preferable that she alters to port and take a full circle around or may even reduce speed by stopping or reversing her means of propulsion, manoeuvring sound signals prescribed in Rule 34 are not applicable in restricted visibility.
- 'B' would eventually hear the fog signal of 'A' from a direction forward of her beam; she shall reduce her speed to the minimum at which she can be kept on her course. She may even take all her way off and navigate with extreme caution till 'A' is finally past clear.



The results are now more shocking, only 188 or 47% getting it correct, the option 'B'. But a whopping 53% answer this incorrectly, 35 or 9% calling this overtaking (Rule 13), 57 or

14% applying the crossing (Rule 15) and 118 or 30% applying paragraph 'e' of the restricted visibility Rule 19 even at the range of 8 miles when the maximum range of sound signals is between 0.5 to 2 miles with 90% probability in the forward axis in still air and in total disregard of paragraph 'd' of being able to prevent collisions at long range by the use of radar. It is another matter that statistics of collisions in restricted visibility is not so bad, it is perhaps because of higher alertness levels. (Note, rules 13 & 15 apply only to vessels in sight of one another and are not applicable in restricted visibility where the 1st condition of application of Rule 19 is **'vessels not in sight of one another'**.)

The surveys reveal that just 63% are aware that STCW convention sections VIII/2 govern navigational watchkeeping. However, only 46% say that COLREGS is a convention of 1972, 11% say COLREGS is just a guidance which is alarming and the balance 43% are confused – they say it is mandatory but by virtue of it being part of SOLAS or the STCW conventions, both incorrect.

That claims of navigational accidents are creating major losses it is natural for them to become a matter of concern, the number of posters and news letters from many P&I Clubs on the subject including addressing these in their safety seminars shows the desire for quick reversals.

While not wishing to criticize, I have been left wondering how posters, which sometimes just quote the rule with a joke or a satire, or another guide, will achieve the desired results when the basic concepts are so strongly misaligned. I do not wish to make an abrupt conclusion but the many surveys of Capt. Roger Syms and my own work prove that the education and assessment systems do need substantial changes to enable improve the navigational standards, because it is on this weakest link that the overall safety rests. Navigators need to study STCW sections VIII/2 from inception to enable proper practical application. The layout and application of the Rules needs better explanations, the emphasis must shift from proving the knowledge element by quoting the text to be able to explain their meaning and practical application linked with basic ship handling knowledge of turning circles and stopping distances. The priority given in recognizing lights and shapes must shift to be able to analyse the situations, apply the correct rules and compliance with the requirements of Rule 8 to ensure **'passing at a safe distance'** and **'the effectiveness of the action shall be carefully checked until the other vessel is finally past and clear'**. The laws more than cover all managerial aspects of safe navigation, STCW A-VIII/2 in paragraph 10 states **'the officers of the navigational watch are responsible for navigating the ship safely during their periods of duty, when they will be particularly concerned with avoiding collision and stranding.'** The term **'close-quarters situation'** first used in Rule 8(c) is amongst the least understood of the many terms in the Rules as is **'her own starboard side'** from Rule 15 or even the definition of **'risk'** to quote a few.

To conclude, as per the ISM Code, **"the Safety management objectives of the Company should, assess all identified risks to its ships, personnel and the environment and establish appropriate safeguards"** (ISM 1.2.2.2) while the **"objectives of the code"** itself is to **"ensure safety at sea"** (ISM 1.2.1). As such, any navigational accident may be attributed to non-fulfillment of the basic requirements of the ISM Code. On the other hand the preamble of the ISM itself states, **"The cornerstone of good safety management is commitment from the top. In matters of safety and pollution prevention it is the commitment, competence, attitudes and motivation of individuals at all levels that determines the end result."** While competence is one element always in the limelight and is indeed very important, but the other three are also very critical too.

Combining Non-Technical Skills Training with Real Employee Engagement

The most productive thing you will ever do for your business

By **Capt John Wright**, Managing Director, WrightWay Training Limited

In this article I will explain the most effective way of delivering non-technical skills (Crew Resource Management) training and how to use and build on these essential skills to achieve real, lasting and cost effective employee engagement.

Crew Resource Management training is essential for any team wishing to function at its optimum. Designed to improve team performance, human factors training sets out to change individual and team behaviours by enhancing individual leadership, management, communication and team skills. It examines the crucial role people play in high-stress, high-risk environments and encompasses team training, simulation and interactive group discussions. It educates teams about the limitations of human performance and develops an understanding of cognitive errors, and how stressors such as fatigue, emergencies and work overload, contribute to the occurrence of errors. Compulsory for all aviators since 1989 and used in medicine and the nuclear industry, the course requires participants to assess self and peer behaviour through case studies and experiential learning. Emphasis is placed on integrating the concepts into daily work routines, in order to minimise the influences of human factors in causing accidents.

Compulsory Resource Management training, known as Human Element Leadership & Management (HELM) training by the Maritime & Coastguard Agency in the UK, was introduced in the marine industry in response to the obligations contained within the 2010 Manila amendments to the Standards of Training, Certification and Watchkeeping (STCW) Convention and Code. The revisions to the STCW, which came into force in January 2013, included a significant shift in placing leadership and management training in the 'essential' rather than 'desirable' category.

For greatest effect and to validate the training, the skills learned should be 'coached in' by trained employees, who would visit offices and vessels to monitor, support and advise on the newly acquired behaviours, ensuring they are being put into practice and delivering where they count most, at the front lines of the operation.

These vital skills are exactly those needed in the process of achieving effective workforce engagement: So when this essential training is conducted as part of a wider company employee engagement process, led from the standpoint of putting the health, safety and welfare of employees as the genuine first priority, it can return 3 to 1 on investment through greater efficiency, reduction of injuries and damage, through building a more content, motivated and productive workforce.

As is well known, **successfully** engaging a workforce yields huge rewards in **everything** a company does. The proof of this, if proof was needed, is contained in the findings of the 2009 McLeod report to the UK Government entitled "Engaging in Success". Amongst the report's many evidence based findings were that those UK business units with the top quartile scores in workforce engagement had 27% higher profitability, 13.7% improvement in net income growth, 19.2% improvement in operating income, 2.6 times higher growth rates and 3.5 less sickness days per employee per year than the business units in the bottom quartile. 86% of engaged employees said they often felt happy at work, against 11% of the disengaged and it showed that employee engagement could make the difference



between business survival and extinction. The latest research from the 'Engaging for Success' team published this year showed that in the UK, 7 out of 10 employees are neutral about, or do not trust, their bosses and 39% of disengaged employees suffer with stress and eventually resign as a consequence. We have seen no evidence to demonstrate that things are any different in other countries. However, what McLeod did not provide was the 'how to fix it' part and that is what I'm writing about here today.

The 'how to do' part is achieved by drawing on the experiences and insights of the entire workforce and allowing them to identify the challenges they face and their methods of how to fix them – and they always know! They will then identify how to simplify, improve and make workplaces healthier, safer and more efficient places and the key to success is the workforce owning their own ideas and implementing them **for themselves**, with the **help** and **support** of their managers and supervisors, rather than by using the directive command and control method. Herein lies the greatest challenge and where the non-technical skills resource management training comes into its own.

By combining these two things as described, one company avoided \$7.5million in direct health & safety related costs and a further \$30 million in operational costs over 5 years. Another turned a £5 million bottom line profit into £100 million over 7 years. The construction of a major airport terminal came in on budget and on time with significantly reduced accidents, and another even bigger capital project came in under budget and ahead of schedule with significantly reduced injuries!

I have personally believed in the need for effective teamwork on the bridge, in the engine room, on the ship and in the whole organisation, since I was a 17 year-old deck cadet – a very long time ago! So to see Human Factors and Leadership & Management training finally becoming part of ship's officer's Certificates of Competency and to see the successes derived from real workforce involvement and genuine end user ownership is very satisfying but there is so much more to do.

So my message here today is that you can advance the oil & gas industry's safety performance still further through effective non-technical resource management training and by creating a culture of shared ownership and accountability. This results in greater profits, reduced injuries, a safer and healthier working environment and a happier and more productive workforce. Not only can it be achieved, but also its pursuit will result in it being the most productive thing a company will ever do for its business. Is it easy? Certainly not, change never is: It involves changing the collective attitudes, beliefs and values of the organization and that is a five to ten year 'journey'.

Background for GlobalMET

On the 13th of June 2013 WrightWay was awarded the prestigious IHS Safety at Sea prize in the training category at a dinner on HMS Belfast in London. It was a pleasure for me (John Wright) to accept the prize on behalf of the many people who have gone



home in one piece to their loved ones who may not have done because of the process described in this article and that is an award that money really can't buy!

WrightWay was the first independent British company to receive accreditation for its HELM training at management level from the United Kingdom Maritime & Coastguard Agency (MCA) in November 2012. The successful accreditation was the culmination of many years of lobbying by WrightWay and others to achieve recognition of the importance of human factors training in ensuring seafarers live and work in a safer environment. The HELM management level course was adapted from WrightWay's

own existing Crew Resource Management (CRM) training course, which it had been delivering for over 15 years.

Prior to the implementation of HELM, and since 1996, WrightWay delivered crew resource management training for many major shipping companies including P&O Cruises, Princess Cruises, Star Cruises, Maersk, Caledonian MacBrayne Ferries, BC Ferries, Canadian Steamship Line, Pacific Nuclear Transport Limited, P&O Ferries, Stena Ferries, Irish Ferries, as well as many companies managed by the biggest ship management company in the world - V.Ships.

This training was so successful in P&O Princess's case that it led them to construct the now highly respected CSMART Marine Simulator Centre in Holland and take an industry lead in this important area of personal development and placing this training into mainstream thinking.

Our 'Securing the Future - The Way Forward' workforce engagement process was invented by my great friend Ken Woodward, who was tragically blinded in an industrial accident in Coca Cola in 1990 and whom was awarded an OBE from Her Majesty the Queen in 2006 for his services to health & safety, of which this idea was a major part. Using these methods, Ken steered the main building contractors of Heathrow Terminal 5 and the London Olympics projects to achieve huge efficiencies and reduced numbers of injuries.

With Ken's help and support, I delivered this process to Total Oil E&P, Conoco Phillips on Teesside and to BHP Billiton Liverpool Bay, between 2004 and 2006. In the marine industry our most notable successes have been with BC Ferries, V.Ships and Canadian Steamship Line (CSL) who have all recognised the power of real and effective workforce involvement and empowerment and the need for non-technical Human Element Leadership & Management (HELM) training. This combination, together with the further introduction of trained coaches tasked with coaching the HELM behaviours in on the ships, represents in our opinion, industry best practice.

Burnt Exhaust Valve on Generator Engine

Mahendra Singh



We should periodically check the peak pressures on generators because if we don't do it and the exhaust valve gets damaged then the exhaust pipe of the concerned cylinder will get red hot. We shall then have to stop and replace the burnt valve which will involve lot of work and may be at wrong time when we are preparing to sail out.

These days generators are using 380Cst fuel and it is very important to keep fuel temperature correct (130-135DegC) to achieve 13-15 Cst Viscosity at the injector.

Good maintenance of turbochargers for supply of enough scavenge air is important as also correctly spraying fuel injectors. Keeping essential spares is also important because recently we had to stop one generator for above reason and move out on two generators, out of which, on one generator the attached CW pump shaft seal leaking abnormally and we had no spare. One exhaust bellow, 2-3 injector nozzles, 2-3 fuel high pressure pipes, one small black colored

motor that sits on top of the generator governor are some of the important spares we should have.

Talking of spares, we should take good care of FW Gen; condensate pump motor because if it is damaged, nothing fits here.



Trust, Integrity, Professionalism and Understanding

The Main Ingredients in a Successful Bridge Team

By
Captain M.H.Hamzah

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We all make mistakes – a lot of them. That is a fact of life! Thank God that mistakes made during my sailing career did not end in a tragedy! Until today, I find it safer to make mistakes in the classroom rather than at sea. Many claim that the sea is unforgiving, perhaps that is the reason why I spent most of my career ashore rather than at sea. Safety first!

Generally there are 2 main types of mistakes, the head and the heart.

The mistakes of the head are:

- Providing wrong information due to lack of focus, inattention or carelessness
- Incorrect recognition of the situation
- Know-it- all attitude
- Application of wrong solutions
- Lack of knowledge
- Wrong perception.

Training is the remedy to overcome mistakes of the head. International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, addresses the first type of mistakes only!

Even Port State Control (PSC), vetting, audits and other form of inspections deal with the first type of mistakes.

It is difficult to recover from the second type of mistakes – the heart. Mistakes here include:

- Misleading information
- Unwillingness to share workload
- Indifferent attitude
- Dishonesty
- Favourable treatment
- Racial bias
- Sabotage.

The Dynamic of the 4Hs (Heart, Head, Hands and Habits)

What is the value of the affective domain in STCW? The Code focuses only on cognitive and psychomotor skills. It is all about intellect and the use of the hands. How about affective domain? Why, is it not clearly defined?

The affective domain however includes factors such as student motivation, attitudes, perceptions and values. It is a basis for commitment and dedication.

How do we measure seafarers' competencies in this domain? What role does the Maritime Education and Training (MET) play in inculcating these?

In education, affective domain plays an important role similar with cognitive and psychomotor skills. It needs to be nurtured and developed. Affective domain is the building block to "habit" or behaviours. It is then imbedded into values. People make decisions based on their values.

Are we successful in developing the right behaviours amongst our seafarers? What habits (if any) are picked-up in MET?

Technology and practices changes over time but values and principles will remain forever. It is thus importance to spend more time in instilling and inculcating the right mind-set rather than focusing only on the intellect and psycho-motor aspects. Seafarers' competencies should also include the "soft skills" and it must be assessed.

The recent inclusion of Bridge Resource Management (BRM) training in the competency tables is a step in the right direction but it needs to be treated as one of the competencies (in column 1) rather than just an element under column 2 (knowledge, understanding and proficiency) of the STCW tables.

How about application of leadership and team-working skills? Does it dealing with affective domain?

The Past Experience

As a shipmaster, I have always asked office to send "my team" to the ship. It is easier to sail with people whom you know. It is much more effective. It takes less time to settle down. You know already their habits! I'll not leave the bridge until I know whom I'm dealing with.

I was fortunate to serve with the same company from cadetship until command level. I enjoyed the close working relationships with shore-management.

I always admired people who go to sea to earn a living. Not many can live and work in a confined environment, 24/7. Being a shipmaster is not so much about being a manager; it is more like being a coach. At least that's how I viewed myself!

A Successful Bridge Team

It is not only about having a great procedure, it is all about people! It is about understanding their needs. A leader needs to allow some leeway in managing the tasks at hands. We are living in a global village, the bridge is no different. Every day is a new day. Passed mistakes should not blind us from acting professionally. Trust and integrity should be the order of the day!

A successful team is one that seeks greater understanding and values each other's contribution towards a safe voyage.

We all make mistakes. Do not worry about the past and learn to accept each other's capabilities and limitations.

In conclusion, I believe trust, integrity, professionalism and understanding are the main ingredients in a successful bridge team. We should focus more on building trust among team members. MET is the place to create a culture of integrity and professional.

We should all walk the extra mile to create a better understanding between ship and shore personnel. It is about personal touch that comes from the heart! We need to see things from the other side's perspective. It is about collaboration and not competition.

We have enough rules to govern the safety and security of ships. Recently the so called "fourth pillar" was introduced to the shipping industry. Maritime Labour Convention 2006 (MLC 2006) provides a set of comprehensive rights and protection at work for seafarers. Hopefully MLC 2006 will promote a lively environment for people to work, live and play at sea.

It will be great if in the next revision of STCW, soft skills are given due recognition. We need to add an additional column to the competencies table to include the affective domain i.e. column 5 in the function tables!

References

- Resource management and leadership & teamwork training by Swedish Club (2011)
- STCW,IMO (2011)
- The human element by MCA (2010)
- The language of emotional intelligence by Jeanne Segal (2008)
- Head mistakes or heart mistakes by Zig Ziglar



**"Thank you for a very informative newsletter, which we always enjoy reading.
However, there is an error in Newsletter 25 on the last page."**

Capt Colin Johnsen, Head, Department of Maritime Studies, Durban University of Technology.

The bulker KIANI SATU went aground near Knysna on the southern coast of South Africa. Another bulker SMART (pictured) went aground near the entrance to Richards Bay in mid August.



Courtesy of Ports and Ships News (www.ports.co.za)



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