

Performance, Outcomes and Results
The MET Network with NGO Observer Status at IMO

GlobalMET

NEWSLETTER



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.

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BoD Meets in Hong Kong

Six directors participated in the very good meeting in Hong Kong on 8 April. Capt Chawla of Anglo-Eastern Univan provided the venue but, on the day of the meeting, he was in New Delhi. He was able to actively participate through online communication and a large screen. Apologies were received from three directors: VAdm Eduardo Santos, Dr Swapan Das Sarma, Capt Mohd Salleh.

It was Capt Tim Wilson's last meeting as Chairman of the Board after seven and half years in the role. He will continue as a director. We owe him heartfelt thanks for his conscientious care of the network and, particularly, for travelling to the IMO meetings to represent GlobalMET. Capt Pradeep Chawla is now the Chairman.

The meeting focussed on the future of GlobalMET and the actions to take. It was agreed that GlobalMET should concentrate on building sources of income and membership by, for example:

- ✦ providing improved teacher training across the industry;
- ✦ the provision of best practice online material for teachers;
- ✦ a peer review of research, creating an online journal with a fee for peer reviews and a scheme for free publication of papers;
- ✦ being involved in developing the Proficiency and Learning Systems scheme;

- ✦ getting a rightful seat at industry meetings, particularly in training on safety issues;
- ✦ creating a Special (Student) Membership category at low cost to the members;
- ✦ producing a list of MET networks throughout the world;
- ✦ surveying members as to needs and expectations for GlobalMET;
- ✦ organising a conference in Shenzhen, conveniently before or after the AGM, BoD and the Crew Connect Conference in Manila in November;
- ✦ organising in conjunction with the Nautical Institute a seminar immediately before or after the Conference in Manila in November;
- ✦ redesigning the website.

Along with other activities, there is a lot to do, but we will.

It was agreed that Dr Chris Haughton would represent GlobalMET at the IAMI AGM on 5-6 May, to indicate a strong willingness to collaborate.

The Executive Secretary is to attend the Maritime India Summit 2016 Conference in Mumbai on 13-15 April.

By **Rod Short**
Executive Secretary



Back row: Prof Takahiro Takimoto, Mr David Fredrick, Capt Pradeep Chawla, Capt Sriram Rajagopal, Dr Peter Whitley
Front row: Capt Richard Teo, Capt Tim Wilson, Mr Rod Short, Capt Himanshu Chopra



Train, Train, ReTrain, ReTrain!

20

GLORIOUS YEARS

Building GlobalMET



This year, GlobalMET will have been in existence for 20 years. It was formed at Hong Kong Polytechnic University in September 1996.

This was an initiative taken while I was Principal of the Australian Maritime College, with access to the AUD 250,000 provided by the Australian Federal Government in 1991 for the export of Australian maritime education and training throughout the Asia Pacific Region.

It began in 1991 at a meeting of Heads of Maritime Training Institutions at Dalian Maritime University. Three subsequent meetings were held: in the Suva Maritime Training School in 1993, in the Far Eastern State Maritime Academy in Vladivostok in 1994 and in the New Zealand Maritime School in 1995.

At the latter it was decided to formally meet at the Hong Kong Polytechnic in September 1996 to establish the Association of Maritime Education and Training in Asia Pacific, as a company limited by guarantee in Australia, located at the Australian Maritime College, where it is still based.

Upon leaving the Australian Maritime College at the end of 1995 and reaching the age of 60, I was appointed Executive Secretary. An international Board of Directors was established, with Swapan Das Sarma, a current Director, then Head of the Singapore Maritime Academy, as the first Chairman of the Board. Core Competency Marine in New Delhi was engaged to provide secretarial services and still do.

The network grew rapidly to slightly in excess of 120 members in 33 countries and, as the global influence increased, the name was changed to the more suitable Global Maritime Education and Training Association, with the registered company being GlobalMET Limited. We provided developmental advice, we organised seminars and conferences in member academies, we provided training workshops, we provided expert assistance and generally endeavoured to strengthen our members. Liaison with the Asia Development Bank is ongoing.

The nine member Board met twice each year and the venue was varied. A General Memo has been issued at approximately

weekly intervals and a monthly Newsletter was started. GlobalMET has received funding from IMO to run workshops on teaching in Singapore, the Philippines and China. Recently it received the funds from the TK Fund for three state-of-the-art competency based education, training and assessment (CBETA) workshops among maritime teachers in the Philippines.

In 2009, after two years of lobbying (to be present at IMO I was an Adviser to the Hong Kong Delegation and an Adviser to the International Federation of Ship Masters' Associations) the network was approved as an NGO member of IMO with Consultative Status. We have since attended every meeting of the HTW - Sub-Committee on Human Element, Training and Watchkeeping (formerly STW), where we have been active in promoting the interests of maritime education and training and continue to do so.

GlobalMET is well positioned to continue assisting its members develop their subjects in line with the needs of the industry and of the people it employs. It will move into the area of providing online learning materials, particularly for seafarers, but also for others involved with the sea. It will assist the teachers and the students. It will continue to grow and will embark on more revenue generating activities. It will become more significant as it adapts to changes in the shipping industry.

At the Board meeting in Hong Kong last week it was agreed that I would retire on 30 June and that Capt Richard Teo, a Director, would take over until a permanent replacement is engaged. It has been quite a role for 20 years, but it is now time for this 80 year old to gradually begin to fade out.

It has been an honour and a pleasure to serve as Executive Secretary. I wish to express heartfelt thanks to the many people, including Directors and Advisors and academic leaders and faculty past and present, together with the Secretariat, who have assisted with the development and running of the organisation. It has been a pleasure to work with you.

By **Rod Short**
Executive Secretary



Continued from previous issue

What is competency-based training and assessment?

Competency-based training is an adult learning methodology based on the action-reflective-learning (ARL) approach where emphasis is placed on what a learner “can do well and effectively” or praxis in the workplace as a result of their development and training. It is double-loop learning as against traditional single-loop learning.

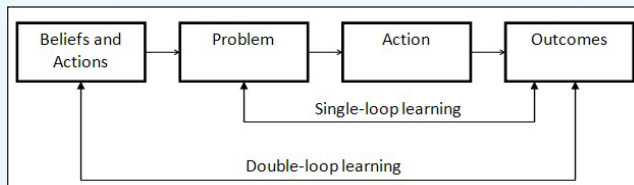


Figure 4 - Double-loop learning (Source: Eberle & Childress 2005)

Learners who have successfully achieved or attained the relevant standard competence or competences will have the skills, knowledge and attitude they need to complete workplace activities in a range of different conditions, situations and environments, to that industry standard of performance that is expected and desired in the workplace. It cannot be attained from a class room, college based environment without special resources.

Competency-based training is based on demonstrable performance standards that should have been set by industry. An example is the STCW convention 1978 as amended (2010 currently). This is the minimum. Some maritime nations have gone ahead to produce their own national standards to match and or surpass the STCW convention. These nations have also progressed ahead in their applications of competency based learning and outcomes based education to ensure that officers serving on board ships are fully competent to perform safely and correctly each time, every time, all the time at the work place. This is the “Praxis” or common user Quality Standard for every skilful worker and the organisation that employs them. These nations have produced Training Packages that embed the national qualifications framework with the learning and assessment strategies of the competences within the standards.

Competency-based training and its delivery allows for flexible entry and exit for learners enabling them to complete their learning and doing much quicker. Once they have achieved competency in one accepted competency by the standard assessment tools, they can then move onto the next competency. Holistic delivery can put a person through cluster or skill sets (two or more competences) effectively where applicable.

Training can take place both on (on-site) and off-the-job (off-site) using a variety of delivery modes, learning and methods. Learning Management Systems are improving regularly at a very quick rate, e.g. ELearning, media-learning, MOOCS, MOODLS, TIN CAN API and so on.

Competency-based assessment materials are designed to ensure that each learner has achieved all the outcomes (knowledge, skills and attitude) required by each described and agreed competency.

Proficiency

It is imperative that we distinguish competence as the product of continuing proficiency. Within the context of the STCW, the term “proficiency” appears in the standards of competence for each level of qualifications. Without going into the various academic debates and arguments as to which comes first and so on, it is prudent for our maritime context to accept that competence is a product of continuing proficiency, which itself must be a continuing and sustainable learning process after mastery. It is the life-long learning aspect of a mariner’s productive work life. In most cases if the life-long learning ceases, the mariner also ceases to be productive, due to invalidity and non-currency of trade and professional skills caused by lack of continuing professional development.

Human Centred Learning Approaches to Attaining Competence

There is considerable noise and shouting across the shipping industry corridors about the importance of human centred competences. Yet this situation has been on the books since the 1995 amendments.

The fact that is most ignored, is that competences are all about humans at work and hence competency based or outcomes based approach, an adult learning methodology is and has always been human centred. Hence training and development must be learner centred and outcomes based, particularly when all mariners are adults, even the youngest cadet on board. Adult learners are able to self-conceptualise, self-manage, self-direct, and self-determine their learning. Each adult learner usually is self-aware of their learning styles and capabilities and limitations. If not the teacher, trainer, lecturer, instructor (i.e. the facilitator) is duty bound to ensure the learner(s) realise these attributes and become self-aware of themselves, in particular their learning capabilities.

The teacher in today’s best practice is required to facilitate the learners’ learning ability, i.e. to learn effectively, guide, mentor, coach, provide and manage the best conducive learning spaces and environments. He or she must ensure that the transfer of the agreed knowledge, skills and attitude that makes up the competence(s) are fulfilled effectively by the learning strategies (delivery). These learning strategies must include assessment strategies, supported by well-designed assessment tools and methods with appropriate and rigorous rubrics. These rubrics, qualitative and quantitative must measure the performance sufficiently in accordance with the performance criteria for the respective competences. The critical evidence produced by the assessee/learner must meet the specified role of evidence conducted in accordance with the rules of assessment. All assessments must be verified and validated by another similarly qualified assessor or panel of assessors.

What has been mistaken by and large is that MET had not taken on board competency based learning seriously enough even after it became mandatory in the STCW 1995 amendments. This, despite many reminders from the Secretary General of IMO and other senior staff members. Many MET practitioners continued to stand in front of a classroom, didactically deliver lectures that were subject based. Students then without fail, committed huge chunks of information to memory (rote) and regurgitated as much as could be remembered at lengthy examinations. They were then graded to a minimum pass mark and deemed competent once the orals (viva voce) were completed. These orals were again memory tests with some theoretical explanations of how to manoeuvre ships at sea, spattered with some regulatory information. Little or no demonstrations of knowledge, skills and attitudes were assessed adequately or sufficiently. None of these followed the rules of assessment and the rules of evidence, and were often unfair, inflexible, un-authenticated and likely non-current praxis. The unfairness was compounded by un-validated tests or assessments.

Ship operators and well experienced fleet managers are calling for human factor competencies that include soft skills and practitioner skills. These are already embedded in the dimensions of competence but not addressed or assessed in traditional, non-competency based courses and inappropriate knowledge based examinations that many MET institutions practice.

To explain further, the dimensions of competence are as illustrated below.

Task skills

Task skills focus on being able to perform the task at an acceptable level to the organisation or industry.

Task management skills

Task management skills refer to the ability to manage a number of different tasks that form part of the job.

This involves being able to integrate a number of different tasks to achieve a complete work outcome.

Job role/environment skills

Job role/environment skills refer to the need to fulfil the requirements and expectations of the organisation.

Contingency management skills

Contingency management skills refer to the ability to respond appropriately when things go wrong or if the equipment breaks down, alternative strategies need to be employed.

Transfer skills

Which means having the capacity to transfer skills and knowledge to other contexts.

Accompanying skills

Applying leadership and management skills to the Economic & Commercial applications - performing to ensure productivity to the constraints of budgets and margins.

Assessing Competence

Competency standards define the requirements for effective workplace performance in a discrete area of work, work function, activity or process. They are used as the basis for defining learning outcomes and assessment benchmarks within the Professional, Vocational Education and Training (VET) and maritime sector.

Assessments must not be confused with evaluation. Unfortunately in the STCW, these two terms appear in the context of assessments, as though it meant the same thing. It is imperative that as facilitator we clearly differentiate both activities in the determination of competency standards.

The figure below explains the difference effectively.

	Dimension of Difference	Assessment	Evaluation – Exams?
1	<u>Content</u> : timing, primary purpose	<u>Criterion referenced</u> -Performance criteria to outcomes (standard) <u>Formative</u> : ongoing to improve learning, close gaps and attain competence	<u>Summative</u> : final to gauge quality
2	<u>Orientation</u> : focus of measurement - rubrics	<u>Process-oriented outcome based</u> : how learning/goals attained through ongoing activities, evidence based to check outcomes achieved	<u>Product-oriented</u> : what's been learned (objective – subject knowledge based) at end of programme
3	<u>Findings</u> : uses thereof, outcomes to standards or goals	<u>Diagnostic judgement</u> : identify areas of improvement. Evidence based and collected to make final judgment <u>A result</u> : competent/not yet competent Feedback to learner	<u>Judgemental without evidence</u> : score and grade on minimum pass mark. Not acceptable in OBE/CBETA

Figure 5 - Dimensions of assessment and evaluation

Competency standards

Competency standards are expressed in outcome terms. They specify knowledge, skill, work attitudes, and the application of that knowledge, skill and attitudes, to the standards of performance required in the workplace.

Competency standards have a set format defined formally by Industry and regulatory bodies. They are also referred to as units, units of competency, competencies, and competency specifications (KPI). It is important to differentiate from the term proficiency.

When assessing competence, it is important that each jurisdiction have published their national qualifications framework that aligns to the STCW 1978 (as amended) convention. Each level of marine qualifications must show what the competences are that finally make up the respective qualification. The STCW code leaves the final determination of attainment to each jurisdiction and their MET institutions. This unfortunately creates gaps and insufficient or inadequate volume of learning that led to inadequate performance criteria to formulate methodology and praxis to ensure that the competences or standards are attained. The rather inadequate argument or excuse has been that there are several models of competency based learning. This is largely untrue and misconstrued as almost all models are outcomes or goal based to standards and when not have shifted their paradigms. Those who still advocate difference really have not clearly understood or wish to practise CBETA-OBE. There are however connotations of increased

cost. These costs have been attributed to resources and resources generation. These resources include:

- ✦ Effective re-education and re-training of teaching staff and regulatory staff to practice competency based learning and outcomes based education
- ✦ Off-site Learning spaces and equipment and its management
- ✦ On-site learning spaces – procurement, management, allocation – logistics etc
- ✦ Learning and teaching materials – paradigm shift
- ✦ Learners’ resources
- ✦ Facilitators’ resources, skills update/upgrade and more attention and detail to management of learning, replacing lectures, reading from text books and simple grading tests
- ✦ Ship operators’ cooperation and willingness.

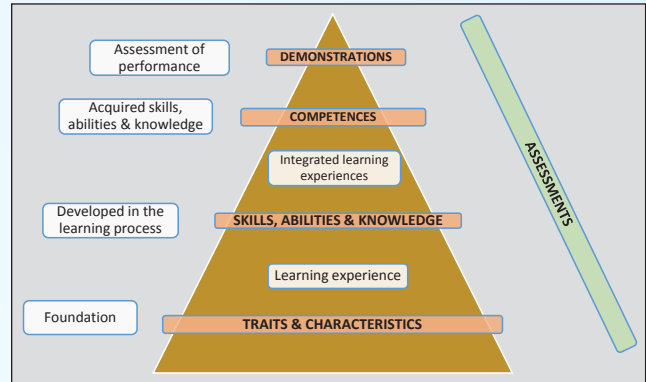


Figure 6 - Competency based approach

Human Factors in Competence Development and Attainment

For human factors in competence development and outcomes, OBE and CBETA embeds Key Competencies (Mayer 1992) and now known as Employability Skills. Each level of marine qualifications have these skills embedded in the various units or standards of competence that make up the qualifications. Examples for Marine Engineer Class 3 and Master Unlimited is tabled below for reference.

Employability skills or core competencies are a constant topic for development of ships’ officers. In 1992, a committee headed by Mayer compiled a list of core competences and called them key competences. Each level of qualifications are supposed to have these key competences embedded in the training curricula. Unless the institution delivered competency based learning, these key competences were not included and hence many graduands were found lacking in soft skills, critical thinking skills, decision making skills, intercultural competence (skills in cross cultural diversity issues in multi-national manning, ports of call, shipping business and organisational practice etc.), effective communications, leadership and management. Also not included were continuing professional development that included keeping abreast of technological advancements in ships’ equipment, management systems and other ongoing changes and commercial practises.

Rapid promotions due to high demand for officers also meant that less experiential learning occurred during his/her career.

Compiled below are two examples of embedded employability skills for Class 3 Marine Engineers and Master Unlimited.

There are eight (8) core skills that must be addressed and embedded in all training programmes. These are:

No.	Core Skills	Effective application - examples
1	Communications	Intercultural context – organisational and human centred activities at work place
2	Leadership, team building & teamwork	Assertive characteristics, build, operate and manage teams and individuals, in situ and elsewhere Initiate change and manage change as an improvement outcome
3	Problem solving	Focus on critical and non-critical issues and resolve them at the work place Manage stress amongst co-workers and self
4	Initiative, enterprise	Recognise, identify emerging opportunities and issues – Develop and oversight work solutions and improvements
5	Planning, developing, organising	Apply efficiency – productivity programmes, cost consciousness and economical outcomes at the workplace
6	Self-management	Apply self-awareness, self-conceptualising, self-directed and self-determination skills at the workplace with co-workers and self
7	Learning and teaching	Develop and improve own competences – transfer to co-workers through coaching, mentoring and facilitating shipboard training programmes in liaison with shore based management
8	Technology and applications	Capability and learning use of new technology fitted and installed and transfer to co-workers as necessary

Employability Skills

The following table contains a summary of the employability skills as identified by the maritime industry for this qualification, **Diploma in Marine Engineering (STCW Certificate of Competence OOW, Engineer Class 3)**. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on packaging options.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	Correctly and accurately complete engineering reports, running sheets and other engineering documentation relevant to the performance of engineering duties Receive, read and clarify as required, messages concerning vessel safety and operations, and correctly interpret and apply to engineering activities Use appropriate techniques when communicating with multilingual crew to ensure communication is effective and messages are clearly understood
Teamwork	Account for personnel involved and equipment used Seek Master's advice when challenges are beyond own scope of technical competence or when input from environmental specialist may be required Use appropriate strategies to foster the trust and confidence of stakeholders
Problem-solving	Identify and implement control measures to mitigate risk Identify difficult situations and negotiate solutions using a collaborative approach Respond to complaints and requests for information from authorities and authorised personnel
Initiative and enterprise	Identify precautions during entry to protect occupants Recognise unusual situations, unexpected risks/hazards and potential/actual environmental incidents Report opportunities and recommendations for improvements
Planning and organising	Identify, collate and process information required to prepare verbal and written reports Monitor the implementation of environmental management plans, policy and procedures, and specified work methods Prepare appropriate plan for completion of work activity in confined space
Self-management	Assess own work outcomes and maintain knowledge of current codes, standards, regulations and industry practices Clarify own scope of authority/responsibility for achieving specific environmental outcomes for the vessel and the roles of other key personnel Impart knowledge and ideas as required through oral, written and visual means
Learning	Develop and provide information and training to ensure all crew members understand their environmental obligations/responsibilities Effectively provide feedback, instruction and training on work performance to engine room crew according to vessel procedures and established engineering practice Monitor effectiveness of the information and training, and provide additional information/training as required
Technology	Use atmospheric detection equipment and interpret the readings Use computer and relevant equipment to enter, access and retrieve engineering information Store records to enable easy access and review by authorised personnel according to regulatory and organisational requirements

(to be continued.....)

By **Capt. Richard Teo**
FNI FCILT MAICD

Executive Secretary

Applications are solicited for a replacement for Rod Short, who has been Executive Secretary since the foundation of GlobalMET and is retiring.

The part-time, position is fully involved in running and developing the network and is responsible to an international Board of Directors. A passion for maritime education and training is essential, with a desire to philanthropically contribute in return for industry commitment. Some international travel is required.

Interested parties are to submit their applications not later than mid-May to
Executive Secretary, GlobalMET Limited, rod.short3@gmail.com

Can a Pious Entrepreneur Compete in Today's Business World?



Cause change and lead; accept change and survive; resist change and die.

RAY NORDA



Photo credit: Vinoth Chandar via Flickr

The Pious Entrepreneur: The Struggle

The struggle between the pursuit of material interest and adherence to **moral values** is the perennial problem of human existence and to put moral precepts into practice constitutes another central issue in business ethics (Tak, S. C., & Ambrose, Y., 2004). Business is all about making profit (at least many believe this premise) and profit equals to revenue minus cost. A pious person is a person who strongly believes in religion and lives in a way that shows this belief. An example of a pious person might be a person who never misses his or her prayers. In this newsletter I would to see how a pious man might fair in business—is it possible and would the outcome be better or worse for all stakeholders?

A Pious Man: The Ethics of Entrepreneurs

The word entrepreneur comes from the French word *entreprendre* which means to undertake; entrepreneurs are individuals who undertake the risk of new ventures. An entrepreneur invests, transforms and makes profit (Richard, 1755). Entrepreneurs are individuals who actually form or lead their own businesses and nurture them for both growth and prosperity. They normally strive to go beyond the normal practice of business formation and they practice good ethics! They normally nurture and expand the business for individual families and societal prosperity. This urge for expansion doesn't stop there, they are always eager to explore more—to question what is normal.

The Pious Man: The Religious Man, God Fearing Man and Businessman

A pious person is a religious and a god fearing person. Normally pious people have the following characteristics which are hard-working, good moral values, respect for people, honesty, trust worthiness, motivated, integrity, normally friendly, cooperative and treats everyone fairly. These are quite interestingly the same prerequisite characters to be an entrepreneur as opposed to the "average businessmen". Although the aforementioned characteristics might not be said of many business leaders today. With that said, the characteristics that an entrepreneur possesses, in the author's humble opinion – a pious person can compete in today's business world!

Additionally, in the author's opinion – to compete in today's business world it is not a matter of being pious or not, but

rather being able to change and keep on improving. We all probably can change, but do we want to change — do the "rewards" outweigh the cons?

The Pious Man: The Story Goes

The following is a story that always keeps reminding me of the present business world. In a famous company before being acquired by a bigger company, the CEO once ended his speech saying this "...we didn't do anything wrong, but somehow, we lost". Upon saying this, all his management team, himself included, teared sadly.

This famous company had been a respectable company. They didn't do anything wrong to their business, however the world around them changed too fast. Their opponents seized the initiative, paradigm shift and eventually became too powerful to compete against. They missed out on the change, the paradigm shift and thus lost the opportunity at hand to make it big. Someone once said, when a paradigm shift comes along, those who do not get on board will be left behind. Not only did they miss the opportunity to earn big money, they lost their chance of survival—to be a continual going concern. The take home message from this story is, if we don't change, we shall be removed from the competition.

The Pious Man: Not Learning is Not Wrong?

It's not wrong if we don't want to learn new things. However if our thoughts and mind set cannot catch up with times, we can be eliminated or "suffer the consequences" of our action or inaction as it were. We have to accept the fact that the advantages we had yesterday, will be replaced by the new trends of tomorrow. We don't have to do anything wrong, as long as your competitors catch the paradigm shift and does things right, we can lose out and fail.

The Pious Man: Change, Improve or Become Irrelevant

To change and improve ourselves is giving us a second chance. To be forced by others to change, is like being discarded. Those who refuse to learn and improve will definitely one day become redundant and not relevant to the industry. They will have to learn the lesson in a hard and expensive way. Remember, a pious man shows devotion to the task—reverence or discipline of action.

The Pious Man: We All Make Choices

From the above story there is nothing stated that pious people can't compete in today's business world. However it is stated that if we don't want to learn new things and thus our thoughts and mind set cannot catch up with times, we can be eliminated from the business competition.

A pious person will always believe in god and normally won't cheat. If he can do something, he will say he can and if he cannot he will say cannot. He will try his very best not to use the sentence like "If I am not mistaken". He will definitely check and re-check before uttering the words, because words have power and cannot be pulled back once spewed. Once your customers start to question your credibility, they will try to find an alternative and possibly do their business elsewhere. So a pious man can always compete in today's business.

A pious entrepreneur normally knows how to control himself or herself and might not be influenced by corruption. Corruption is one of the main problems in business. Milton and Smith (1995) discovered high profile entrepreneurs became folk heroes and one suspects, the most influential business role models for the community. When the bubble finally bursts and the crash comes, it soon becomes clear how corrupt and leaderless the “Country’s” [actual name not disclosed here] system had become. In the wake of corporate collapses, many questions have been raised about the integrity of business and government leaders. This is not a new phenomenon. But can a pious man change all that? When then Catholic President John F Kennedy (JFK) was to become President – many thought that he might be taking orders from the Pope Himself. This turned out not to be true!

The Pious Man: The Conclusion

In conclusion, a successful entrepreneur should have three social motives which are the need for achievement, the need for power and the need for affiliation. A pious person normally will have a high need for achievement and high need for affiliation. However he might not have a high need for power but overall the combination of three motives should be able to fair just as well if not better than most business leaders without profit being the prime motivation. For with the “pious business methodology,” the business may even make more profit for many of the aforementioned virtuous reasons.

There are many entrepreneurs who don’t do well because they are jealous of their fellow entrepreneurs. These jealous entrepreneurs will probably spend their precious time trying to sabotage the business of their fellow entrepreneur instead of using the time to try to improve their business. This indeed will be a major downfall for the jealous entrepreneur. A pious person normally won’t be jealous if his fellow entrepreneurs are doing well, in fact he will use the example of the successful entrepreneur to bring himself to greater heights.

Being an entrepreneur can be a noble profession provided we follow good ethics. If we create profit through running the enterprise, then we can pay the profit back to the society, bringing peace, stability and prosperity to the society. Doing business to create profit is not a bad thing at all. By creating employment opportunities, we will create prosperity. It is actually a noble undertaking.

References

Tak, S.C., & Ambrose, Y.K. (2004). Righteousness and profitability: The moral choices of contemporary Confucian entrepreneurs. *Journal of Business Ethics*, 54: 245-260.

Murrey, H. (2014). Entrepreneurship as a means to create Islamic economy. *Economic, Management and Financial Markets*, Volume 9(1), 75-100.

By

Capt Sivanandan Vivekanandan

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Highlight on Copyright and Fair Use in the Digital World

Highlight

by
Iman Fiqrie

When developing learning materials, it is important to understand at least the basics of copyright law. Although it varies from country to country, in the United States, copyright of printed matter is governed by Title 17 of the United States Code. Of particular importance to learning developers is *fair use*, noted in section 107, excerpts below.

Title 17 of the United States Code, § 107

Notwithstanding the provisions of sections 17 U.S.C. § 106 and 17 U.S.C. § 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include:

- ✦ the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- ✦ the nature of the copyrighted work;
- ✦ the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- ✦ the effect of the use upon the potential market for or value of the copyrighted work.

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

According to the Association for Training and Development (ATD), The notion of fair use gives professionals some scope in what they can include in educational materials, but because penalties are often assessed on the basis of the number of copies made of the material, this is one area where it is better to err on the side of asking permission rather than seeking forgiveness, because forgiveness can be very expensive.

Evolution Aspects in the Marine Simulator Domain

The progress in the electronics industry has strongly influenced the development and application of simulators for specific marine related training objectives. More, and different, types of simulators are becoming available to a wider group of users as a basis for the quality training requirement.

A simulator can be described as a device that duplicates limited aspects of the real world. The simulation process recognizes all the classic benefits such as avoidance of costs and dangers associated with operation of actual systems, avoidance of injury and damage and rapid and repeatable learning exercises.

The first and best known category of marine simulators which was developed is that of the shipbridge simulator with some of distinct milestones:

1967 One of the first systems appeared in Sweden at SSPA in Gothenburg for research purposes. Using computer generated imagery (CGI) to produce a mainly nocturnal picture on 7 black and white CRT screens.

1968 Developments in Netherlands at TNO DELFT and at MARIN in Wageningen in resulting in the Shadow graph Point Light Source System whereby cut out models of horizon and landmass objects are placed in front of a light source and back projected onto a circular screen. Moving the models gives an apparent change in azimuth.

1970 The Model board system was a popular other development at this time, whereby a scaled physical model of the exercise area is constructed and a small TV camera is made to track over the surface. The monochrome picture is then put onto a screen by means of a television projection system.

1975 At about the same time slide projection systems were considered an option at some other training and research institutions. VFW-Fokker (MBB) installed such in FachHochschule Bremen in Germany.

1977 A night time visual training simulator made its appearance at the College of Nautical Studies, Southampton, UK. Built by Decca, this nocturnal system produced a series of light points from light point projectors, each controlling the intensity, colour and movement of the lights and then projected onto a screen to give 50 degrees arc to port and starboard.



A first radar and navigation bridge simulator

1977 Similarly around that time the first computerized radar and navigation simulator was launched in Hortenby Kongsberg in Norway. This system has been constantly upgraded and the modular structure allowed the systems to be expanded and enhanced like the world famous building blocks.



Shipbridge simulator with steering stand but no outside view

Different solutions have been designed for the bridge simulators to create the effect of a realistic environment for the student workplaces. Usually this has resulted in a simulated ships bridge fitted with equipment and the outside view projected or shown on monitors or screens.



A full mission bridge simulator

Especially the outside view from the bridge offers a spectacular impression which often diverts the attention away from the installed equipment and the sophistication of the mathematical models driving the simulated processes.



High-end bridge simulator with advanced visuals

From then on the development progresses with the improvement of technology and the present day results can be seen at many training locations.

(to be continued.....)

By **Prof. Capt Stephen Cross**
Chairman IMSF

Good Night Malaysia 370



Preface

This article was written with the intention of learning from the MH370 disappearance such that we hope that it will not happen to a merchant marine vessel. Most of the facts of the incidents were extracted from the "FACTUAL INFORMATION – SAFETY INVESTIGATION FOR MH370 9M-MRO" published by the Safety Investigation Team for MH370, Ministry of Transport Malaysia. (Ref: MH370/01/15)



Introduction

On 07 March 2014 at 1642 UTC, a Malaysia Airlines (MAS) Flight MH370, a Beijing-bound international scheduled passenger flight, departed from Runway 32R, KL International Airport with a total of 239 persons on board (227 passengers and 12 crew). The aircraft was a Boeing 777-200ER, registered as 9M-MRO.

Kuala Lumpur Tower cleared MH370 for take-off and soon it was tracking direct to waypoint IGARI.

MH370 was instructed to contact HCM ATCC on the radio frequency of 120.9 MHz.

At 1719:30 UTC, MH370 acknowledged with "Good night Malaysia Three Seven Zero".

This was the last recorded radio transmission from MH370.

It has been more than 2 years and the plane is yet to be found.

Related Safety Equipment on MH370 as compared with a merchant marine vessel

Emergency Locator Transmitter/Emergency Position Indicator Beacon (EPIRB)

MH370 has four Emergency Locator Transmitters (ELT). One fixed unit located at the ceiling Aft with a connection for remote operation from the cockpit, working on 406Mhz Cospas-Sarsat system. It can also be activated when the aircraft is subjected to a sudden deceleration force. In addition to 406Mhz it also transmits on 121.5Mhz and 243 Mhz.

There is also a second portable ELT located at the forward cabin of the coat closet.

There are an additional of two ELTs working on 121.5Mhz and 243Mhz which will be deployed when the slide rafts on each side are launched.

On the fateful day there were no signals were detected from the ELTs.

While on a merchant marine vessel complying to SOLAS, it is mandatory to be equipped with an EPIRB working on 406Mhz. It is also equipped with a hydrostatic release unit to ensure that the EPIRB is float free on reaching a depth of 1.5 to 4 meters. Some

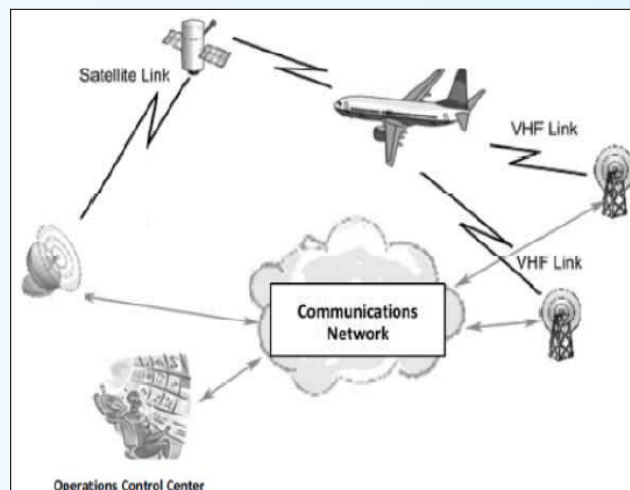
EPIRBs may include 121.5Mhz in their transmission and newer versions may even include a GPS receiver to allow position to be sent out simultaneously.

Aircraft Communication Addressing and Reporting System (ACARS)/Long Range Identification and Tracking System (LRIT)

MH370 incorporates an Aircraft Communication Addressing and Reporting System (ACARS). The system provides a data link to the ground service provider on flight plan, maintenance data, aircraft position and engine performance through VHF or SATCOM (Inmarsat). It also provides information and messages mainly on four events i.e.

- a) Out of Gate Event
- b) Off ground Event
- c) On Ground Event
- d) Into Gate Event

Information is generally sent every 30 minutes and if no information is received, the ground service provider will 'PING' or call or send a message to request for information.



Until recently, the International Civil Aviation Organization (ICAO) has incorporated new requirements for all aircraft to be tracked every 15 minutes by the year 2021. Some airlines nevertheless have already implemented this tracking requirement.

While on a merchant marine vessels methods provided for the purpose of monitoring are using the Long Range Identification and Tracking System (LRIT) which is incorporated into the Inmarsat-C Satellite Communication Equipment and sends the Identification, Position, Time of the vessel every 6 hours to a service provider who stores them in a database which is only accessible by the Port State, Flag State, Coastal State and Search and Rescue Authorities. In addition, commercially, Inmarsat-C polling facilities, Automatic Identification System and other systems like Purple Finder are available for ship-owners to track their vessels. The question is are the ships relatively safe. Many maritime administrations have indicated that many ships did not regularly send back information on their LRIT.

Since implementation in 2008, many ships which are equipped with LRIT have no means of knowing the functionality of their system on board. Some rely on feedback from shore authorities when they did not receive any position updates, while others are provided with softwares for regular checks.

Aircraft communications equipment/Merchant marine vessels communication equipment

Communication equipment on board MH370 includes the following:

- three units of VHF that uses Selective Calling
- two units of HF
- Satcom (Inmarsat) providing 5 channels of voice communication and 1 channel for data

The Satcom also provides for audio, text communication and for Inflight Entertainment.

The system automatically logs in and exchanges handshakes every hour through the Land based satellite earth station.

On the fateful day of MH370 incident there was no distress alert or message sent.

On Merchant marine vessels communication equipment includes the following;

- Terrestrial equipment using VHF and MFHF with Digital selective Calling
- Satellite equipment consisting of Satcom-B (obsolete by Dec 2016), Satcom-C, Fleet 77 (obsolete by 2021), Iridium Communication System and other non-GMDSS satellite system like VSAT and Thuraya.

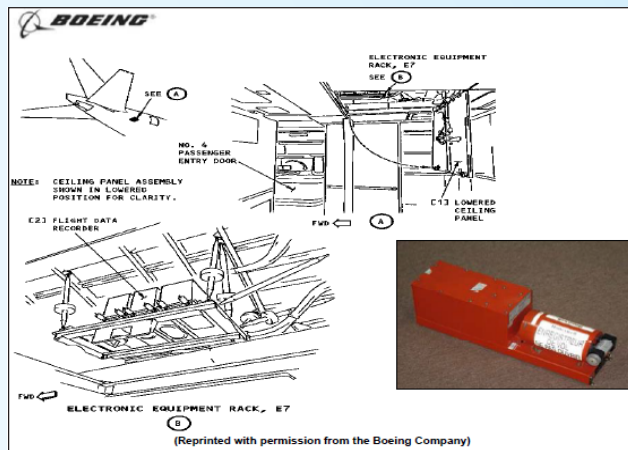
With so many different types of equipment on board we hope Merchant marine vessels will be able to send out a distress alert/message when threatened by grave and imminent danger.

Aircraft Recorders/Merchant marine vessels Voyage Data Recorders

To enable the fuselage of MH370 to be located it is provided with two types of Flight Recorders each fitted with an Underwater Locator Beacon (ULB).

The Solid State Flight Data Recorder (SSFDR) located at the Aft Ceiling of the aircraft records 1300 parameters through sensors for a period of 25 hours. While voice recording is done by the Solid State Cockpit Voice Recorder (SSCVR) located side-by-side with the SSFDR. It can record four audio channels. Both the flight recorders can withstand water pressure up to a depth of 20,000 feet.

The ULBs were designed with a battery life of 6 years and can operate on 37.5Khz for thirty days. From the factual report, the ULB fitted on the SSFDR expired more than one year on the day of incident while the ULB fitted on the SSCVR was still valid.



Merchant vessels are similarly equipped with Voyage Data Recorder (VDR) or some with the simplified one. The VDR is required to be able to record ships parameters for a duration of 12 hours. VDRs are either permanently fixed or float free. They are also fitted with Underwater Locator Beacons which can operate for at least 28 days.

The stored information in the VDR can be retrieved and used by authorities for accident investigation.

Annual testing is to be carried out by authorized engineers to ensure that it is working normally.

In conclusion, Merchant marine vessels are similarly equipped as compared with MH370. The only difference is that aircrafts travel at very much higher speeds. On the other hand Merchant marine vessels similarly equipped are dependable on the plethora of equipment which is considered adequate to meet safety requirements. However, there was no location information when MH370 ditched into the sea.

We have to bear in mind that the concept of the existing Global Maritime Distress and Safety System was introduced in 1988 and this concept has not changed for the last 30 over years. We are sure that the International Maritime Organization who has initiated a review and modernization of the GMDSS system will take cognisance of the needs to further improve the safety of Merchant marine vessels.

It is hoped that "GOODNIGHT MERCHANT MARINE VESSEL" will never happen.

By **Chong Chee Wah**
Malaysian Maritime Academy

Report Highlights Poor State of Surveying and Charting Worldwide

Marsh, a global leader in marine insurance broking and risk management, has issued an industry information report that highlights the inherent risks involved in operating ever-larger ships in poorly surveyed waters: 'Hydrographic Concerns for Modern-Day Large Vessels'. The Marsh Report quotes IHO President Robert Ward and UK National Hydrographer Rear Admiral Tim Lowe, among others.

The report, which refers to IHO publication C-55 - *Status of Surveying and Charting Worldwide* as one of its references, notes that many of the world's charts continue to rely on older or inadequate data that may not be appropriate for the operation of ever-larger, modern vessels.

The report also notes that the navigation of largest vessels in inadequately surveyed areas introduces potentially serious additional consequences for ship operators because the marine salvage industry may have difficulty in recovering the largest of stranded or grounded vessels.

The report also draws attention to the operational risks involved in the polar regions, where the status of surveying is particularly limited.

The report goes on to encourage governments, mariners and ship operators to contribute to improving the world's charting coverage by investing in surveys and submitting reports and data to Hydrographic Offices and the IHO wherever possible.



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