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

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.

www.globalmet.org
A s we head towards the end of the year, we have several events shaping up that members ought to be preparing to attend;

Most important of all is our Annual General Meeting scheduled for 8 November at 0800 for 0830 at the SOFITEL, Manila. The Board meeting will follow immediately after the AGM. Look out for meeting papers on our website. The Board is undergoing review and examining how best we can serve members and stakeholders. Funding is most urgent.

We will as usual fit into any spare rooms that may be available at the CREW CONNECT conference from 5 to 7 November. Our Chair, Capt P Chawla has a speaking slot and our GlobalMET led group comprising Dr Richard Teo, Ms Presca Lee Lugo from MARINA and Dr Angelica Baylon, MAAP will present the MET Teacher Standards. Hopefully members have taken advantage of the 20% discount.

Another conference by the Royal Institution commences at SOFITEL on 8 November. Rooms will be tight. So please be on the lookout for last minute changes. An alternative location is the Manila Yacht Club, a short trek from the SOFITEL.

Other events following our AGM will include sharing some important time with the Nautical Institute and the IMaREST.

Meanwhile our Newsletter 73 includes important messages from Iman Fiqrie regarding the wiring of our heads in modern learning. Take note as that’s where global learning is heading.

Rod Short returns with Part III of the Horsburgh Lighthouse saga. Great reading. I just wonder if it will be strong and safe enough for the unmanned ships that will soon be traversing that passage.

Capt Francis Lansakara revisits our newsletter after many years and has equally stern warnings and insights into the recent collisions between naval and merchant ships.

Richard Teo provides information about practical competency based assessments that are mandatory by the Australian Maritime Safety Authority. Indeed evidence based assessments have been neglected for too long.

And again, members please let us know what you would like as improvement to our services.

By Capt Dr Richard Teo, FDRIMarM FNI FCILT MAICD FDr MSc MIM GDipBus BTeach AdDipL&M DipQA
Exec Sec-Director GlobalMET

Members and their staff members are encouraged to submit their thoughts through authoring articles for publishing in our Newsletter. Articles should reach the Secretariat by the last Friday of each month. Publication usually will be in the 3rd week of the following month. GlobalMET reserves the right to reject any article that may be deemed inappropriate.
At Posidonia 2018 Athens, it offered a showcase for the forward thinking next-generation leaders in shipping. It also made clear that the old guard still needs convincing to embrace change – (Lloyd’s list July/August 2018.)

Maritime education and training. MET, the orphan spawned by the shipping industry is the victim of slow to respond and change leadership. MET remains in the past, following syllabi and subject oriented delivery methods set in the last millennium. This situation exists, despite the innovations of the digital age and the advancements made in learning spaces, environments and technology. Work based learning and competency based delivery and assessments to specified outcomes are the norm.

Most importantly learners are no longer children following outdated pedagogy but young professional adults who need to learn via adult learning methods, andragogy, and the available digital technology that includes synthetic and simulation training. This is reality as jurisdictions’ licensing rules insist on competency based assessments. The assessments must be evidence based and specifies that the evidence must show that such assessments reflect a vessel on the water. The STCW Convention and its code specify standards as the outcomes of training, assessment and certification.

Regrettably learning events are still “lectured / instructed” with long hours of listening to boring “lecturers”; taking copious notes, memorising tons of information and data to be regurgitated at onerous examinations that do not produce outcomes, in a class room environment. Too many institutions are trapped into the baccalaureate system to sell their courses and increase enrolments. These courses are run in accordance with university practice over two or three semesters, dragged over time tabling and school based delivery.

However, it is not too late to produce degree level qualifications applying TVET, Technical and Vocational Education and Training see www.unevoc.unesco.org

More countries, developed and developing have now their National Educational Qualifications and Quality Skills Frameworks that encompasses Skills development in Higher Education and TVET and articulation between the domains of education. This means that the qualifications are transportable across boundaries, previously almost impossible to recognise as equivalents.

A segment of the Australian Maritime Safety Authority’s guidelines, mandated practical assessments (AMPA) are reproduced below for information.

3. Assessments

3.1 Approved final assessors shall ensure that:

3.1.1 the development of any assessment strategy takes into consideration the broad nature of the assessment process;

3.1.2 each candidate is provided with the opportunity to review and understand the AMSA Mandated Practical Assessment (AMPA) for the relevant MAR Maritime Training Package qualification;

3.1.3 each candidate is provided with the opportunity to discuss any issues regarding the assessment prior to it commencing; Page 4

3.1.4 each candidate is fully aware of the assessment criteria and process;

3.1.5 each assessment is carried out by an assessor named on the final assessor’s letter of approval from AMSA; and who holds as a minimum:

- a current certificate of competency issued under Marine Safety (Domestic Commercial Vessel) National Law Act 2012 at the same level as the qualification being assessed with at least 12 months’ relevant sea service, or
- a relevant seafarer certificate, as master, engineer or deck officer, issued under the Navigation Act 2012.

3.1.6 each assessment is carried out in accordance with the requirements of the AMPA relevant to the MAR Maritime Training Package qualification;

3.1.7 each assessment is undertaken in the workplace and/or under realistic workplace conditions which typically reflect the use of the full-range of equipment; performing tasks or activities within the same timelines that are expected in the workplace, and performing in whatever the weather conditions are on the day, be they wet, dry, windy or calm;

3.1.8 the on water components of the assessment are carried out on a vessel that meets the requirements outlined in Attachment 1 of this document;

3.1.9 where candidates are assessed as part of a group exercise, the size of that group must be limited to five candidates and each candidate must be assessed on their own personal performance;

3.1.10 each candidate is provided with an introduction to the vessel or place of assessment;

3.1.11 when an assessor or candidate is confronted with a dangerous situation, or exposed to a risk of accident or injury, the assessment is terminated and rescheduled;

3.1.12 each candidate that is assessed as not having successfully achieved an assessment task is provided with an opportunity to undergo re-assessment; and

3.1.13 each candidate is aware that assessment files and associated documents may be made available to AMSA.

3.2 Approved final assessors shall be aware that:

3.2.1 where appropriate, parts of the assessment may take place in a workshop, simulated situation, commercial repair or hard stand area;

3.2.2 the complete assessment may be carried out when the candidate has completed all parts of the training package or over a series of sessions or days spread throughout the training; and

3.2.3 additional simulated exercises and oral questions may be used to provide further opportunity to clarify a point or for a candidate to demonstrate competence.

Further reading may be found at the following link. https://www.amsa.gov.au/qualifications-training/training-organisations-and-courses/registered-training-organisations/ampa

By Capt Dr Richard Téo, FDRIMarM FNI FCILT MAICD
FDx: MSc MIM GDPbus BTeach AdDipl&M DipQA TAE
Independent Business and Education Consultant
Surface Learning, Deep Learning and Neuroplasticity in Modern Learning

Exciting News in Learning Today

I’m extremely excited to be writing about a topic as exciting and important as deep learning, and doubly excited to be writing it alongside the equally important topic of neuroplasticity. Let’s not forget about surface learning either.

First off, I’m sure you’ve all heard the saying that if you always do what you’ve always done—you’ll always get what you’ve always got. For example, the way many courses are created today. The way courses and instruction’s done today isn’t far from the way it’s always been done—understand some behavior we want to mimic or change, create some knowledge, skills and attitudes (KSAs) around it, find some content about that behavior to match or demonstrate it, give some formative and summative assessments to see if the learner can recall back the information on-demand. That’s pretty much surface learning in a nutshell. This may be required for some criterion-based courses and institutions, e.g., national standards in education, maritime, aviation, etc.

Higher Order Thinking Skills and Bloom’s Taxonomy

I would venture to say, however, that in many institutions of learning today, deep learning is what we really want. Deep learning in education is about activating high-order thinking skills; learner-centered versus teacher-centered, pedagogical or traditional teaching methods. If you’re familiar with Bloom’s Taxonomy, a taxonomy guide that instructional designers often use to help create great objective statements, then higher-order thinking would be the ability to analyze, evaluate, synthesize and/or create. One must not only be available to describe, list, remember or understand, but take that content, resource or activity and analyze, evaluate, and create from it—with minimal help or scaffolds from the teacher or facilitator. This is where real innovation and creativity comes from.

Higher Order Thinking Fires Neurons and Memory

How neuroplasticity fits into all of this is simple, there are billions of neurons in the brain that play a significant role in the formation and storage of memory. This goes directly to the topic of working and long-term memory. Recall Robert Gagne’s 9 Events of Instruction was about the sequencing of instruction to activate long-term memory and neuro processes. It’s a bit more complicated than that, however, when synapse fire they strengthen the connection between neurons and pathways. It is also thought that by activating higher-order thinking skills—that this process of strengthening neural pathways and connections, and thus memory, can be encouraged or created (new connections); thus the term neuroplasticity or brain plasticity, which means “…the ability of the brain to change throughout an individual’s life…function can be transferred to a different location…the portion of the grey matter can change, synapse may strengthen or weaken over time” (Wikipedia). What this really means is that it’s possible for those not born with innate super brain powers to also develop brain power or the capability to process higher-order information into long-term memory. In laymen’s term, become smarter over time.

Putting it All Together from Analysis to Design and More

If we put all this together in an instructional design plan that includes theories and models, it would be using what’s called constructivist theory and a constructivist instructional model. How does it work? One would go through the systematic process of performance improvement and analysis, e.g., use of the analysis, design, development, implementation and evaluation (ADDIE) model and come up with some enabling and terminal objectives, formative and summative assessments, but instead of using them in the traditional systems approach and performance outcomes way—create activities and problem-based learning scenarios and activities with resources and support to fire these neurons through higher-order thinking; both soft and hard scaffolds may be required, but no directed goals (outcomes) are given; goal-free objectives (an activity with a rubric is ok). The enabling objectives are translated into the activity, the assessment or outcomes are in the form of a rubric of higher Bloom Taxonomies, and terminal objectives can be assessed through the rubric from discussions, assignments and reflection journals.
**Digital Brains, Higher Order Thinking, and Neuroplasticity is Here**

In the traditional way, instruction is usually setup for the average learner. Utilizing the learner-centered and constructivist method—those who fire more neurons get more, i.e., put in the extra work, those who put in average or minimal work also get what they put in. This should be the way education in the future is done. There are some schools in the U.S. that have digital brains in the classroom that can assess such things and move learners into different groups and clusters for deep learning. Some of these digital classrooms have more and not less teachers to help facilitate this process. So, in this case technology increased jobs!

**Conclusion**

It might seem a bit harsh to suggest that we leave behind those who only want or can-do average work, but it should equally troublesome to hold back those who can do more. With digital brains in the classroom or not, with deep learning and neuroplasticity, surface learning may soon become a thing of the past. Maybe then in the maritime industry we can finally stop pollution, create low-carbon emission alternatives, solve climate change, global warming, alternative energy concerns and a host of other very troubling concerns that need solutions. So fire up some neurons today!

By William E Hamilton & Iman Fiqrie

CPLP, PhD Candidate University of the Rockies

---

**More on Deep Learning: Education vs. Machine Language and Artificial Intelligence**

There is a subtle distinct difference between Deep Learning (DL) with Artificial Intelligence (AI) and Machine Language (ML), i.e., Deep Learning (DLM) and DL with education (DLE) in the traditional sense. One could say that the similarities and connections between the two is neural pathway theory and is critical to our everyday life and providing solutions to big global issues like climate change, global warming, population, economies, food shortages, security, and more, e.g., speech-to-talk, predictions and more.

According to futurist Kurzweil, the idea about AI and ML was to build an intelligent computer that could understand language, make inferences and decisions by itself. This could be very significant given the global predicament as computers can learn to represent very high-level concepts from very low levels of lots of raw data automatically; another game changer.

DLM attempts to mimic the brain neurons and synapse processes that are activated during higher-order thinking, e.g., in a DLE scenario i.e., from problem-based learning or activity-based learning. These neural processes occur when synapses are fired as mentioned in the article. In DLM, these processes are artificial neural networks using the same concepts. The question for deep learning is, which one should be the independent variable and which one should be the dependent variable as they both could be depending on if we’re talking about DLE or DLM. People may get the two confused. What about a blend of the two that can be seen in the digital brain classroom already in use today? These “… classroom[s] of the future probably won’t be led by a robot with arms and legs, but it may be guided by a digital brain.

By Iman Fiqrie & William E Hamilton

CPLP, MBA, Ph.D. candidate, B.S, A.A., ACB, CL
Lecturer

---

The foundation stone for Horsburgh Lighthouse was laid on 24 May 1850, the anniversary of Queen Victoria's birthday. The “Singapore Free Press” reported the elaborate masonic ceremony that was held at the invitation of the Governor of the Straits Settlements, Lieutenant Colonel Butterworth.

A party of well over 30 people (the records do not indicate the total number) disembarked from the steamer “Hoogly” and the barque “Ayershire”, which was towed out from Singapore, and marched to the summit of Pedra Branca just before noon. There, the Governor requested the Worshipful Master and Gentlemen of the Lodge Zetland in the East to proceed with the ceremony:

“I have solicited the favour of your laying, on this the Anniversary of our beloved Queen's birthday, the foundation stone of the lighthouse to be erected on this spot for the safety of the mariner and in commemoration of that celebrated hydrographer James Horsburgh FRS, to whose labours the mercantile world is so much indebted for the easy navigation of these seas.”

The ceremony that followed included the approval by the Worshipful Master of the construction plans submitted by J T Thomson and the deposit, in a specially prepared cavity, of a bottle containing current English coinage, an original edition of the Horsburgh Directory and a copy of the latest newspapers and other Singapore publications. An inscribed copper plate was also placed in the cavity. A silver trowel was used to seal the entrance with cement.

Next, the foundation stone was lowered into its bed and square, level and plumb were used to check that it was properly adjusted. Corn, wine and oil were then poured over the stone and, after a short prayer, the Worshipful Master addressed the gathering.

In a brief speech, he paid tribute to Horsburgh “by whose enterprising genius and surpassing zeal, the navigation of these intricate seas has been greatly facilitated ... The merits of the distinguished man to whose memory the lighthouse is to be dedicated, are too universally acknowledged to need any lengthened panegyric on my part”.

In addition to the normal expression of gratitude, the Governor in his reply paid tribute to the mercantile community and mariners of China “for their liberality for their donations towards the Horsburgh testimonial, magnified by the munificence of Messrs. Jardine, Matheson and Co.” ...

At 2 pm the party retired to the comfort of the “Hoogly” where a dejeuner was prepared to which His Excellency the Naval Commander in Chief, the Governor and guests did ample justice.”

Thomson took the opportunity of the invitation to return to Singapore with the Governor’s party to be present at the Queen’s Birthday supper and ball, to obtain medical help for his continuing illness and to deal with a number of matters connected with the lighthouse construction.

The most worrying of these was the unsatisfactory performance of the contractor. Despite advances to cover the cost of the stone cutting at Pulau Ubin, work was very slow, as the contractor had not been paying the labourers and had instead been using the money for his private purposes.
When Thomson endeavoured to exercise closer control and called the contractor to account, he absconded by shipping out on an American vessel bound for China, having already loaded on board a considerable quantity of goods that he had obtained on credit from merchants in Singapore.

Thomson took over the detailed control of the quarrying, only to find that the sub-contractors for the stone cutting had united to increase their terms, knowing that the south-west monsoon season was so far advanced that he would either have to give in to their terms, or stop the works for the season. They sought a 67% increase in the rate, but, after prolonged negotiations, settled for 41%. Thomson also had to pay 26% more for bricks.

The higher costs did however, bring substantial benefit, as the work was expedited when larger numbers of workers were attracted, particularly to the quarries on Pulau Ubin. In the remaining 3.5 months of the working season, 44 courses were prepared at Ubin, whereas during the 6 months between the original signing of the contract and the absconding of the contractor, only 9 courses had been fully prepared.

A period of steady progress then ensured. Thomson's direct payment of the workmen's wages had many advantages and a previously fractious workforce now became tractable and obedient, so that “personal chastisement was never inflicted and in fact was never called for”.

During August to October, 30 to 35 workmen were employed on the rock and, by mid-October, when the increasing north-easterly swell began making it difficult and dangerous to carry on, 59 feet of the tower, from the foundation course to the capital, had been completed.

The cutting of stones for the capital of the tower and flags for the floors proceeded at Ubin during the 1850/51 north-east monsoon season. Thomson made a landing on Pedra Branca in late November and found everything in order, however, two weeks later, unable to land, he observed that the landing pier and boathouse had been washed away.

At the end of March 1851, a landing was made in preparation for the resumption of work. Thomson reported on the state of the rock: “The pier was entirely washed away ... Two stones weighing 640 lbs each were found washed off the rock ... they had been placed 6 feet above high water spring tides ... On the south side of the rock, parts of the water racks and shed were broken down; these were 15 feet above the sea.” Work quickly resumed and the highest course of granite was laid in mid-June. Thomson mentions how, as they went higher, they could see further into the surrounding waters. Numerous fish were seen, including “gigantic skate” (probably manta ray), swordfish, on rare occasions turtles, and the “ugly and ferocious shark” was seldom absent. There were numerous oysters, but these were soon taken for food.

July 1851 was marked by calm weather and progress was good. Early in August “a large barque was seen lying on Postillo Shoal all day, but she got off in the evening and came up by Pedra Branca at 8 pm, when she nearly ran on to Middle Rock. Next morning the same barque was seen on the Stork Reef, where she lay till 8 am when she got off and tacked into Singapore Straits”.

The lantern, machinery and apparatus were delivered to the rock at the end of August and by 21 September the lamps were ready for lighting. During this period another barque, the “Metropolis” struck a rock near the lighthouse, became water-logged and, though still floating, was abandoned by her crew. The “Hoogly” was relieved from lighthouse duty and, with considerable difficulty, towed the barque to Singapore.

The Governor and other dignitaries landed, inspected the completed lighthouse on 27 September and expressed themselves in favourable terms regarding all the works and arrangements. The light was illuminated for the first time that evening to mark the occasion. Thomson went back to Singapore on the steamer and had the opportunity to watch the light until it dipped below the horizon at a range of 15 nautical miles. He was highly gratified.

Horsburgh light was exhibited permanently from 15 October 1851. The total cost, according to Thomson, was 23,666 Spanish dollars, about £6000.

Thomson’s notes, published in “First Pharos of the Eastern Seas – Horsburgh Lighthouse”, compiled by J A L Pavitt, have again been used as the primary source of material.

By Rod Short

R F Short
Capt Francis Lansakara - in his long sea going carrier navigated the ships through most of world's busiest waterways believes collisions at sea is a human cause....

Time line of recent Accidents in Singapore Strait

- March 2013 Turkish bulker colliding with a Vietnamese cargo ship in broad day light with perfect weather conditions.
- January-February 2014 three separate collision incidents resulting in oil spills and environmental damages.
- November 2015 fast ferry from Batam en route to Singapore collided with an unknown object causing panic on the high seas the passengers, mostly Singaporeans abandoning the ferry to rescue crafts.
- December 2015 Collision between a freighter and chemical tanker resulted in sinking of the freighter with loss of life and other sustaining damages; and
- August 2016 collision between Very Large Crude Carrier and a Container Ship resulted in sinking of the freighter with loss of life and other sustaining damages; and
- August 2016 collision between Very Large Crude Carrier and a Container Ship resulted in sinking of the freighter with loss of life and other sustaining damages; and
- 21 August 2017 Naval ship RSS Courageous collided with a cargo ship, the ANL Indonesia, along the eastern Singapore Straits near the position of John S McCain. The collision not only caused extensive damage to RSS Courageous, but also resulted in the deaths of four of its crew members. Two naval officers were later found guilty of causing the accident and fined for negligence.
- USS Fitzgerald collided with MV ACX Crystal, a Philippine-flagged container ship, about 80 nautical miles (150 kilometres; 92 miles) southwest of Tokyo, Japan. The accident killed seven Fitzgerald sailors. Their bodies were recovered from the flooded berthing compartments of the ship. At least three more of the crew of nearly 300 were injured, including the ship's commanding officer. The top two senior officers and the top enlisted sailor were relieved of duty; about a dozen other sailors will receive non-judicial punishment and in the later part after the USS John McCain collision the fleet commander of the US 7th fleet was reported to have been dismissed.

Rules equally applied but the safety management

Rules of The Road (International regulations for preventing collision at sea) Both the Merchant and Naval ships are governed by Rules of the Road also known as COLREG. An internationally agreed set of rules apply to all ships regardless whether it is built for commercial or battle purpose. Rule 1 begins by “These Rules shall apply to all vessels upon the high seas and in all waters connected therewith navigable by seagoing vessels” Navigational rules described the ship which supposed to take action in the case of a collision situation as the “give way ship” and the other as the “stand on ship”. Where only one of the ship is supposed take action to avoid the collision the other who is stand on is not free but, also obliged to under the rules for two specific actions where necessary:

1. If the ship suppose to give way do take action but it appeared insufficient to avoid the collision the stand on ship must take additional action necessary to avoid the collision
2. If the ship supposed to give way do not take any action at all for whatever reason the stand on ship must take whatever action necessary to avoid the collision. Based on these principles and analysis on past collision cases even an innocent ship could end up taking a considerable portion of the blame amounting to about 30%.

Although collision avoidance rules in principle applied equally to all types of ships in practice safety management systems on board naval ships are significantly different as they are based on naval rules or codes given to them by their command. Safety management system in a ship could be defined as the set of rules or codes defining the manner in which ships are safely navigated through international waters. In merchant ships safety management systems are standardised by an international convention the question is in order to avoid a collision at sea uniformity of the approach to the collision avoidance rules will be foremost. International safety management code applied to following commercial ships:

From 1 July 1998 Passenger ships and high-speed craft passenger, and oil/chemical/gas tankers, bulk carriers and high-speed craft cargo ship of 500 gross tonnage and above.

From 1 July 2002 other cargo ships and mobile offshore drilling units (MODU) of 500 gross tonnage and above the convention clearly exclude naval ships. The question here is objectively can a person expect uniformity in application of rules when they originate from different disciplines?

**Recommendation made by Maritime Port Authority of Singapore in 2003 is an advance warning**

After investigation in 2003 Singapore Naval Ship collision Maritime Port Authority of Singapore (MPA) “Singapore is an extremely busy port used by a large number of commercial vessels. The Collision Regulations provides a consistent set of rules to ensure the safe handling and navigation of vessels. In view of the heavy commercial traffic in our waters, all naval and state vessels should comply with these Regulations. In the event that the operational requirements of naval and state vessels necessitate a deviation from these Regulations, they must however take necessary and appropriate measures to ensure the safety of normal commercial traffic.” On the 21 August 2017 almost after 14 years collision between USS John S McCain & Anic MC shows that issues highlighted by the MPA 14 years ago remained unresolved.

**Capacity of vessel traffic management systems in The Strait is in question**

Traffic management in a shared waterway Singapore Strait(also known as Strait of Singapore) although it bears the Singapore hallmark and passes through part of its territorial waters, is a shared waterway and its navigational safety, rescue coordination and pollution prevention measures are governed by a common agreement known as STRAITREP took effect 19 years ago on 1 December 1998, jointly agreed between Singapore, Malaysia and Indonesia in accordance with regulations laid down by International Maritime Organisation. The Objectives of the STRAITREP:

- Enhance the safety of navigation;
- Protect the marine environment;
- Facilitate the movements of vessels; and
- Support Search & Rescue (SAR) and oil pollution response operations

In this particular case where USS John S McCain collided with Anic MC they were on the Eastern part of the Vessel Traffic Information System known as VTIS – East. Vessel Traffic Information systems provides a useful service except they do not act as traffic controllers and leave the collision avoiding actions to ships command, it commenced operation in 1998 therefore its capacity to effectively handle present day high traffic require a complete re assessment.

By Francis Lansakara – FNI
Director – JMC NAUTICAL PTE LTD
Council Member – The Singapore Nautical Institute (SNI)
Advertise in the GlobalMET Newsletter & General Memos

<table>
<thead>
<tr>
<th>Placement</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Half front or back page</td>
<td>$750</td>
</tr>
<tr>
<td>Full inside page</td>
<td>$500</td>
</tr>
<tr>
<td>Half inside page</td>
<td>$250</td>
</tr>
</tbody>
</table>

GlobalMET Newsletter is widely circulated.
Visit: http://globalmet.org/ for complete membership list.
Contact: secretariat@globalmet.org

SPECIAL 50% DISCOUNT FOR GlobalMET MEMBERS

Global Maritime Education & Training Association
GlobalMET Limited
Australian Company Number 103 233 754
www.globalmet.org

Chair:
Capt Pradeep Chawla
Anglo-Eastern Ship Management
23/F, 248 Queen's Road East
Wanchai, Hong Kong

Executive Secretary:
Capt Dr Richard Teo
Maritime Way, Newnham,
Tas 7250, Australia
richsteo@gmail.com

Secretariat
1070 Tower B1 Spaze I-Tech Prak
Sector 49 Gurugram 122002 India
Tel 91 124 45525 56/57
globalmet.secretariat@gmail.com

Design by: Core Competency Training Pvt. Ltd.
Gurugram, INDIA. Tel 91-124-45525 56/57
e-mail: marketing@corecompetency.net Web: www.corecompetency.net