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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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Editorial

Reading the articles submitted to this edition of the newsletter, I am reminded of our need to continually look forward, to adapt and to innovate. The world of shipping is continually changing, and our role as trainers must change and adapt to the changing environment in which we operate. Think back to your first ship and the technology on board. For myself, this was a time before computers, when an electronic calculator was a massive leap forward, and satellite navigation was just being developed (Transit – remember that?). Ok, this dates me, but it illustrates the differences between when I first went to sea, and the technology facing a new-entrant on a first trip today. Has the training changed?

I like to think that all colleges worldwide keep up-to-date with technology as it changes. It is an important part of the MET world that we should be equipping our students with the skills and understanding to be able to safely operate latest technology, to understand how it works, and not to use it as a “black box”, performing the function without knowing how. As I ask students when using new technology, “How do you know if it has gone wrong?” This also hints that we need to be providing the “older” skills, such that we can identify technological failure as early as possible. One of the biggest problems is developing these skills in a classroom environment. Should we be looking to use more laboratory or workshop based teaching? Using simulators more? Organising our training to be task based rather than subject based?

My thanks as always to our contributors, and as always we have a selection of articles which, hopefully, will get the thinking processes going. Iman Fiqrie offers a report from a conference he attended looking to the future of teaching, and I particularly note the “20 digital skills every 21st century teacher should have”. Richard Teo is looking at competency based training, and asks the question “Are you facilitating training to competency based standards?” he suggests that we are at a turning point in MET – but I’ll not steal his thunder and leave you to read his interesting article. Rod Short has provided another tale from his files. How much has changed, but how much remains the same. Ian Gray provides the first part of a paper looking at the Future of Maritime Education in Australia, and in particular looks at the problems faced. I look forward to the continuing part. Finally Jeric Bacasdoon looks at the problem of second-hand smoke, and the effect on safe working and living conditions on board.

We look forward to receiving contributions from our readers, and I thank our regular contributors for their articles. Keep them coming!

Warm Regards

By

Capt. Richard Dunham
PGDip Cert Ed

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 1st Friday of each month. Publication usually will be in the 3rd week of each month. GlobalMET reserves the right to reject any article that may be deemed inappropriate for the promotion and well-being of MET.

Association for Talent and Development International Conference and Exposition 2017



ATD Board of Directors and former Cisco Executive, Ms Marci Meaux speaks at ATD 2017 ICE

The Association for Talent Development 2017 International Conference and Exposition (ATD 2017 ICE) is billed as “The” World’s largest learning and development industry event of its kind; providing one with the knowledge, strategies and solutions needed to effectively train and develop talent. It’s also touted as the place to be for game changers, legends and industry practitioners.

There were over 300 sessions ranging from learning of all sorts to sales training, coaching and guided selling to advanced topics on artificial intelligence, gaming and topics like microlearning and learning management systems—more than 148 of those sessions were recorded sessions exclusively for ATD 2017 ICE attendees to browse later. There were also over 400 speakers, attendees from all 50 U.S. states and attendees from over 90 countries.

One of the first sessions I attended on the first day was the Certified Professional in Learning Performance (CPLP) Breakfast where we got to meet and greet other CPLP’s from all over the world—there are currently only about 2100 or so CPLP’s worldwide in a market of high demand. One of the CPLP’s, and someone I admire, was a Dr Treadway, who not only had his CPLP, but a Doctorate in Learning Design and Development, a certification in Human Resource Management and now working on his certification in Organizational Development. These are the real game changers and legends the conference spoke of.

My next session was on Sales Enablement; Learn: Succeeding with Sales Enablement in 2017. This session also had a few game changers and legends in it; Kerri Barton, Director Global Field Enablement – Content Splunk; Scott Comptois, Global Director of Sales Training, Sealed Air; Don Schmidt, Senior Director of Sales Effectiveness Edmunds.com; and John Tintle, Director of Content & Communications Highspot. This would be the theme for rest of the 4 days at the conference—high impact, calibre industry speakers and engagement!

One of the things this panel of speakers focused on right off the bat was that this was the age of employees and the impact of effective onboarding and the training process. There was a lot of talk about the effect of millennials and sales force training. One interesting observation was that Baby Boomers (those with birth days from the early to mid-1940s to early and mid-1960s), who were expected to be leaving the workforce soon but delayed because of recent economic downturns were teaming up with Millennials (those with birth between 1981 and 1997)—Boomers learn the technology and Millennials get the transfer of knowledge from the “old guard”. Who gets squeezed out or left out of these learning opportunities, “Gen X” (those with birth between early-to-mid 1960s and ending birth years ranging from the late 1970s to early 1980s). The point here was to make sure they are also incorporated into technology training and opportunities.

This sales session also spoke of sales force issues like the expectation of needs, use of out-dated sales binders and PPT training, i.e., death by PowerPoint. The panel also spoke of the use of the “Magic 7” formula for sales training; i.e., 7 different formats and 7 different ways. There was much, much more in this session from sales software like Sales Navigator and Sales Force, to understanding and focusing on the entire life-cycle of the buyer’s journey versus just trying to sell a product.

In another session on Creating and Sustaining a Peak Performance Culture, one of the important issues in a culture is having to deal with “ghosts” or past issues that may be holding back peak performance in an organization. The speaker pointed out that our strongest alliance in a culture is not to the overall culture or organization itself, but to the subculture. So if we want peak performance, we must understand and deal with sub-cultures. Another important take-away here was some qualities to help identify a peak performing organization:

- Integral Leadership. Business performance, leadership effectiveness, understanding, ownership and embodiment
- High trust and integrity. A culture of “say-do”. Write your core values down on paper, then write what is happening in your organization—this is your actual culture.
- Appropriate communication. It’s not enough to just do the right things, leaders must be really clear about what’s important, be intentional, enrol others, gain shared perspective and intent and take coordinated action.

Another powerful understanding is that an organization should have an external focus; meaning that in an ecosystem, the organization exists because of the customer and that if the organization doesn’t meet the needs of the ecosystem—it dies.

Other concepts explored here were that when we look at the past, present and future—real power exists only in the present where we have choice and can act; the past, even though we spend a lot of time there, we cannot change; but the future has the most real potential.

I would go on to at least two more sessions that day and attend the annual ATD meeting as well. There were many other venues like the ATD Book Store, Global Village and exhibitions to attend to.

One of the highlights was the next day’s General Session and speakers, U.S. Astronauts Scott and Mark Kelly. In introducing them, ATD President, Tony Bingham, reminded us that the learning journey must blend the digital with the physical.

One real take away was that as far as learning and development is concerned—many organizations have a lot of work to do! I think many expect someone else to “do” technology for them as they resist the growing trend of digital technology growth and penetration into just about all facets of society, work and life.

As I learned at ATD 2017 ICE, the learning journey must blend the digital with the physical (we have to work for it) as there are more SMART phones now than there are people on the planet; we must embrace the cloud, understand that people have value and help them shift and evolve in this digital age. By 2020, people under 40 years of age will be more than 40% of the population. Today, Gen Z and Millennials use their SMART more than 15.4 times more than others... leaders must be onboard with this and help hold others accountable for their own initiatives at learning in this digital age.

As keynote speakers, U.S. Astronauts Captain Scott and Mark Kelly said at the General Session—helping us to do the hard things is the best gift any nation or business can give us; the others are planning, goals, allowing us to make mistakes, and take risks. Additionally, we must practice, be persistent and not give up. Making constant small corrections instead of big ones makes the process manageable. The bottom-line, in this digital age—one cannot expect ICT to bear all the load of our digital must haves and aspirations. To help with that journey, I’ve attached some hyper-links on 20 digital skills every 21st century teacher should have as well as information on expectations and 9 elements that any “digital citizen” should understand and might act on.

<http://www.educatorstechnology.com/2012/06/33-digital-skills-every-21st-century.html> and http://www.digitalcitizenship.net/Nine_Elements.html

Every day at ATD 2017 ICE I went home overflowing with knowledge, but thirsty for the next day, hope you enjoyed! Please don’t hesitate to ask questions and give feedback, thanks for reading.

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Competency Based Education and Training in Work Based Learning Environments



Preamble

At the Nautical Institute, Hong Kong SAR Branch meeting recently, Seaworthiness and the Human Element was the theme that prompted "Crews Control", a talk presented by Ron Clark, Admiralty Manager of Reed Smith Richards Butler. He spoke about competence and negligence. He cited an incident when a fire on board a car carrier had led to a total loss of the ship and cargo. He further stated that these could have been avoided if the fire had been contained by the crew, had they been properly instructed and trained (Seaways May 2017). This reference addresses the immediate state of maritime education and training, MET in our industry.

Current modus in most countries train officers and crew in a shore establishment where shipboard work environment attempts to be suitably or sufficiently replicated. This deficiency can cause a lack of awareness of any shipborne incident as the various hazards and subsequent risk management and prevention of incidents cannot be fully replicated or contextualised. However, instruction and training must be meted out to seafarers as closely as possible. Although intentions are good, methodology and delivery of the training and instruction remains archaic, instructor-centred pedagogy. You will often hear from "instructors" the rhetoric "I teach them test /examine them, then send them back to work". Usually the "instructor" follows a syllabus and adheres to the instructions in the syllabus. Voila, "job well done"! Hardly!

No sir, not all! In this short article, I hope to challenge MET trainers to go beyond this premise. Are you facilitating training to competency based standards?

In recent times, I have had the opportunity to facilitate training for Master and Chief Mate candidates for vessels over 500GT. The young officers expressed difficulty in obtaining the required sea-time as well as the lack of development and training on the ships they serve on. After all, isn't sea time where you gain development by experiential learning and praxis? Despite all the hype from industry about mentoring and on the job learning, it does not appear to be so in the companies these young men served on. There were 35 very intelligent candidates from 7 economies across the world. They had cultural diversity with different learning styles. All learning sessions were conducted in English, resulting with proficiency in Literacy and English language becoming very challenging to most. More than half were from non-English speaking background, NESB. They served on various ships from offshore support vessels to freighters, tankers, bulkers and so on in international and coastal

voyages. It is very surprising how little importance is attached to English language knowledge and skills. Being a proponent for Literacy, language and numeracy, LLN training for industry and education, I suspect these issues are also apparent in teaching and administration staff, several of whom are also non-native English speakers.

This short article touches on work- based learning, WBL and the application of competency based education, training and assessment, CBETA on-site (shipborne) and off-site (campus). Some attention to LLN and pluriliteracy during training is also mentioned.

Takeaways- keywords

Collaborative learning, work-based learning, cultural diversity in English language and literacy, pluriliteracy, competency based education, training and assessment, performance standards and criteria, group dynamics, learning styles, teaching styles, facilitator of learning.

The Australian Qualifications Framework – AQF

Maritime Education and Training (MET) is supported in vocational education by nature of the fact that maritime qualifications are achieved via competency based education, training, learning and assessment principles in accordance with the STCW convention 1978 as amended. All Australian industries education and training adhere to the AQF and the Standards for Registered Training Organisations (RTO), 2015 authorised by the Australian Skills Quality Authority, ASQA. The Australian Maritime Safety Authority accepts these standards for training and certification of seafarers in accordance with the STCW convention. All industries training and certification in Australia adheres to the Australian Vocational Education and Training, VET system. Training packages are standard for all accredited and recognised qualifications. The Australian Maritime Training Package 2015 (MAR15) exceeds the STCW convention minimum standards.

Learning and Assessment Strategy - Delivery of Training

The course and unit outline specified competency based learning. The learning outcome for this article will remain unnamed in accordance with privacy conditions. The learning materials were bountiful, designed to rely on delivery by lectures and memory based examinations and tests to meet academic and higher education (HED) practice. The intended

learning outcomes were not fully in compliance with the competence per the STCW table in question and the Training package standard of competence. Innovation was the key word to ensure learning and assessment strategies met the required standards. To ensure that the candidates could be judged as having attained the competency standard, the following actions were incorporated in the learning and assessment strategy:

- The standard of competence per the STCW and MAR 15 was identified and mapped.
- The standard of competence and elements were mapped against the three principle domains per Blooms Taxonomy (updated version), namely, cognitive, psychomotor and affective.
- The volume of learning was then determined to provide the learning pathway per the domains, identifying the required, knowledge, skills and attitudes, KSA, for candidates to perform against the criteria for each element.
- Evidence of having demonstrated the required KSA would be adduced from assessment tools to be designed per the performance criteria for the competence.
- Learning and practice was not conducive and lacked continuity due to time tabling commitments committed to only once a week, non-modular facilitation. To overcome this deficiency:
 - “Flipped Classroom” technique was applied so that class room time engaged students-teacher activities. Learners then applied collaborative learning, through discovery and discourse led by the facilitator.
 - Group dynamics provided keen debate and discourse.
 - The navigation bridge was emulated in the activities that provided the platform for decision making based on facts that were historical, current and predicted scientifically.

The above are by no means the best practice yet in its current innovation. I hope to remodel the existing lecture based materials to incorporate, action learning and action research methodologies so that learners’ participation brings about the experiential learning and practise, missing in most institutions.

Conclusion

We are at a turning point in MET. Those still opposing competency based learning methodology will need to address their fears. These fears are unfounded due to ignorance. Many with whom I have had opportunity to speak with have differing ideas and opinions on competence and what competence address and what it means. Yet there is truly only one simple premise

giving ample room to provide best practice learning and doing. This begins by treating learners as adults with responsibility and accountability for managing their learning and doing. Adult learning methodology brings about the technique of competency based learning.

The greatest confusion is derived from IMO model courses, starting with the foundation model course for teacher training 6.09. It fails to identify, describe and suitably quantify and qualify the agreed and determined standards of competence for teachers. Nomenclature for describing competences are erroneous and lack properly described performance criteria for each standard of competence. There is a standard for identifying and writing standards of competence. Many practitioners are quite unaware of this. The course also fails to provide the training and certification to the competency based approach. The mistaken role of facilitating learning and assessment as instructors add to this issue.

“What’s in a name?” many have retorted. Well if you name your son Alice or your daughter John, you are going to be in so much trouble, not to mention the kids! Perhaps I might be out of line here. With that I leave you to ponder on one of Barista Uno’s Double Shots (2017) page 27, quote

“Do grades really matter in developing a ship officer’s full potential? Is the whole system giving too much emphasis on the memorisation of facts at the expense of demonstrable work-related skills? Shouldn’t the main focus be on competency-based assessment as required by the STCW Convention? Important questions yet few seem eager to ask them.”

“Knowing maritime schools by their fruits,” August 2014

Further Reading

Popenci S. & Millar V. (2015) Writing Learning Outcomes. A practical guide for academics. University of Melbourne, Australia.

Spady W.G. (1994) Outcomes - Based Education: Critical Issues and Answers. American Association of School Administrators, Arlington, Va.

Uno B. (2017) Barista Uno - Maritime Double Shots – Crew Training, pp25-30.

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“Waihemo”: The Second and Third Voyages



I returned to Auckland on 1 July 1954 after nearly two weeks of leave following the first voyage and rejoined “Waihemo”. We discharged cargo in Wellington, Melbourne and Adelaide, then proceeded in ballast to Burnie in Tasmania, where we loaded 4,000 tonnes of concentrates for Richmond, California. We then proceeded to Sydney where we lay at Woolloomooloo, to the east of the Botanical Gardens and adjacent to Garden Island Naval Base, for three weeks while loading the ship down to her marks. The ship was again a floating warehouse, laden with the needs of the people in the Pacific Islands.

We then called at Lautoka, Suva, Nukualofa and Apia, before sailing over four thousand miles to Richmond in San Francisco Bay.

Approaching San Francisco we ran into very rough weather off the Farallon Islands, cooking ceased except for a large pot of soup and we weren't able to sleep, despite having our mattresses propped up on one side by the bunk board.

Next morning the Golden Gate Pilot came aboard from the two-masted schooner “California” purchased by the San Francisco Bar Pilots Association in 1931 and in service as the pilot vessel until retired in 1972.



“California”

On opening the hatches we found that the concentrate had become quite heated under the dunnage and sacking placed on the surface.

From Oakland we sailed to Vancouver, and were berthed at CPR pier as shown in the photos below.



In Vancouver we picked up the Super Cargo and then returned to Ocean Falls to load paper, then came south to Powell River, up the Fraser River to New Westminster for lumber and then across to anchor

in Cowichen Bay. There the Super Cargo left us and, on a Sunday when there was no loading, we launched one of the lifeboats, as shown in the photo below.



Chief Officer Harry Goodrich at the helm, Cadet Richard Wilson at rear right and myself in the front right

We then went south to San Francisco where we stayed six days, berthed almost under the Bay Bridge. I visited the beautiful Muir Woods and saw the plaque:

Here in this grove of enduring redwoods, preserved for posterity, members of the United Nations Conference on International Organization met on May 19, 1945, to honor the memory of Franklin Delano Roosevelt, thirty-first President of the United States, chief architect of the United Nations, and apostle of lasting peace for all mankind.

Next we were topping off in San Pedro, then set off on the two week trip to Tahiti.

The Australian Captain, ‘Big Jim’ Dawson, a likeable man who took a real interest in us cadets, teaching us in his dayroom and telling us stories about Polynesian navigation and his calls at Papeete, hired a car and driver and drove us around the main part of the island, obviously to see it, but another reason being apparently to keep us out of the bars. On the northern side we encountered a car that was broken down, so we stopped. The Captain found himself speaking to the Honorary British Consul, who assured us help was organised.

I recall Quinn’s Bar with Eddie Lund playing the piano and the common toilets. I recall one of the crew saying how he’d found a girl for the night and went to a hotel and found the reception counter deserted but that a voice called out “I’m in the toilet, take the key for number six”. I recall the police rounding up some of the crew when we sailed. Three of them being returned so drunk that we lowered a cargo net and lifted them on board. After we sailed an argument broke out and the two were forced by the Bosun to face up to boxing it out on number five hatch next morning. The fight didn’t last long. I recall a lot more about Papeete!

After Tahiti we paid a brief call off Avarua in Rarotonga to load mainly oranges before sailing for Auckland, where we arrived on the 12th of December 1955 and I went on a week’s leave.

We left Auckland for my third and last voyage aboard “Waihemo” on 21 December, spent Christmas in Wellington then went to Dunedin before crossing the Tasman to Melbourne and Sydney. We called at the usual Pacific Islands, including Fanning Island, then loaded in Vancouver, Ocean Falls, New Westminster and Chemainus. We then sailed for 24 days from Chemainus to Auckland. I felt sorry for our six passengers, as we saw only one island in American Samoa. The third trip lasted only three and half months. In Auckland I left “Waihemo”, a very happy ship, and joined the inter-colonial “Kowhai”.

By **Rod Short**

The Future of Maritime Education in Australia

A Discussion Paper

“Education is the kindling of a flame, not the filling of a vessel”
Socrates 470 BC-399 BC

Introduction

This paper was originally developed as a component of a University of Technology Sydney course work masters of education program. The paper was originally prepared in 2008 and recently updated. The paper discusses the future of maritime education in Australia by identifying the continuing paradigm that dominates its delivery, the current factors affecting maritime education and maritime education's possible future direction. I will achieve this by briefly reviewing the historical influences that determined how we got to where we are and outline some of the potential future directions for maritime education. The latter, the future of maritime education in Australia, is a topical issue, with the House Standing Committee on Infrastructure, Transport, Regional Development and Local Government, presently conducting an inquiry into coastal shipping. The Committee is specifically charged to:

3. *Assess strategies for developing an adequate skilled maritime workforce in order to facilitate growth of the Australian coastal shipping sector;*

(<http://www.aph.gov.au/house/committee/itrdlg/coastalshipping/tor.htm>)

Prior to commencing this discussion on the future of maritime education in Australia it is important to describe what facet of the maritime industry is being discussed. This paper will examine commercial shipping and in particular the training of crews. Traditionally the term maritime includes:

- sea transportation (cargo and passengers whether for profit or recreation),
- maritime exploitation (ocean and sea bed resources - fishing and mineral exploitation); and
- maritime infrastructure (ship building, stevedoring, port operations, etc.).

The combined maritime industry is an essential component of global transportation and recreation. The sea transportation sector of the maritime industry is responsible, almost exclusively, for the transportation of bulk commodities and the majority of consumer goods. It is an integral component of the global economy. The following discussion will focus on the sea transportation sector as this skill area is essentially linked to the others.

Today's ... sea-going merchant ships of no less than 100 GT comprised of 94,936 ships of 721.9 million GT with an average age of 22 years; they are registered in 150 countries and manned by over a million seafarers of virtually every nationality.

(IMO International Shipping and World Trade – Facts and Figures Oct 2007)

The maritime industry's leading body is the International Maritime Organisation (IMO) which has facilitated a regulatory regime of some 50 IMO conventions supported by hundreds of codes, guidelines and recommendations. These govern just about every aspect of the industry - from the design, construction, equipment and operation of ships to the training of seafarers; or from the drawing board to the scrap yard. The primary international instrument regulating commercial mariner training is the International Convention on the Standards of Training and Certification of Watchkeepers 1978 as

amended by the 1995 Protocol (short title STCW95) and the subsequent Manila Amendment in 2010.

Local industry description

In the domestic sea transport component of the maritime industry there are two sectors. The blue water sector which covers Australian vessels trading internationally and all vessels trading interstate. The brown water sector covers vessels trading intra-state. This division of maritime operations and seafarer qualifications was considered by the developers of the STCW95 who included provisions for unrestricted and near coastal operations.

The Australian federated system of Government has led to two completely separate regulatory regimes, one national system administered by the Australian Maritime Safety Authority that is compliant in all respects with international standards, and a second regime previously administered by the State and Territory regulators for near coastal operations, in the process of transition to a National administration under the domestic vessels regime. The two sectors created by these separate regimes have similar qualification structures providing personnel to operate, maintain and support the vessel.

The majority of commercial shipboard operations are carried out by the deck department which includes the master, the deck officers (mates) and deck ratings. The maintainers generally comprise the ship's engineering department and they primarily maintain and operate the ship's machinery. The last group generally comprises the catering or hotel services department to support the operators and on-board maintainers. The support department can range from one person in the case of a cargo ship to many hundred on a cruise ship. Each of these groups has a few common core safety skills and the balance of their respective competency is based on the specialist skills they need to discharge their respective roles as operators, maintainers or support staff.

The internationally dominant paradigm

There have been two (2) distinct iterations of the international convention covering the training standards for the sea transport sector of the maritime industry, STCW78 and STCW95. The first, STCW78 contained a lexicon of the requisite knowledge required for each level of qualification (certificate of competency). STCW78 articulated vocational qualifications in the liberal tradition or interpretive philosophy of education. The liberal tradition is an educational philosophy which seeks to develop the student intellectually, morally, spiritually and aesthetically through acquiring knowledge. In the liberal tradition the knowledge was typically transmitted by subject matter experts (Master Mariners and Chief Engineers) through lecture, study groups, reflection, critical reading and discussion (Zinn 1990 p.76-77). Similarly, under the interpretive paradigm the student is required to make use of practical experience and instruction to contextualise their learning (Foley 2004 p.12-15).

The liberal tradition/interpretive paradigm moves beyond skills and knowledge, and through reflection, it seeks to develop appropriate attitudes. One such attitude relevant to the maritime industry is termed 'a seaman's eye', the capacity to recognise what is out of place at a glance and correct it before injury (to cargo, ship or crew) occurs. To develop 'seamen's eye' great emphasis was placed on seetime, the on-the-job qualifying sea



service a student acquired to be able to transfer what they have learnt in class into a workplace situation.

... I now consider practical knowledge to be more fundamental than theoretical knowledge, the former being basic to any clear grasp of the proper significance of the latter. But my argument now is not merely for the priority of practical knowledge in education, but rather for the priority of personal development by initiation into a complex of specific, substantive social practices with all the knowledge, attitudes, feelings, virtues, skills, dispositions and relationships that that involves.

(Hirst 1993 p.197 in Hager 1995)

Further, the liberal tradition/interpretive paradigm seeks to get students 'to know how to do things and not merely to be able to do them.' (Bailey 1984: 80 in Hager 1995). Given the wide range of variables (time of day, wind, weather, visibility, fatigue, density of traffic, etc.) affecting the operation of a ship it is not difficult to understand the importance of equipping a maritime student with the 'how to do things' and not merely 'able to do them'. The liberal tradition supports strongly the concept of lifelong learning (Hager 1995), and the concept that learning should take place at different stages. Under STCW78 training was separated by minimum periods of on-the-job seetime, termed in the convention as qualifying sea service.

However, STCW78 was identified as having weaknesses and it was agreed internationally to amend it. As STCW78 evolved into STCW95 and amended by the Manila Amendment 2010 we have seen a greater emphasis on the acquisition of a menu of practical skills (competencies). Often it is now expected that these practical skills will be acquired outside of the ship, off-the-job. This has been in part due to a decline in the opportunities for training to take place on-board, as crew sizes have fallen from typically over 30 in 1978 to 12 in 2008. This decline in on-the-job learning opportunities has also been as a consequence of a reduction of qualifying service required by trainees, the demise of traditional company cadet schemes where there was a greater coordination of trainee learning opportunities and a reduction in the number berths available for trainees. (Muirhead 2004 p.142-143) Despite this shift of emphasis for practical skills to be acquired off-the-job, the goal of maritime training still remains to produce competent ship's crews capable of safely and efficiently operating ships.

Further, in STCW's evolution there was recognition that maritime transport is not undertaken in isolation to protecting the environment and an industry's social responsibilities. Consequently, the list of competencies was expanded to take into account such changes as well as new technologies being introduced. In the 1995 iteration of STCW the previous minimum knowledge provisions of the original STCW78 convention were replaced by detailed requirements addressing;

- Competence
- Knowledge, understanding and proficiency
- Methods for demonstrating competence
- Criteria for evaluating competence (West of England P&I Club)

The reviewers sought to quantify what Watchkeepers needed by competence, yet there is no definition of 'competence' in STCW 95. There was also a shift of emphasis from on-the-job skill transfer to obtaining competence in practical skills off-the-job; ashore with improved technologies such as computer simulation. All of this indicates that there has been a change in predominant educational paradigm from the liberal tradition of knowledge of STCW78, with its how to do things; to the behaviourist or scientific paradigm.

The behaviourist paradigm seeks to bring about behaviour that will ensure survival of the human species (Zinn 1990), in

this case to improve the safety of life and property at sea and the protection of the environment, by meeting internationally agreed standards and policies (AMSA 2007 p.2) through promotion of behavioural change. The methods associated with this teaching philosophy include programmed instruction, contract learning, teaching machines, computer assisted instruction along with practice and reinforcement (Zinn 1990 p.76-77). These methods are similar in scope to the scientific, instrumental, technical or positivist approaches to education described by Foley (2004 p.12-15) with its easily identifiable outputs acceptable to regulators and governments.

Evolution of the predominant paradigm

The capacity of the behaviourist/scientific paradigm's ability to meet the development of an 'appropriate' attitude needed by a competent seafarer is questionable. Other questions affecting the prevailing behaviourist/scientific paradigm include its capacity to effectively measure (assess) outcomes if the education provider is inadequately resourced. There is also considerable anecdotal evidence that many maritime administrations, which also have the responsibility for the drafting, approval and implementation of STCW; that they are unreceptive to other paradigms which are more student centred, output based or flexible, this is probably in part due to most maritime administrations not being educators (Lewarn 2008 p.25).

In considering the evolution of STCW, the other educational philosophies such as humanist and radical philosophies; there would be a considerable shift in the control of the learning to the learner. This poses the difficult question of regulator of 'how do they ensure easily (economically) that each individual learner reaches the same minimum level of competency?' Another view is that maritime education should be more output based and flexible with educators assuming more of the role of a facilitator. Boud (1987) contends that as a facilitator the adult educator is to provide a supportive climate 'for learners to clarify their own goals ... and make judgements about the degree of the success of their self-directed programme.' (Boud 1987 p.224). Arguably within the scope of an internationally regulated program of competencies there is very little scope (of course with the possible exception of duration) for learners to be self-directed.

It is interesting to note that as competency based training in Australia has become embraced by those ashore it has had some influence in the nationally regulated 'near coastal' (brown water) sectors of the maritime industry. The local maritime industry is also an industry with problems. It is faced with the challenges of a diminishing and aging workforce and the overwhelming threat of irrelevance. Entering the 21st century it is confronted with:

- the need to bring much of the industry to a contemporary standard of safe and relevant operations;
- the need to integrate new technology and understand the concessions that demands;
- the need to make the industry attractive to a workforce under the age of 50;
- the need to regulate the industry in a relevant and effective manner; and
- the need to challenge the comfort paradigm we all work under. (Dikkenburg 2005)

Consequently, under a regime based on the learner achieving competencies there is no allowance for the inclusion of a specified period of on-the-job experience, qualifying sea service or seetime. Another feature of competency based training is emphasis on the recognition of prior learning, learning gained in the workplace. There exists the potential to shift the emphasis where practical competencies are obtained, back away from the

shore providers. That is the provision of practical experience being transferred back to the workplace with the potential for on-the-job assessment.

Experience is doing, whether the experience contributes to learning or not can be debated and certainly not all experiences are educative (Dewey in Merriam, et al 2007 p.162). The latter qualification by Dewey is common where a task is routinely performed time and time again, once mastered it does not necessarily prepare you for the exceptional circumstance. In a system of training which is quantified in competencies (doing) does the student develop appropriate knowledge and attitude, is by osmosis (absorption through immersion) to develop an appropriate attitude. However, there is some suspicion that competency based training and on-the-job assessment is more of a cost shifting or economic matter, as there at times appears to be insufficient resources expended on training the on-board trainers (Lewarn 2008 p.24).

The Australian position

The number of mariners in Australia is difficult to discern with any level of accuracy as there is a blurring between sectors and the shore and seagoing components. The AMSA Maritime Skill Availability Study which draws on data from 2000 through to 2002 quoted the Australian Shipowner Association research that there were some 4,150 persons with 'maritime related qualifications' in the Australian maritime industry and more than half, 2460 were ashore in those positions because possession of these qualifications was either essential or preferred. It was also felt from discussions with employers and from anecdotal evidence collected by the authors of the Maritime Skills Analysis Study that the employment of foreign nationals or non-mariners would give rise to an unacceptable loss of quality (MSAS p.10). It is not known whether this unacceptable loss of quality would also extend to maritime training in Australia.

In the last decade there has been a serious lack of sufficient numbers of Australians trained with maritime qualifications.'
(AIMPE p.11)

More recently, the Australian Shipowners Association at Natship 2007 (National Shipping Conference) identified that obtaining manning figures for the Australian maritime industry was 'notoriously difficult'; however, conservatively the Australian maritime industry will be some 2000 personnel short by 2010. (Hatch, 2007). A critical influence on which direction Australia moves in with respect to maritime training is the need to address the skills shortage. In February 2006 the Council of Australian Governments (COAG) made a number of determinations that were to be implemented by the close of 2008 to address the general skills shortages across Australian industry. While these determinations apply to all aspects of vocational training and licensing in Australia they directly affect maritime training which is regulated by international convention: COAG determined that:

- Elimination of prescribed time periods in vocational training
- Elimination of duplicate assessments by regulatory bodies for people seeking occupational licences

- Harmonisation of licensing requirements with vocational education training and assessment
- Better mutual recognition of qualifications/licences issued by other authorities

(NMSC 2007 p.12)

The 2007 discussion paper from the National Maritime Safety Committee summarises the effect of the COAG deliberations on the Australian maritime industry, it does in the main attempt to limit the discussion to the 'small ship sector' operating in the brown water or near coastal sector. This may be in attempt not to become engaged in any argument that Australia is not meeting its obligations under an international convention STCW, noting that the only signatory among the COAG members to an international convention can be the Commonwealth.

The impact of this on the Australian maritime industry is that:

- Requirements for prescribed minimum periods of qualifying service (i.e. seetime) be removed
- Requirements for orals examinations by State Marine Authorities (SMAs) be removed
- Assessment for licensing of competency will shift from the SMAs to the RTOs
- Certificates of Competency (or licenses) should be issued by SMAs on the basis of completing relevant AQF qualifications

(NMSC 2007 p.12)

The direction above from COAG previously applied to the waters under the jurisdiction predominantly of the States and Territories and/or the Commonwealth (Nav Act 1912). In the last 10 years a National System for Domestic Commercial Vessel Safety to stream line the interrelationship between the blue and brown water operations by perpetuating continued separate regimes (AMSA 2016). This reflects the STCW makes provision for coastal states to make regulations for 'near coastal voyages'. There is at present no definition in STCW as to what a 'near coastal voyage' is and interpretations vary dramatically.

The current discrepancies in the definition of near-coastal voyage (NCV) often resulted in problems in relation to Port State Control. Hence, the introduction of an explicit definition of NCV and the review of the common principles governing these voyages was considered necessary.

(Mahapatra 2007)

Under another international convention, the United Nation Convention on Law of the Sea a coastal State has jurisdiction of a 12 nautical mile zone to seaward and has an exclusive economic zone up to 200 nautical miles to seaward. The definition in the Commonwealth's regulations defines near coastal as:

Australian near coastal area means the area within the Australian Exclusive Economic Zone (EEZ)

(MO Pt3 issue 6)

To be continued.....

By

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Second-hand Smoke Onboard Ships: a Threat to the Maritime Industry



Safe ships require not just competent but also healthy seafarers. In fact, the health of seafarers is always a concern for the maritime industry. There are also chances that a seafarer could be unfit onboard even though he or she has passed his or her medical examination prior to boarding the ship. It can be attributed to the working environment onboard that is not conducive to good health. Aside from the nature of work, there are also other factors that might put the health of seafarers at risk such as lack of exercise, fatigue, and poor diet, to name a few. There are many studies and articles that give suggestions and advice on how to equalize these factors to remain healthy. But there is one more health risk factor that is seemingly taken for granted or overlooked – exposure to second-hand smoke.

Second-hand smoke is the smoke produced by smokers that non-smokers breathe. According to Japanese Journal of Marine Medicine in 2006, 56.8% of seafarers smoked. That means the remaining 43.2% or almost half of the seafarers' population is also subject to second-hand smoking. A recent study in 2017, *Experiencing Second-Hand Smoking Onboard Ships by Seafarers*, conducted by Bacasdoon surveyed 555 seafarers, who are non-smokers, from 79 vessels of different types. It was conducted to determine how second-hand smoke affects seafarers onboard ships, specifically non-smokers. The study focused on the locations onboard where non-smokers experience second-hand smoking and how they are affected by it. Fully aware of the effects of smoking to health, Bacasdoon clarifies that the study is not against smoking onboard as he acknowledges that smokers have also their rights to smoke. Unfortunately, rooms that are designated for smoking are common for both smokers and non-smokers, thus, putting non-smoking crew to a greater risk of exposure to second-hand smoke. The said study responds to the call of Maritime Labour Convention, 2006 to conduct research on the health status, medical treatment and preventive health care of seafarers. And also, it raises awareness to maritime authorities to address the problem – exposure of seafarers to second-hand smoke onboard.

The results of the study indicate that 98% of the respondents experience second-hand smoking onboard. Non-smokers are exposed to second-hand smoke in different locations onboard ships. 56.8% experience second-hand smoking in crew mess room, the designated smoking room with the most number of respondents exposed to second-hand smoke. One crew said that he experiences second-hand smoking almost everyday in the messroom because crew take turns in smoking during coffee breaks, breakfast, lunch, and dinner.

Twenty-three point two percent (23.2%) of the non-smoking crew are exposed to second-hand smoke in the bridge while 21.8% experience second-hand smoking in recreation room. It is followed by engine control room (ECR) with 8.8%, then smoking room, and officer's mess room with 7.2% and 6.5% respectively.

The said study found out that a third officer and a cadet had no other choice but to inhale second-hand smoke when the Master or the Chief Officer starts to smoke in the bridge. Recreation room is where the crews relax and unwind after a day's work usually watching movies, playing games etc., whatever is available on board. However, this is not necessarily true to all vessels as one crew said that he cannot stay longer in the recreation room whenever somebody smokes. He also added that when he starts to feel discomfort, he leaves the room immediately.

A Second Engineer said that the ECR is having not just second-hand smoke but also third-hand smoke that even if there is no one smoking, the smoke can still be inhaled as if you are smoking. Some vessels have smoking rooms but they are common place for all crew – both smokers and non-smokers because entertainment and recreational equipment can be found and used inside.

"In the Officer's Mess Room, I can stay if there is only one crew smoking. I just distance myself for about two meters. But when three or more smokers start to smoke also, my body can not tolerate anymore so I would leave the room immediately," said one second officer.

Second-hand smoking is also experienced in Ship's Office, Day Room, Cargo Control Room (CCR), ER Workshop, Duty Messroom, on deck, in Master's Office, Chief Engineer's Office, cabins, tally offices, and in hallways.

Healthy seafarers perform well, and get the job done. But this is just as good as until the working environment that poses health risks takes its toll on them. This can have an impact on seafarers' ability to perform their jobs effectively. Further result of the study states that 70.8% of the non-smoking crew, when exposed to second-hand smoke feels discomfort, followed by cough (44.2%). Difficulty in breathing is felt by 31.8% of the respondents and 18.5% experience headache when exposed to second-hand smoke.

Other effects of second-hand smoking felt by non-smoking seafarers are dizziness, chest pain, eye irritation, nausea, disorientation, bad odor, allergy rhinitis, sinusitis, nasal pain, nose irritation, and colds. A third officer said he acquired Pulmonary Tuberculosis (PTB) onboard when he was a cadet. It was linked to second-hand smoking in his findings during his post disembarkation medical checks.

A Junior Officer said that second-hand smoke in the bridge would cause him discomfort and coughing and sometimes his jobs were affected like keeping a proper lookout, plotting positions, writing in bell book to name a few.

According to one crew, when the smokers start smoking and he already finds difficulty in breathing, he just goes to his cabin. As a result, his social life onboard is compromised, he added. But he is willing to sacrifice social life to save his health.

"It sucks to start the day with headache because of second-hand smoke," lamented one engine crew. *"Chief Engineer always smokes during tool-box meeting before we go to work,"* he added.

Numerous studies have already proved that second-hand smoke has serious effects to health. In 2012, National Maritime Occupational Health and Safety Committee said that second-hand smoking has links with a range of health disorders. Individuals who do not smoke and who are frequently exposed to the toxic chemicals in smoke can suffer severe and life-threatening health concerns. In the long haul, people exposed to smoke have a more danger of suffering from lung growth, nasal sinus tumor, coronary illness, stroke, and breathing issues, for example, expanded hacking, wheezing, pneumonia, bronchitis, and asthma. According to British Columbia HealthLinkBC (2015), non-smokers will experience the ill effects of the impacts of breathing second-hand smoke immediately. In as little as 8 to

20 minutes, physical reactions that are connected to coronary illness and stroke can happen. These responses incorporate expanded heart rate, less oxygen to the heart, and constricted blood vessels that increase blood pressure and make the heart work harder.

Charles W. Schmidt (2007) said in his article, *A Change in the Air: Smoking Bans Gain Momentum Worldwide*, that countries have implemented several smoke-free workplace policies since the workplace is one of the main sources of second-hand smoke exposure for many adults. Some have gone beyond by banning smoking in all indoor workplaces. To protect its workers, Ireland took the extraordinary step of banning indoor workplace smoking absolutely. In so doing, it launched a wave of similar national-level policies now spreading across the globe. Just this March 2017, the Philippines also enforced national smoking ban when its President Rodrigo Duterte signed the Executive Order on smoking ban nationwide, acknowledging the health effects of second-hand smoking.

Onboard ships, there are also smoking regulations but they are mostly limited to locations that specifically address possible causes of fire and explosion. Laws protecting seafarers onboard from second-hand smoking are close to none.

On February 23, 2006, the International Labour Organization (ILO) adopted MLC, 2006 that promotes decent conditions of work of seafarers considering that, given the global nature of the shipping industry, seafarers need special protection. Moreover, ILO was determined that this new instrument should be designed to secure the widest possible acceptability among governments, shipowners and seafarers committed to the principles of decent work, that it should be readily updateable and that it should lend itself to effective implementation and enforcement.

In its entirety, MLC, 2006 mentioned only once the term "smoking room". In Regulation 3.1.11 – Recreational facilities, mail and ship visit arrangements, paragraph 4(a), it states that consideration should also be given to including the following facilities at no cost to the seafarer, where practicable: (a) a smoking room. Though it further mentioned in Regulation 4.3 – Health and safety protection and accident prevention with the purpose to ensure that seafarers' work environment on board ships promotes occupational safety and health, there is no specific provision concerning seafarer's protection from second-hand smoke onboard ships.

MLC 2006 emphasizes in Regulation 4.2 that shipowners are liable and responsible for health protection and medical care of all seafarers working on board the ships in accordance with the following minimum standards. Health and Safety Executive (HSE) states that employers should have a specific policy on smoking in the workplace and should take action to reduce the risk to the health and safety of their employees from second-hand smoke to as low a level as is reasonably practicable. Furthermore, smoking policy should give priority to the needs of non-smokers who do not wish to breathe tobacco smoke; and employers should consult their employees and their representatives on the

appropriate smoking policy to suit their particular workplace. According to National Maritime Occupational Health and Safety Committee (2012), any room that is designated for smoking should be used solely for the purpose of smoking. It is not recommended to allow smoking in any cabin used for sleeping, as it is likely that it will be used by smokers and non-smokers at different times. Where reasonably practicable, any room that is designated for smoking should be completely enclosed on all sides by solid, floor-to-ceiling walls; adequately ventilated and not ventilated into a smoke-free place, and does not have any door that opens onto smoke-free premises which are not mechanically closed immediately after use.

While it is true that smokers have the right to smoke onboard, it should, however, never compromise the other half of the seafarers' population. Non-smokers strive to live a healthy lifestyle by not smoking onboard but because of lack of policies protecting them from it, they still end up experiencing second-hand smoking because it is almost unavoidable onboard ships. It is about time for maritime authorities to look deeper into this crisis and start creating policies that should aim to promote the health and welfare of seafarers and maintain a healthy shipboard environment and reduce to a minimum, if not, eliminate the risks of non-smokers from tobacco smoke. This is the hope of one crew when he said, *"I want to live healthy. But onboard I have no choice but to breathe in second-hand smoke because the designated smoking room is common for all crew. I hope there will come a time that there will be separate room for smoking."*

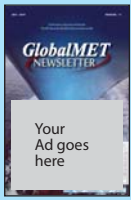
Every shipowner and charterer desire smooth cargo transfers and operations so that they could be delivered to their destinations without fail. Only competent and healthy seafarers will make this job done. Every Administration would want to have more active seafarers especially those whose economies highly depend on maritime industry. Only healthy and fit seafarers can continue to go onboard ships. Every shipping company and its manning agency would like to have smooth operations in crew management and deployment, not disrupted by employees unfit for sea duty. And every seafarer, motivated by personal dreams and high hopes to provide for his or her family and aims to finish his or her contract and be able to go onboard again, is yearning that his or seafaring career would not have an untimely demise just because of a working environment onboard that is prone to acquiring the ill effects of second-hand smoking.

Therefore, second-hand smoking poses a threat to the entire shipping industry. And it is just a matter of time that this threat, when not acted upon, will be like rust on deck, when left, will slowly destroy the whole ship. Then it is just proper that everyone – from the International Maritime Organization (IMO), ILO, shipowners, governments, shipping companies down to the seafarers themselves should act to have a safe working and living conditions onboard. It is never too late! Let us start protecting seafarers from second-hand smoke onboard ships.

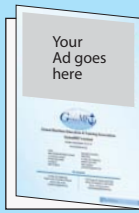
By **Jeric Bacasdoon**
Deck Officer/OIC at Sea



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