ISSUE NO. 66

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

# GlobalMET NEWSLETTER



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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

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s suggested in the last edition of the Newsletter, we have tried in this edition to pull together a few ideas about IMO model Courses. My thanks to Chris Haughton and to Richard Teo for their efforts in developing two interesting articles at fairly short notice for this edition.

Having read the articles, I am reminded of the problem of the law of unintended consequence. Similar to the possibly more familiar "Murphey's Law" (anything that can go wrong, will go wrong), the Law of unintended consequences tries to highlight the fact that even though we might take actions for the best possible reason, the consequences of the action either give us an unexpected bonus, or, an unexpected drawback, or, give us a result which is completely unexpected. With model courses, the original idea was to improve the training and certification of watch-keepers. Laudable as this idea is, it removes the need for curriculum development, and makes it easier for anyone outside the world of education, to decide if you are meeting the STCW requirements for your course. This, in turn makes these minimum standards THE standard, and does not encourage us to develop the courses further than the minimum requirements. Can we do better? I will leave the two excellent articles to develop the ideas further, and go some way to answer the question.

I have added a short article to expand on the idea of using the IMO model course and what we should do with them. A model course is not "one-size-fits-all" and IMO do not expect it to be. Why, then, do we use it that way?

Thanks, as always, to Rod Short for further recollections form his time at sea. It is enlightening to look at the time that ships used to spend in port loading and discharging in comparison to modern shipping. At the risk of sounding like an ancient mariner, it is perhaps one of the reasons why retention of seafarers is universally poor – no time to experience the world. Perhaps this could be a topic for another edition of the Newsletter – what can be done about retention?

Best wishes.

By Capt. Richard Dunham PGDip Cert Ed



## Using the IMO Model course?



MARITIME ORGANIZATION

et us assume that you are in the lucky position of having to create a short course, one that has not been taught in your institution before. Where do you start?

A number of questions will need to be answered at this early planning stage, among which will be the following. What should the course cover? How much time will I need to prepare the course? How long should the course be? How should I assess student progress? What teaching materials do I need?

An easy place to start would be to ask your colleagues if any of them have experience of the course in question. However, it is unlikely that they will have detailed information as to course content, and so another starting point would be the IMO Model courses. A full list of the Model courses can be found on the IMO website. Search IMO website for Catalogue of publications, or use this link to find the list of model courses

#### http://www.imo.org/en/OurWork/HumanElement/ TrainingCertification/Documents/list%20of%20IMO%20 Model%20Courses.pdf

You will need to purchase the publication, but it can be instantly available to you if you purchase and electronic copy of the model course online.

You now have a document which will give you details of the minimum standards for this course - indicative hours, content, and an idea of what the timetable will look like. This is an excellent starting point, and we should now question if this format will meet the needs of our learners. As an example, the time available in the timetable for the introductory content may not be needed if the students are already familiar with your institution. If we cut this down, what else can be added? Do we need to take the model course and follow it to the letter?

In the introduction to a model course it states "The model course can best be described as a guideline, which when used with discretion can bring about uniformity in the world of Maritime Training. However, the intention of the model course is not to provide a package that is to be applied blindly. In any training mechanism, the presence of a trained instructor can never be underestimated or substituted. The knowledge, experience, skills and sincerity will always act as the lynchpin in transferring knowledge as the primary part of training." This can be interpreted as meaning that we should use the course as a guideline, and adapt it to not just meet our teaching style, but also the learning style of the students. It will be affected by other external factors such as the target group of students, how long since they were in education, their reason(s) for attending, if this course is interrupting their leave, and so on. A skilled instructor can adapt the delivery methods and timings to take account of the learning styles of the students and their motivation(s) for attendance.

The Model course introduction goes on to state, "Education systems around the world are a function of cultural backgrounds. And these vary considerably from region to region. The success of this model course will therefore rest on the fact that it can guide the application universally. It has been drawn using a large canvas to identify the basic requirements and stipulations of IMO conventions and related recommendations related to the subject." This reinforces the idea that the "one-size-fits-all" model course will not work in all regions of the world and will need to be adapted for local conditions. This is where the skilled instructor and education developer steps in, to use the model course as the basis of the course to be prepared, but using their skill and experience, adapt it to the local requirements. In short, then, the IMO Model Course allows us to see one method of putting together the course, defines the course content, and shows an example of how the course could be structured with indicative hours for delivery.

There will, no doubt, be discussion about the course, and a few more questions to answer. Are the indicative hours sufficient? Does the suggested course content provide (my) students with sufficient understanding of the subject? Do I need to expand the content for my students? Does the suggested timetable tackle the subject matter in a logical sequence that my students will be able to follow? This is where the skill and experience of the instructor must be used - to adapt the course for local conditions.

What we should end up with is a course fit for our students, which follows and expands on the content of the model course, which is adapted to local requirements of our teaching environment, which can be approved by our regulator as meeting the course requirements. A method of developing a course, which matches international expectations for the knowledge, understanding and proficiency of seafarers, but is specifically designed around our students.

Is this all we need to do?

Capt. Richard Dunham PGDip Cert Ed

# **On Model Courses and Competency Based Education**

#### Introduction

Based on the revised guidelines for development, review and validation of model courses (MSC-MEPC.2/Circ.15), model courses serve to ensure that any course is consistent with the relevant IMO instrument. In this regard, it is accepted that competency based education, CBE or competency based learning, CBL as stipulated in the STCW convention 1978, as amended shall be the methodology. Both terminologies may be deemed equivalent for the STCW, a general framework for marine qualifications provided as the minimum standards for seafarer training and certification. Competencies are described briefly in broad terms, without elements and not showing the requisite dimensions of learning. There isn't any unpacking information. Rubrics are left to imagination with indecisive and poorly worded performance criteria. This arrangement then is expected to provide for competency based education, training and assessments, CBETA for all mariners.

In the context of this article, I have taken CBE, CBL, CBETA and outcomes based education to collectively follow the same objectives and outcomes for the effective delivery of training, teaching, facilitating learning and principles and methods for conducting assessments that attain the standards of competence for the marine qualifications in the STCW convention 1978, as amended.

#### Model Courses are not yet Competency Based

Modernisation and improvements to the model courses are reportedly underway. The guidelines provide a specific format for the design of model courses. Careful study of the guidelines show that strategies for delivery, assessments and evaluation of the training programmes are not competency based learning CBL or CBE. They in fact remain primarily knowledge based delivery. Model courses then inherit some of these basic flaws:

- Strategies for learning and assessment remain traditional delivery by didactic lectures, chalk and talk and by and large teacher-centred approach with antiquated, out of date resources except for some full mission simulators and a few computer-based training software, that are mostly look and see without outcome-based practical and demonstrable activities.
- 2. Each course has not sufficiently identified and described the agreed standard competences that make up the qualification (packing instructions to ensure KUP met), resulting in numerous subjects to be lectured that do not necessarily result in learned outcomes that comprise the standard competences. The STCW is a standards based qualification framework. The model courses seem to have ignored this and are almost completely knowledge based documents.
- 3. Course methodology is subject centred (*superfluous information not amounting to the requisite volume of learning aligned to the actual performance required*) instead of being learning outcome oriented, i.e. to the specified performance standard. This results in onerous memory work to be regurgitated at a non-criterion referenced examination that does not measure competence as having been achieved or attained in accordance with the performance criteria.
- 4. Lack of orientation towards adult learning (Andragogy) methods to achieve the learner-centred approach in competency CBE/CBL approach.

 Continuous activity-based/ demonstrable, evidence based assessments tools design and applications for competence or skills sets (holistic approach)



must be included effectively. Significantly, little priority has been given to adult education methodology, a primary contribution and aspect of CBE/CBL, thus limiting the training to within knowledge based boundaries. Outcomes based education OBE, objectives appear to be ignored.

- 6. There has not been a required shift in paradigm from out of date pedagogy, teaching syllabus to outcomes-based learning, assessing and teaching strategies. There is instead a notable resistance to change. There is also little mention of state of the art (resources) learning strategies via adult learning methodology i.e. andragogy and heutagogy.
- 7. Learning environments are still traditional, class room oriented, out of date time tabling, forcing teacher centred approach delivery split over weeks. These lectures are dragged over boring compulsory hours of didactic lectures. Insufficient priority has been given to learning styles, modernistic learner-centred learning environments and spaces. Little if any at all provision for work based learning, WBL and construct that pertains to WBL, an imperative dimension for ascertaining competence.
- 8. Incorrect application of the revised Blooms taxonomy and the inadequate use of descriptive language (action verbs) to cover each principal domain of learning, i.e. cognitive (knowledge and understanding), psychomotor (Skills and proficiency aligned to the knowledge) and affective (attitude and behaviour in performance). There is no evidence as to how standards of competence can be transferred to the learner, sufficiently.
- 9. Most important of all, the model courses in its present design are not suitable for mature professionals and young adults. They appear to be likened to high school kids, following high school pedagogy. There is a need to minimise or eliminate traditional pedagogy more suitable for children and school. Even that is changing at a far greater rate than MET.
- 10. Instead professional performance oriented learning and praxis must be instituted, applying andragogy, heutagogy and flexible learning in a CBE/CBL context in conducive learning environments and spaces. The model course 6.09 is the best start point to institute an approved quality benchmark, i.e. standardised approach to training programmes and courses delivery. The suggested class room seating arrangements in model course 6.09 are seemingly out of date and do not encourage group dynamics, interactions and learning.

#### What to do?

To begin with, the model course 6.09 that is supposed to train maritime educational teaching staff to deliver maritime education and training (MET) needs to be superseded and republished to deliver outcomes based CBE/CBL. It is in its present state, tinkered to death. It cannot attain a standard of competence outcome because it is trying to fit CBE/CBL into a non-competency based instructional manual. The term "instructor" does not connote to professional adult education and directly CBE/CBL. MET and the delivery of courses require higher skills than what is required of an instructor. This term has been retained in lieu of "Facilitator" or even "Teacher". This

is a step backwards and is evidence of an irrational resistance to change. I was appalled at how the revised model course 6.09 appeared. The final draft produced was clear evidence of insufficient knowledge, understanding and proficiency of what a standard of competence comprised of and how each competence or cluster of competences/skills sets may be delivered across a range of variables and transferred during training and assessment. In short, the manual would mislead the aspiring practitioner for MET, resulting in learners who would be "not yet competent" on completion of training:

"College is a place where a professor's lecture notes go straight to the student's lecture notes, without passing through the brains of either" – Mark Twain

Simple meaningful words and if contextualised to the current MET situation; MET professionals in regulatory and providing MET need to depart from traditional didactic teacher-centred approach to learner centred-learning and assessment strategies. Curriculum and training programmes must move away from subject based delivery to performance based delivery. This means a decisive departure from old traditional practices where the sage stands in front of the class room spieling his or her narrow-focussed dissertations. Learning and assessment delivery strategies need to engage every learner-candidate in a participative, collaborative inquiry and sharing community of practice in conducive learning environments and spaces. Heed then:

# "The mind is not a vessel that needs filling, but wood that needs igniting" – Plutarch from Ian Kidd's translation of Essays

Cost of operations and resources, too often an excuse for not practising CBE/CBL need to be matched with good financial planning by providers and their respective governments. Those who are unable to obtain the funds to provide proper training as required for CBE and CBL must either stop or integrate with other providers. If not the standard of MET will not be attained even at minimum standards per the STCW.

Fundamentally, the STCW itself needs to be fully converted to the criterion referenced standard performance based outcomes per the standard of competences. Some model courses, in particular, course 6.09 have yet to properly identify and describe the qualification and teaching competences correctly and deliver training towards these outcomes. The learning dimensions in accordance with Blooms taxonomy need to be thoroughly explained to; firstly, ensure that the confusion from past mistakes caused by tinkering are eliminated and secondly, ensure outcomes viz., competences are described appropriately for each dimension, i.e. cognitive, psychomotor and affective to fully attain the competence accordingly. Assessment tools, methodology and applications need to be properly described so that design, rubrics and judgement are standardised across borders. This is imperative for measuring the competence(s) that have been attained in accordance with the criteria. Some jurisdictions have already produced and published national standards and competences in industry training packages equivalent and above the STCW, e.g. Australia and New Zealand.

#### Conclusion

This article is not exhaustive and further reading is recommended. We have a long way to go to attain correct MET methodology if competent seafarers are the products of training programmes. Model courses must be so constructed to conduct the process of competency based learning in accordance with the STCW standards and not in its present non CBL/CBE format, hence possibly causing the reported insufficiency of seafarers' competence, trained with model courses.

Incidentally, there is nothing to stop the awards of professional degrees that are competency based. Too often I hear old die hard Higher Education academic lecturers express disregard for CBL/CBE. These people are perhaps the resistance brigade?

#### **Further Reading**

Blackboard – Competency Based Education (CBE): Higher Education's answer to the call for change (see www.ed.gov/olinews/competency)

Guidelines for assessing competence 4Ed 2012. West Australian Govt.

Popeneci S. & Miller V. (2015). Writing learning outcomes, Melbourne centre for the study of higher education

By Capt. Richard Teo, FNI FCILT MAICD MSc MIM GDBus BTeach/Ed MMar



Manila, April 2016 - GlobalMET workshop on facilitating STCW Competency Based Learning methods in Maritime Education & Training for teaching and administration staff (MARINA, MAAP, ABS Academy, PIT, NMP)

## 'Waihemo': The First Voyage



n 1946 the Union Steamship Company of New Zealand purchased four 7,200 ton Canadian built and owned standard 'Victory' ships for the trans Pacific service. 'Waihemo' was built in 1943 by West Coast Shipbuilders, Vancouver, as 'Parkside Park'. She carried 6 passengers. She was sold to Panamanian interests and broken up in 1969. I joined her in the second year of my cadetship and did three voyages. Two of the voyages lasted five months and the third four months. With a triple steam engine she did a steady 10 knots, but could reach a maximum of 11 knots. She was a slow, happy ship and I enjoyed my time on board.

For the first trip I joined her in Auckland in early January 1954 and we went to Wellington, Melbourne and Sydney to complete discharging and then loaded her down to her marks with general cargo - all the necessities - for the Pacific Islands. The trip to Vancouver took six weeks, calling at Suva and Lautoka in Fiji, Nukualofa in Tonga, Apia in Western Samoa and Fanning Island in the Gilbert and Ellice Islands.

There were three cadets, Richard Wilson, Jack Irwin and myself, accommodated in specially built quarters at the after end of the boat deck, heated by steam pipes which cracked and banged when the steam was on. The passengers included the manager of the cable station on Fanning Island and his wife and a German, who frequently interacted with us. I met an attractive girl while swimming in Apia and he teased me frequently about leaving my heart in Samoa.

At Fanning Atoll, also known as Tabuaeran, one of the Line Islands of the central Pacific Ocean and now part of Kiribati, a cable station was hosted as part of the Trans-Pacific Cable between Canada and Australia. When we arrived mid-afternoon we were too large to enter the lagoon and lay off, rolling gently in the Pacific swell. A launch carrying the daughter of the cable station manager came out. She sat on the top of the wheelhouse wearing a bikini, which of course resulted in a lot of wolf whistles.

After the re-united family went ashore we lay off until the next morning when some cargo was discharged, before setting off for Tatoosh Island light house on Cape Flattery, at the entrance to Juan de Fuca straight between Washington State and British Columbia, some 3000 nautical miles away.



In Vancouver a Super Cargo joined the ship for loading the pulp, paper and lumber over two weeks in Chemainus, New Westminster, Powell River, Ocean Falls and back to Vancouver. Ocean Falls, our northernmost port was owned by Crown Zellerbach and is only accessible via boat or seaplane. At the time the pulp and paper mill was the largest mill in British Columbia. The population was around 3000, most working in the mill. When we were there the children had to be off the streets by 2100, because of the bears coming out of the forest searching for food.

We then called at Tacoma near Seattle. I was reading the draft at the stern when an elderly longshoreman came across and said 'This ship from Noo Ziland?'. Upon hearing confirmation he responded by saying 'That's away down under, on the opposite side of the world'. When I again affirmed he said 'Tell me young man, how come the cargo's not upside down?'.

With timber deck cargo loaded almost to the bridge windows, we then proceeded down the coast, under the Golden Gate and spent four days loading in San Francisco, berthed almost under the Bay Bridge at the bottom of Market Street. We took every opportunity to go ashore and see the fascinating city.

From there we went to San Pedro in Los Angeles to finish loading, mainly machinery for the new paper mill at Kawerau in New Zealand. Again we went ashore and took the train into Los Angeles where we walked the streets of Hollywood and saw the cement handprints and footprints in the forecourt to the stars. After two days, with passenger having joined the ship, we sailed for Tahiti, two week steaming away. 'Waihemo' was down to her marks.

In Papeete we stayed only overnight, to disembark the passengers and discharge and load some cargo. Nevertheless Tahiti has strong attractions, the island is mountainous and beautiful, the woman are attractive and welcoming, Quinn's bar featured a tremendous American pianist and gendarmes were used to help in rounding the crew up for sailing the next afternoon.

We then steamed for five days to Rarotonga, where we loaded from lighters while rolling in the Pacific swell off Avarua tropical fruit on deck for Auckland. Seven days later we arrived back in New Zealand having taken five months for the voyage. I went home to Opotiki on leave for two weeks, before re-joining.

**Rod Short** 



## Model Courses – Do We have a Problem?

ome readers may already have heard my going on about Model Courses – so to them I apologise – and to everyone else I trust this short piece will give food for thought. The usual caveat applies: the views expressed here are my own and not necessarily shared by the organisations for whom I consult.

The hypothesis is that model courses, in general, have become so uncritically entrenched and normalised in maritime training that we may be reaching a position where they are beginning to have negative impact. And this, despite having had a hand in revising one of them myself!

First, some history. Model courses were developed in the 1970s, following the introduction of the STCW Convention and at the behest of IMO Member Governments, in order to assist in the Convention's implementation and improve the quality of existing courses in developing countries. Fast forward to the 21<sup>st</sup> Century and the IMO now sells more than 60 model courses encompassing a huge range of maritime curricula.

Model courses offer a pragmatic and ready solution to the challenges of delivering new curricula. They all contain some sound material and good advice (as l've mentioned elsewhere<sup>1</sup>) and are designed to assist institutes and their teaching staff in organising and introducing new training courses. They offer help (for those who want it) in developing a curriculum which is fit for purpose, work towards the intended and measurable outcomes and meet the STCW requirements.

What they're *not* intended to do is offer definitive, prescriptive onestop, input-driven solutions to curriculum design and delivery. This seems to be what's happening and, in a nutshell, is at the heart of the problem. Let's unpack the component parts.

#### **Short Cuts**

In many academies and learning institutions it is thought the Model Courses are used exclusively. This relieves the institution from the burden and costs of having to set up properly constituted curriculum design teams. The downside of this is that the *engagement* of academic staff with the material they are teaching may be secondhand and flimsy. There's a risk that 'instructors' (to quote the language of the Model Courses) simply deliver the material in a didactic, formulaic style, stripped of personal interpretation, cultural nuance and pedagogic awareness. The curriculum becomes driven by the exigencies of the Model Course instead of by the learner. This is as far away from effective teaching as it's possible to get.

#### **Dependency Culture**

Academic faculty now run the risk of becoming dependant on the Model Course and of relying totally on its content. Any departure, even where it's relevant, topical, educational and interesting, is impossible since the rigour of the Model Course doesn't permit any departure from the prescribed track. The timetable is relentless and steams on regardless of the speed of assimilation being displayed by the learner. If the instructors themselves are this reliant on the prescription, imagine how the mindset may transfer to the student: 'This is The Way and There Shall Be No Other'. It would be hard to imagine a more dispiriting and depressing state of affairs.

#### **Critical Thinking**

Model Courses have little concept of, or show allowance for, critical thinking. In 'Model Course World' it's a perfectly binary scenario, where there are definitive rights and wrongs, blacks and whites, ons and offs. No possibility of shades of grey, alternative interpretations, contextualised explanations and sometimes, just plain differences of agreement. This is not the way the real world operates. We've all witnessed many differences of opinion between Subject Matter

<sup>1</sup> Holder, L. (2017). *Maritime Training on Board*. Edited by C. Haughton. Edinburgh. Witherbys.



Experts where all parties are convinced of the correctness and efficacy of *their* pet solution or procedure. The truth is that *all* the solutions probably work and we should keep an open mind as to which one to choose taking into account the

context, and evaluating all the other factors. But how on earth are students expected to develop their own initiative and critical senses if they're being trained within a system so devoid of uncertainty? How can learners learn to cope with the uncomfortableness of not having pre-set solutions if their instructors don't understand this concept?

#### It's Easy with a Model Course at My Side

It's an interesting observation that we happily pull in the technical experts when we need to fix our radars, engines or computers but when it comes to training, everyone's an expert. This is because we've all been trained and there's a tendency to morph that experience into expertise. Unfortunately, having been a student qualifies you to teach about as much as consulting your doctor gualifies you to practice medicine. Teaching, training, instructing, facilitating (and they're all different activities) isn't rocket science (or as hard to learn as medicine!) but it's not always easy, needs an element of training, a good dose of learning and, as with any new practical or cognitive skill, loads and loads of reflective practice. The Model Courses, with their easy-to-follow, teach-by-numbers layout, may seduce competent mariners into thinking they're automatically competent teachers. While this is also likely in colleges where they don't use Model Courses, it's probably true to say that the wholesale adoption of them makes the likelihood more certain.

#### Where's STCW in all this?

An interesting question. STCW is the Convention, one of the four so-called pillars of maritime safety<sup>2</sup> and the instrument which Governments, by and large, adopt into their domestic law and so give us our legal framework within which to work. It's difficult to argue that STCW's perfect – some parts are over-written while it's too light in other places. But to get 170+ nations to agree to *anything* (in a world where we can't even agree on which colour buoy goes on which side of a channel) is little short of miraculous and the IMO should be applauded for its sterling work on the STCW.

The STCW is the bedrock of maritime education and training. Nations use the Convention to devise their training schemes, write their standards, set up their audit and inspection regimes and then... let the academies get on with it. Why then do we need this extra layer of interpretation called the Model Course? The short answer is 'we don't'. Hundreds of training institutions the world over don't use or recognise them and wouldn't know a Model Course if they tripped over one. The supreme irony of course is that the western and developed nations who have been largely behind the Model Courses are the same ones who don't use them! So we can now add 'patronising' to the list of negatives associated with the esteemed Model Course. These same institutions may of course have their own national versions of Model Courses – but their localness and restricted use means they're much easier to keep current. And this is addressed in the next paragraph.

#### **Currency and Relevance**

Two of the most serious consequences to consider. Learning is essentially dynamic. Technological and societal change is all around us. The fundamental problem is that once the Model Courses are written they're likely to stay on the shelf – for years! Recent pressure has caused a few Courses to be (rather hurriedly) re-issued, but the fundamental problem remains.

<sup>&</sup>lt;sup>2</sup> ...along with SOLAS, MARPOL and the MLC

Time for a quiz...as you read the following quotes, all from the same Model Course, have a go at dating the year it was published:

'Check the blackboards and writing materials...'

'Check...the overhead projector transparencies (OHPs) and arrange them in the order of presentation...Ensure spare lamps are available...

"...arrange your [photographic] slides in order of presentation..."

"..check [the cine film's] compatibility with the projector (i.e. 16 mm. 35 mm, sound etc)....Test-run the film to check there are no breakages...'

'...the two types of video player commonly used are VHS and Betamax...'

'...check the raster format used in the tapes is appropriate to the  $\mathsf{TV}...'$ 

Year of publication? Go to the end of this article to see the answer!

But of course, much more important than the currency of the museum-piece projector equipment, is that of the *curriculum* itself. The shelf life of knowledge is getting shorter and shorter: if curricula is overly prescriptive it will never be able to keep fully up to date. The inclusion of redundant and old material risks bringing the whole concept of Model Courses into disrepute. The only solution is to adopt the principles of outcomes based education to encourage organic, continuous review and development.

This in turn means we have to wean ourselves off the obsession with centralised, controlled, monolithic design models and turn towards a more devolved delivery model based on the STCW itself. Course design needs to become much more nimble, fresh and dynamic.

#### **Industry's Approach**

You'd think (and hope) that the maritime and offshore industries would be keen to ensure that training standards are high, relevant and current. Judging by their attitude towards Model Courses this doesn't always seem to be the case. The evidence for this is in the fact that some short course certificates *must state that they've been delivered in accordance with the relevant Model Course*. Presumably, this is predicated on the assumption that the Model Courses are fit for purpose. After reading this article you can make your own mind up on that one.

We are in a situation therefore where Model Courses have, in some cases, superseded the STCW and become the *de facto* Convention. Academies are working in compliance with the Model Courses instead of the STCW and this state of affairs is being reinforced by industry in the erroneous belief that it's the Right Thing To Do.

#### What can be done about it?

The genie's well and truly out of the bottle. Our forefathers who wrote the first Model Course (with the utmost good intention) could never have foreseen the day when it would be, for all intents and purposes, *de facto* law. Nearly fifty years and sixty courses later, with an entire industry of curriculum development under its belt, it's difficult to see how the Model Course Megalith can be dismantled.

In recognition that all's not well, the IMO have recently pronounced that seafarers shouldn't have to produce documents that aren't required by the Convention [i.e. Model Course Certificates] and that STCW Certificates 'should not be required to contain reference to IMO Model Courses' (STCW.7/Circ. 24.1). This is, of course, the same as saying STCW Certificates *may* contain the reference, so it doesn't really change anything.

As I mentioned at the beginning, I had a hand in editing a Model Course a couple of years ago, as part of a GlobalMET team. We thought we'd done quite a reasonable job in designing something that was learner-centred and up to date. Imagine our surprise when, four months later, our work was published. The new thinking had been largely expunged and it had all been reformatted to comply with the IMO Model Course pattern. Even the use of the term 'facilitator' was deemed too radical and was replaced by 'facilitator/ instructor' and then simply 'instructor'. The resistance to change is clearly very strong.

My own view is that, for starters, Circ. 24.1 should be beefed up even more to read 'shall' rather than 'should'.

As well as that I think it's imperative that the Model Courses are reviewed root and branch to bring them up to date pedagogically as well as technically. And finally, surely it's vital that the IMO constitutes a standing Curriculum Review Committee whose task it is to keep every single one of those sixty-odd courses up to speed.

How you go about convincing 170 nations I leave to someone else...!

The quotes are taken from pages 53 and 54 of the Model Course 1.39, 'Leadership and Teamwork' published in  $\ldots$  2014

By EdD MA BA PGCC CertEd QTLS Master Mariner FNI FSET



## MARTHA InterManager

nterManager, the trade association for in-house and third party ship managers, together with The Warsash Maritime Academy, has presented the findings of its fatigue study, Project MARTHA, to The International Maritime Organization (IMO).

Speaking at the presentation at the end of January 2017, Capt Kuba Szymanski, Secretary-General of InterManager urged the maritime industry to take notice of the findings as the industry recruits aspiring seafarers.

The report highlights growing levels of fatigue, particularly among Masters and Watch Keepers, and noted that motivation was a major factor in fatigue experienced by seafarers.

#### Findings of the report include:

#### Fatigue's effect on Masters

A Master's place on a ship is central to its performance, a claim which many would agree with. The project confirmed this and found a number of reasons for how a Master's role differed from that of other crew members, including that Masters:

- Have more weekly work hours
- Feel that work in port is less demanding than work at sea
- Are far more fatigued at the end of a contract
- Are slightly more overweight compared to others onboard
- Suffer from mental fatigue, compared to physical fatigue suffered by other seafarers.

#### Fatigue's effect on performance

The performance of seafarers onboard is paramount to a vessel's operation and efficiency. The study found:

- During interviews, seafarers pointed out that not being relieved on time was having an effect on motivation
- 48.6% of participants felt stress was higher at the end of a voyage
- Sleepiness levels vary little during the voyage, suggesting there are opportunities for recovery while onboard.

# Fatigue and the cultural perspective

The cultural differences

Project MARTHA sought to examine threw up some interesting results and a clear divides between European and Chinese seafarers were found:

- European seafarers worked fewer hours than their Chinese colleagues
- Chinese seafarers on dry bulk carriers worked an average of 15.11 hours a day compared to European seafarers who worked an average 10.23 hours a day
- There is evidence of higher levels of fatigue and stress in Chinese seafarers, rather than European seafarers.

Addressing IMO delegates and invited guests, Capt Szymanski said: "I sincerely hope the results of our research will be read and acted upon by ship managers and ship owners who will go on to revise their attitudes and procedures. There are a number of low hanging fruits" which, with a little adjustment, could make a big difference. These are not necessarily costly changes - such as having seafarers relieved on time and organising work onboard with humans and not regulations in mind and engaging sea staff in decisions - but empowering seafarers to take care of their lives more than it is today.

"Our people are our assets and we need to develop a strategy whereby shipping is once again seen as a career of choice for tomorrow's young talented people.

There is no avoiding the fact that the global fleet is increasing and more manpower is needed. However, we are demanding more from current seafarers rather than recruiting even more cadets into the market. Attracting new seafarers and retaining them will test the industry, but we cannot ignore these findings in making the industry an attractive place for aspiring seafarers."

By Capt. Kuba Szymanski Secretary General

# Rebuilding 6.09 in the Phillipines with OBE/CBE/CBL

good sign of progress. Our GlobalMET workshops have been successful, having empowered our Pinoy partners to create their own standards to not only match

EMSA but beyond. This is evidence of going beyond EMSA and HTW-imo.

Unfortunately due to the lack of funds, we have not been able to fulfil our commitments to assist MARINA-CHED in this project on site. Our Capt Richard Teo continues to monitor and assist via modern media means.

Guidance several preparatory workshops started earlier this year to lead to this. Much has followed our training initiatives.





## **PSC Inspections on Board Ships**



e, as seafarers, are always afraid of PSC inspection on our ships. To some extent it is natural but, if we work systematically and keep recording things honestly, we need not fear.

Honesty is very important. If you know a defect and you are aware of it and have a plan to tackle it, the PSC inspector gets convinced. The problem arises when you are not aware and /or you are hiding things, then the inspector does not like it and will not trust you, resulting into recommendations or even detentions.

Here, I have advice to PSC inspectors. Please do not order detention lightly, unless things are really very bad. Give recommendations and ask the next port to check on the work done or ask the master to send photographic evidence of rectification.

Keeping the engine room clean and protective laggings (on hot surfaces) intact, a good impression is created. Further, if you keep the oil pump catchment trays dry and clear and the bilges clean, there should not be much problem. They generally will ask to show 15ppm alarm and incinerator safety devices. Emergency steering is tried out by them and, therefore, if we demonstrate our good maintenance here, there will be most likely no written recommendations.



It is very important for Chief Engineer

to accompany the inspector and, likewise, the Master should also go with the inspectors for rounds on the bridge and on deck. If we follow this, results will be good.

Keeping photographic evidence of maintenance work and cargo loading and discharging in separate folders, easily convinces the inspector.

Record of work and rest hours must be kept up to date because this also attracts MLC 2006 provisions. Cleanliness of galley, provision rooms and keeping garbage and oil record book up to date must be followed as a habit.

Shipboard safety is enhanced by double checking things and cultivating and following small good habits like cleaning the tools after work and putting them back in place and keeping garbage bins in accordance with the best practices of your company.

# **Re-checking**

I have reiterated many times in other write ups before that using our God given senses of smell, touch, sight and hearing are fundamental to fire prevention and safe operations on board. Next comes, rechecking. We do check things but don't always recheck.

I learnt it long ago when I was a 5th engineer. I changed over the main engine from diesel to heavy fuel but forgot to change over the return line. I was having tea thereafter but I said to myself, perhaps I have not gone to a place where I will normally go after changing over, and that pointed to me, I have not gone to the return line.

After rough weather, we must check connections on the cylinder head of M/E and clamps on the pipings. Generally there is a rubber piece between the pipe and the clamp and when clamps get loose due to vibrations, this piece slips off and the clamp starts to RUB against the pipe and very soon, a hole is developed and leakage starts. Leakage also can be from high pressure fuel pipe of the generator. We must keep the alarm, fuel leakoff tank high level, tested. Such an alarm is also on main engine.

Fires occur in the galley. A greater check here is required and this drill to be carried out more frequently. Fires do occur in cabins largely due to overloaded and loose sockets. We must

Prante Later

check electrical connections inside engine room control console. We now have self closing ashtrays on board and these must be used. Carelessly disposed off cigarette is still a major cause of fires on ships. Next are the automatic electric kettles called thermotanks. We use hot water but forget to fill and fires have occured in ECR if lot of loose paper is stored around these.

All pipes carrying hot oil, steam and exhaust gases are lagged but these get lose due to vibration and expose the bot surface. These leggings should be checked in a phased manner, also below floor plates. Keeping engine room clean is important to detect any minor leak that may enlarge and become hazardous.

Incinerators also cause fires due to breakage of pipes or on uptakes and this equipment needs to be carefully checked while in operation. Don't use it at night time if supervision can not be ensured.

Fires on boilers and scavenge fires are a subject by themselves and these should be discussed with senior engineers during watch or drills. Good maintenance as per PMS is required as a good habit.

Mahendra Singh Chief Engineer

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