Dear Members

PLEASE ENSURE THIS GEN MEMO IS WIDELY DISTRIBUTED WITHIN YOUR INSTITUTION

1 Survey Reminder

Please be reminded about the Member Survey and Seafarer Survey (ref Gen Memo 02/11) and kindly provide responses to the former by 21 January and the latter by 31 January.

2 MCQ Paper

The attached and the following covering note have been received from Denis Drown Ex.C., F.N.I, retired from the Marine Institute, Memorial University of Newfoundland (a GlobalMET Member) where he worked as Instructor; Department Head Nautical Science, and was the first Director of the Centre for Marine Simulation and the Offshore Safety & Survival Centre. Denis is a Master Mariner with 50 years experience in the marine transportation industry as mariner; educator; manager, and as consultant for training and oil pollution prevention projects, nationally and internationally. Please liaise directly with Denis <denis.drown@nl.rogers.com>

We plan to submit a paper(s) for IMEC 23 (Constanza, Romania) and/or IMLA 19 (Rijeka, Croatia), both in 2011. The first will be about our new research and the second will describe our efforts for the consideration of maritime lecturers.

As always, if you know of persons who may be interested in our study …….. it takes about 25 minutes, results are presented generally, individual participants are not identified (I’ve had to emphasis anonymity for the benefit of participants in certain countries). Presently most participants are Maritime English language teachers, fitting the general criteria of adults (over age 25 years) with NO marine transportation industry experience and NO formal education or training in maritime (shipboard) technology (I’ve had to emphasis that this is NOT a test of marine technology knowledge).

3 Request for Training News

Maritime journalist David Hughes, whose articles are regularly published in Safety at Sea International and the Singapore Business Times, has asked if GlobalMET members could provide news about recent training developments. Given the need to raise the profile of MET and especially of the MET providers, this is a chance to publicise the many developments taking place in many academies around the world. David's email address is <anderimar.news@googlemail.com>.
4 Newsletter

Attached please find GlobalMET Newsletter No 3. Contributions for the Newsletter will be welcomed. For the March Newsletter they should be received not later than the end of February.

5 EGMDSS Comment

GlobalMET has been requested by a Member to solicit comment on the usefulness of the EGMDSS online material - [www.egmdss.com/gmdss-courses/](http://www.egmdss.com/gmdss-courses/) - developed for the EC and which is described by the developers as:

*EGMDSS training courses provide a rich and flexible tool for professional development, as well as opportunities for life-long learning on-line. They encourage the regular refreshing of knowledge and skills required to operate GMDSS equipment. EGMDSS provides easy access to essential knowledge on distress, urgency, and safety communication, and the broadcast of marine safety information (including navigational and meteorological warnings). The courses cover all aspects of marine VHF radio communication. They cover all the radio procedures and techniques of GMDSS for alert, urgency and distress calls. The courses are designed for all seafarers, whether amateur or professional.*

Is there a downside to this, could it adversely affect GMDSS training for professional mariners, or is it a useful tool that complements established GMDSS training?

Comment from a Member familiar with this online material would be welcome. Please let the ExecSec have such comment by the end of January.

Best regards

Rod Short

Executive Secretary
In Proceedings
Company of Master Mariners of Canada & Petroleum Human Resources Council of Canada

4th International Conference: MARITIME HUMAN RESOURCE SOLUTIONS

Fisheries and Marine Institute of Memorial University, St. John’s, Canada, 29-30 September 2010

Disparate Measures in Examinations for STCW Certificates of Competency: The Use and Effectiveness of Multiple Choice Questions

by
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(the authors are presenting privately, without affiliation)

Abstract

Mariners are familiar with the process of obtaining a certificate of competency through qualifying examination. Mariners know that their certificates are required to meet standards as laid out in the STCW 1995 Convention. What may not be appreciated is that examination methods are disparate, with considerable differences country to country. Maritime administrations have multi-dimensional examination regimes in varying combinations of written, practical demonstration, simulation and interview (oral). The effectiveness of the examination process is critical, since its purpose is to ensure a certificate of competence holder can complete on-board tasks safely and with the least environmental impact. There are no comparative studies questioning the relative merits of examination regimes.

Embodying this disparity is the use of multiple-choice questions (MCQ), the subject of the authors’ surveys and studies published at international conferences in Marseille, 2006; Rotterdam, 2007, and Szczecin, 2009. They describe a survey to determine the extent to which MCQ are used in STCW examinations; a survey soliciting opinions from maritime lecturers; a study to identify factors producing artificial test scores, and a study comparing the MCQ performance of student mariners relative to students with no maritime technology knowledge.

MCQ are increasingly used in STCW examination. There are concerns about their effectiveness and reliability, where the authors’ studies show that significant scores can be obtained by students with no marine technology knowledge. There are concerns regarding their place in an examination evidencing competence. There are concerns that use is driven by economics and administrative convenience.

The paper reviews the authors’ progressive research; the pros and cons and principle factors influencing MCQ assessment, with the objective of providing insights into the relative significance of these factors so that they may be taken into account. The paper offers conclusions for the consideration of maritime administrators and nautical college officials responsible for examination methods; for maritime lecturers tasked with constructing MCQ items, and for maritime students seeking an understanding of the process leading to professional qualification. The paper suggests a solution addressing the disparity question.
1. Introduction

Mariners obtain a certificate of competency through qualifying examination, and know their certificates meet standards set out in the STCW 1995 Convention. What may not be appreciated is that examination methods are disparate, with considerable differences country to country. Maritime administrations have multi-dimensional examination regimes in combinations of written, practical demonstration, simulation and interview. The effectiveness of the process is critical, since its purpose is to ensure a certificate of competence holder can complete on-board tasks safely and with the least environmental impact.

There are no comparative studies about the relative merits of examination regimes, for example whether it matters that, for the same certificate, the examination includes open questions rather than closed questions. There are no surveys as to the reasons for international differences, for example are they cultural, historical or simply resulting from the generalized wording of STCW 95. Embodying this disparity is the use of closed questions in the form of multiple-choice questions (MCQ), the subject of the authors’ ongoing research since 2005. This research includes a survey to determine the extent to which MCQ are used in STCW examinations; a survey soliciting opinions from maritime lecturers; a study to identify factors producing artificial test scores, and a study comparing the MCQ performance of student mariners relative to students with no maritime technology knowledge.

2. Background

2.1 STCW and Competence

Scope of knowledge is implicit in the concept of competence, with competence assessment encompassing not only the immediate technical job requirements, but also reflecting the broader aspects needed to meet the full expectations of performance as a mariner, including knowledge, cognition, communicative and leadership skills. Certification attests to mariner competence to perform on-board tasks safely, and STCW signalled a move from knowledge-based towards competence-based learning and evaluation. There is concern amongst the maritime community about the increasing use of MCQ, particularly in relation to competency assessment.

2.2 MCQ Assessment

The advantages and disadvantages of testing and examination using MCQ have been debated since the 1930s. In maritime administrations and nautical colleges the differing opinions as to the use of MCQ assessment reflect the broader debate in the literature. MCQ are popular with instructors and examiners because they are easy to computerize, administer, mark and compile. However they are harder to construct than essay (open) questions which are quick to set but time-consuming to grade and difficult to assess statistically. MCQ can provide uniformity and fairness for students, and can cover considerable factual subject matter, but they have limited value in testing for knowledge or skill, encouraging ‘rote standardization’, and discouraging intellectual thinking.¹

2.3 Concerns

A general concern is that MCQ restrict independent thought and creativity, measuring recognition rather than understanding. Given the same MCQ experience, students with a logical (deductive) mindset may be expected to respond differently to students with an argumentative (intuitive) mindset, reflecting varying abilities to identify patterns, decode MCQ language and generally apply ‘testwiseness’. In maritime education there are concerns about variations in MCQ use from one country to another, where the authors’ studies show generally greater use of MCQ in North America and Asia than in Europe; concerns that use is driven by economics and administrative convenience, and concerns about effectiveness in an examination attesting to competence. These concerns are reflected in the technical press, for example in “Seaways”², and mirrored in the literature, for example criticism of poor design and
construction and over-emphasis on MCQ testing.³ That MCQ test results may reflect influences other than subject knowledge is a concern in any learning situation, more so in maritime education where MCQ testing and examination is part of a process leading to determination of seafarer competence.

2.4 Research Limitations

Gathering data can be difficult for private researchers. Maritime administrators and college authorities may understandably be cautious when individuals request information, although once the appropriate department is contacted and the objective explained then officials can be cooperative. The initial MCQ research had 56 responders from 40 countries, and previous private research into marine pollution regulations had responses from 42 countries.⁴ Although representative of the maritime community responses are limited compared to the IMO membership and the number of maritime colleges.

3. Pros and Cons: A Brief MCQ Literature Review

Controversy has surrounded MCQ assessment ever since the method appeared in the 1930s, with testing perceived as ‘unfair’, and ‘simply guessing’, and with uncertainty in deciding the level of knowledge even for those scoring 100%.⁵ In 1980, following STCW 78, Canada revised its maritime examination system, with increased use of MCQ. About the same time the United States controversially introduced MCQ in examinations for mariner competency.⁶ Literature on MCQ is voluminous with little specific to maritime education except general advice through the IMO⁷ and the Nautical Institute.⁸ However, there are many studies of MCQ assessment in professions such as aviation, medicine and nursing; and for secondary and tertiary students in courses for mathematics, economics, chemistry and language. These studies are often relevant to maritime students who have similarities in educational background.

The MCQ debate may be considered academic, but is relevant to the mariner community where examination is for competency to do the job safely, efficiently and with least environmental impact. Testing for factual knowledge, or even cognitive skill, does not guarantee mariner competence, which requires a combination of knowledge, skills, attitudes and communication ability. With a focus on paperwork, computers and statistics there is a tendency to forget assessment is about testing mariners’ abilities to do complex and demanding jobs.⁹ The benefit in using machines for marking MCQ exams does not provide sufficient reason to deny an examinee the opportunity for the self-expression and lateral thinking marking a person with leadership potential.

The increasing use of MCQ is driven by accountability translating into comparability, quantification and standardization; with the passivity of MCQ testing linked to poor writing and thinking skills, sending the message that language understanding, complexity of thought and articulate writing do not really matter.¹⁰ Further, MCQ testing reduces complex conceptual processes to mechanical, easy to follow operations, resulting in students increasingly incapable and intolerant of complex thinking.¹¹ MCQ items expose students to a number of responses containing wrong answers (misinformation), and simply reading and repeating statements increases the probability that the statements will be judged true.¹²

MCQ tests are an inexpensive way to check on factual knowledge, but they are not useful for assessing abilities to write, apply knowledge and solve problems¹³, even though it is believed that MCQ tests can be designed to assess both lower level thinking skills, such as recognition and recall, and higher level thinking skills, including the ability to apply, synthesize and integrate.¹⁴

Constructed-response supporters hold that essays are more reliable than MCQ in assessing knowledge and encouraging intellectual thinking, since answers are more difficult to recall than recognize.¹⁵ However, essay questions, although quick to set, take longer to mark, can be subjective in grading, and are not easy to analyze. However, it is possible to have a balance between ‘closed’ and ‘open’ assessment methods using MCQ test variants designed to improve reliability and effectiveness.¹⁶&¹⁷
4. Principle Factors Influencing MCQ Assessment

4.1 Question Structure, Validity and Reliability

Writing good MCQ items is not easy, even for trained teachers. Much has been written about MCQ structure since Giles M. Ruch’s rules for MCQ tests in the 1930s, although not all rules are based on research. The most difficult task is creating distractors, which should be plausible for students with incomplete knowledge or who are guessing, but should not trick knowledgeable students into incorrect responses. Implausible distractors can disrupt the student’s state of mind, since there is a tendency to pause and imagine how such an option can be made to fit the question. Attempts to deliberately confuse may cause resentment at being forced to ‘think through’ the options. A MCQ test must be validated to ensure it does what it is meant to do. The more a test is validated, the greater its reliability, where reliability is the degree to which scores repeatedly reflect test-takers’ knowledge and understanding.

4.2 Testwiseness

Testwiseness is defined as “… the ability to recognize patterns in the answer options, identify unintentional clues, or use other skills unrelated to the level of knowledge or ability which is the intended target of the test”. MCQ testing encourages students to study examiner preferences and specimen questions at the expense of learning the subject matter. Students can be taught testwise strategies to find the right answer to a MCQ independent of subject knowledge, for example: looking for grammatical clues; mistakes in test construction, and key words. Nursing students look for clues from key words such as ‘best’ or ‘first’, matching a positive action in the stem to a similar action in the answer. MCQ tests may provide options such as “a and c”, or “a but not b”, with each option treated individually as a true-false item, and then merged according to the combinations listed in the distractors.

4.3 Language Comprehension

Phrasing of the question stem is very important, particularly where there is lack of English language comprehension. A study comparing the performance of English first and second language students in examination for a common technical standard (a situation similar to STCW) found that students having problematic language proficiency and taught in a passive rote learning system, favoured knowledge recall over knowledge application. When the phrasing is unclear students may read more into the MCQ than the item-writer intended, particularly if the writer is inexperienced or untrained. Excessive formality used to achieve precision can result in pompous and alien language. However minor changes in parts of speech do not seem to influence performance, and framing the question in the active or passive voice has little effect. The authors’ survey showed that otherwise excellent students frequently have English language comprehension difficulties, with in some cases approximately 70-80% having difficulty with MCQ tests in English. The responders commented that English Speakers of Other Languages (ESOL) students preferred MCQ to be in their first language, though shipping companies wanted the tests in English. The authors’ studies indicate that persons more proficient at language and deductive reasoning with a little subject knowledge are as able to answer MCQ correctly as a person having less language skills but extensive subject knowledge. As well, those older and more experienced are better able to compensate for lack of knowledge, particularly in non-critical or predictable situations.

4.4 Language/Grammar and Word/Concept Association

Language/Grammar factors are significant when the language of the responses does not flow easily or correctly from the question stem. Both Language/Grammar and Word/Concept Association may both attract to and detract from the correct response. There is the possibility of a word or phrase in the question...
stem stimulating an association with a word or phrase in one of the responses, which may or may not be the correct answer. Word and concept associations may be checked using lexical databases.

4.5 Age and Deduction

Age is a factor especially where there is a significant difference, for example between persons taking junior and senior certificate examinations, since older persons can compensate for their lack of subject knowledge through deductive reasoning, and through skills proportional to the absorption of culture.

4.6 Guessing and Chance

Chance may affect scores in MCQ tests in two ways; first, the examinee may be fortunate in the selection of questions; second, marks may be obtained by guessing. Guessing and chance, as opposed to pure luck, have exercised educationalists since 1930. Examinations are considered as situations where students face decisions under uncertainty, with an increasing tendency to guess when a low grade is anticipated. The chances of guessing correctly can be reduced by having more distractors, although increasing the choice from four to five does not improve test reliability. The difficulties are designing additional distractors, which penalize honest but wrong attempts when all distractors are plausible. Variations of MCQ tests may reduce or discourage guessing, or it may be better to accept just three distractors with simple marking and allow for this in the overall assessment plan. Variants include confidence rating and alternative scoring procedures, and “thought-provoking” items. Multi-faceted exams comprising communicative short answer, applicative essay and multiple choice questions may also be used.

4.7 Gender

With increased female recruitment to the traditionally male-orientated marine industry, gender differences matter. Several studies find females do worse on MCQ tests than on essay tests, with lower scores attributed to social and cultural differences. MCQ tests promote values of objectivity, factual knowledge, and rapid performance (male socialization), and devalue subjectivity, reflection, introspection and feelings (female socialization), with guessing increasing male and diminishing female MCQ scores. Teaching regimes may also be a factor, such as an unfriendly classroom atmosphere, biased educational materials and poor instructor role models. The shift from pen-and-paper towards computer-based testing may affect assessment, especially regarding gender, although the difference is small when restricted to MCQ. Males and females have different patterns of classroom interaction, with males likely to be more comfortable with computer use, and with females exhibiting higher levels of anxiety and lower levels of confidence in computer interaction.

4.8 Intuition

Intuition is defined as “a subject’s capacity to utilize the characteristics and formats of the test and/or the test-taking situation to receive a high score”, with a definitional addendum that “intuition is logically independent of the examinee’s knowledge of the subject matter for which the items supposedly measure”. MCQ may be answered correctly with no subject knowledge, implying a connection between testwiseness and intuition, where intuition is a function of cognition and ‘crystallised intelligence’.

4.9 Other Factors

Other factors described in the literature include, Changing Responses; Cheating; Development, Validation and Reliability; E-learning; Examination Strategies; Lefthandedness; Social Issues, and Training of MCQ Constructors.
5. MCQ Research

5.1 Research and Research Objectives

The authors’ ongoing research is in proceedings of the 14th International Maritime Lecturers Association (IMLA-14) Conference, Marseille, 2006; the 19th International Maritime English Conference (IMEC-19), Rotterdam, 2007, and IMEC-21, Szczecin, 2009. These are reviewed below as the IMLA-14 survey; the IMEC-19 study, the IMEC-21 study, and the Ongoing Study, also outlined in Appendices A, B, C and D respectively. The research objectives are to provide information and encourage the sharing of maritime educators’ and administrators’ experiences in the way in which MCQ are developed and utilised, and to offer insights into factors influencing the effectiveness of MCQ assessment.

5.2 Definition

The research uses a database of 1500 English-language MCQ presently in use as contributed by maritime administrations and nautical colleges from 22 countries. Without exception these MCQ are all designed to assess factual knowledge and are from the standard ‘single-best answer family’, that is, where one response is selected from a list of four possibilities, either in direct-question or incomplete-statement forms. The MCQ are those used in training and examination for competencies described in STCW 95 for Masters and Mates (Tables A-II/1, A-II/2) and for Engineer Officers (Tables A-III/1 and A-III/2).

5.3 The IMLA-14 Survey

The IMLA 14 survey indicates considerable variations in examination methods from country to country, with wider use of MCQ in North America and Asia than in Europe. The survey shows that MCQ are popular for their convenience but their are reservations regarding their effectiveness, occasioned by lack of formal training in MCQ construction, planning, developing and validating; lack of resources to develop quality items, and a general lack of confidence in assessment for a professional qualification. The lack of confidence is reflected by students’ attitudes to MCQ, although students prefer closed questions (i.e. MCQ) to open questions (i.e. essays) since the answer is there and recognition is easier than recall.

5.4 The IMEC-19 Exploratory Study

The IMEC 19 study describes exploratory research to identify factors that produce artificial test scores. A MCQ maritime technology test was given to 157 post-secondary students without marine knowledge (novices), but with similar secondary education to mariners. The results show scores attributable to factors other than subject knowledge, with an ability to answer MCQ related to time in school, experience, ‘testwiseness’, educational level, language skills and general knowledge. The exploratory study demonstrates the feasibility for more research to identify factors influencing MCQ assessment.

5.5 The IMEC-21 Study

The IMEC 21 study is based on the IMEC 19 exploratory study and compared the MCQ test results of 930 international student mariners with student non-mariners (novices), studying, for example, English Literature, English Philology, Civil Engineering, Environmental Studies and Business Administration. The supposition was that novice test scores must reflect factors other than subject knowledge, and that there is a relationship between scores and the characteristics of gender, age, English comprehension, and previous MCQ experience.

Randomly selected MCQ tests were given to Deck or Engine mariner students in their second year of training. Questions are sorted so that the first 10 are basic about general ship knowledge and safety, and the last 10 are more advanced. It was expected that the novices would do better with the basic questions
since some of the answers could be within the knowledge of the general population. However novices did as well with the advanced questions as they did with the basic. Study results show novices scoring significantly above chance, sometimes equalling or exceeding student mariner scores, indicating influences other than subject knowledge and suggesting an ability to answer MCQ unrelated to subject knowledge. The IMEC-21 study supports the proposition that students "brought up" in an early MCQ educational environment develop a skill in answering MCQ correctly, independent of subject knowledge.

5.6 Ongoing Research

Ongoing research is an attempt to identify the reason why novices’ MCQ test scores exceed those of student mariners, and why novices, contrary to probability, respond to certain questions either mainly correctly or mainly incorrectly. Study subjects are Maritime English and English Language faculty who are asked to address the same MCQ tests used in the IMEC-21 study. Faculty are in the same position as the student novices, that is with no maritime training or background, with the difference that they may use their linguistic expertise to analysis the reasons for their responses.

6. Conclusion

Properly constructed and validated MCQ have a place in checking factual knowledge and are effective classroom assessment tools where there is dialogue between instructor and student. Standard MCQ should be used with caution in an examination process leading to a STCW qualification because MCQ cannot reliably assess subject knowledge, and are not designed to evaluate competence.

If MCQ are used in STCW competency examinations they should be variants and a minor element in a multi-dimensional process that favours competency based assessment. The effectiveness of MCQ should be evaluated during an interview. MCQ variants require resources for construction, marking and preserving objectivity, which should include resources for the formal training of instructors charged with creating MCQ items. Considering the possible consequences of incompetence, these resources are a good investment in a safe maritime transportation industry.

7. Solution

The differences in MCQ use are a reflection of disparate competency examination methods. The disparity may be a result of culture, history, research, or generalized wording of STCW 95 giving scope for national administrations to adapt to their own conditions. Until there are comparative studies as to reasons and consequences it cannot be said that there is a problem requiring a solution. However what can be stated is that disparity is a present ‘situation’ or a ‘circumstance’ that merits solution because doubt compromises confidence. The solution is a comparative study of maritime examination and teaching methods, starting with an accumulation of data similar to the authors’ IMLA-14 survey, but more detailed and investigative. Such a study requires an international and institutional approach.
Appendix A (Page 1 of 2)

IMLA-14: A Study and Survey on MCQ Usage in Education and Examination for Marine Certification

The survey and study is directed to maritime administrations and nautical colleges developing or administrating examinations on behalf of a maritime administration. Responders check which examination methods are used for each competency according to the STCW specifications.

Collecting the Data

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
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<td><strong>Written Examination</strong></td>
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<td>Mandatory minimum requirements for certification</td>
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Extract from the Survey Form

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<td>2. Determination of cognitive levels</td>
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<td>How do you take account of learning styles, personal strengths and weaknesses?</td>
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<td>Are formal ability and aptitude tests used to determine cognitive level?</td>
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| 11. Training of MCQ constructors |
| What are the procedures for training test constructors? |
| How are content, levels and range of question types determined? |
| How are challenging wrong choices, language flow, and item length balanced? |
| What time is allowed for test writing, standardizing and validating? |

| 12. Popularity of MCQ |
| What are the advantages and disadvantages of MCQ tests? |

| 13. Other items of interest |

| 14. Maritime Administrations, Schools and Interested Individuals Experiences |

Extract from the Study Form
### Appendix A (Page 2 of 2)

**Presenting the data - Compilation**

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<td>1</td>
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<td>Slovenia</td>
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<td>4</td>
<td>0</td>
<td>16</td>
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<tr>
<td>South Africa</td>
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<td>0</td>
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<td>Spain</td>
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<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>14</td>
<td>3</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Sweden</td>
<td>16</td>
<td>13</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Trinidad &amp; Tobago</td>
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<td>1</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Ukraine</td>
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<td>2</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>United Kingdom</td>
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<td>2</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
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<td>5</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Vanuatu</td>
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<td>1</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Venezuela</td>
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<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Vietnam</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
</tbody>
</table>

Notes:  
1. Number of competencies as listed in the STCW Specification Column 1 (2005).  
2. Examination method (‘Other’ includes in-service experience, simulator, laboratory, orals etc.)  
3. Numbers of examination methods for each competence.
Appendix B

IMEC-19: An Exploratory Study

The study attempts to identify factors that produce artificial test scores. A MCQ test is compiled using questions taken from a database of typical marine MCQ questions. The test is applied to 157 post-secondary students without marine technical knowledge (novices) but with similar secondary education and of similar age to mariners in the early stages of their careers. The results show scores exceeding chance and other inconsistencies.

Presenting the Data

<table>
<thead>
<tr>
<th>GROUP 1</th>
<th>GROUP 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing School, University and Technical College</td>
<td>Independent Career (Vocational) College</td>
</tr>
<tr>
<td><strong>Ten Questions</strong></td>
<td><strong>Ten Questions</strong></td>
</tr>
<tr>
<td>Score 4-7</td>
<td>Score 0-3</td>
</tr>
<tr>
<td>Mean: Range 0-7</td>
<td>Participants</td>
</tr>
<tr>
<td>Participants (76 total)</td>
<td>47</td>
</tr>
<tr>
<td>Male (24 total)</td>
<td>14</td>
</tr>
<tr>
<td>Female (52 total)</td>
<td>33</td>
</tr>
<tr>
<td><strong>Participants by Course</strong></td>
<td><strong>Participants by Course</strong></td>
</tr>
<tr>
<td>1. Trades Technology</td>
<td>3.9</td>
</tr>
<tr>
<td>2. Nursing</td>
<td>4.1</td>
</tr>
<tr>
<td>3. Prim/Elem Educ</td>
<td>3.8</td>
</tr>
<tr>
<td>4. Industrial Eng. Tech</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>47</td>
</tr>
<tr>
<td><strong>First Education MC Experience</strong></td>
<td><strong>First Education MC Experience</strong></td>
</tr>
<tr>
<td>Primary</td>
<td>42</td>
</tr>
<tr>
<td>Secondary</td>
<td>0</td>
</tr>
<tr>
<td>Post-secondary</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Participants (81 total)</td>
<td>27</td>
</tr>
<tr>
<td>Male (9 total)</td>
<td>4</td>
</tr>
<tr>
<td>Female (72 total)</td>
<td>23</td>
</tr>
<tr>
<td><strong>Participants by Course</strong></td>
<td><strong>Participants by Course</strong></td>
</tr>
<tr>
<td>5. Office Admin Tech</td>
<td>5</td>
</tr>
<tr>
<td>6. Hair Stylist</td>
<td>2</td>
</tr>
<tr>
<td>7. Criminology</td>
<td>8</td>
</tr>
<tr>
<td>8. Therapeutic Recreation</td>
<td>4</td>
</tr>
<tr>
<td>9. Legal Studies</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>All Courses</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>First Education MC Experience</strong></td>
<td><strong>First Education MC Experience</strong></td>
</tr>
<tr>
<td>Primary</td>
<td>31</td>
</tr>
<tr>
<td>Secondary</td>
<td>0</td>
</tr>
<tr>
<td>Post-secondary</td>
<td>1</td>
</tr>
</tbody>
</table>

Observations on the Data

Greater numbers of participants are needed for statistical significance, and a more specific study instrument is required before attempting conclusions. However, some observations are in order. In Group 1 a majority of participants scored between 4 and 7 out of a possible 10. In Group 2 this was reversed, with the majority scoring between 0 and 3. The secondary education graduation entry requirements for Group 1 are more stringent than for Group 2. Within Group 2 the highest scorers are students in Criminology and Legal Studies, where the graduation entry requirements are more specific than for the other vocational students. The participants are disproportionately female (124) as against male (33).

The Study’s objective is to identify extraneous factors that may produce artificial test scores, considering anecdotes about ability to answer MCQ correctly with little or no subject knowledge. Study results exceed a probability of 25% (2.5 mean) scores being obtained by serendipity (luck), raising the question as to what influences are at work. It may be that long exposure and experience with MCQ testing enables a correct response to be selected intuitively, a faculty proportional to educational level. However since virtually all of the Study’s participants have MCQ experience since primary education no comparisons are made.
Appendix C (Page 1 of 2)

IMEC-21: A Study on Language and Effectiveness of Multiple-Choice Question Assessment.

The study uses English language marine technology MCQ items contributed by nautical colleges and maritime administrations, and currently in use around the world. With the cooperation of nautical college participants, 930 student mariner and novice test subjects at given locations in different countries each wrote similar tests.

Collecting and Presenting the Data

Example of Test 9D (Deck) taken by both Student Mariners and Novices (English Literature Students).

<table>
<thead>
<tr>
<th>Study Subject</th>
<th>Test Type &amp; Number</th>
<th>Gender</th>
<th>Age Group</th>
<th>English</th>
<th>First MC</th>
<th>MARINERS - QUANTITATIVE STUDY RESULTS - DECK QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Basic Questions</td>
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<td>Test Question Number Advanced Questions</td>
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<td>Correct as %</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>Correct out of 13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ques 1-10: Mean 5.6 Range 3-8</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Ques 11-20: Mean 5.4 Range 1-9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ques 1-20: Mean 11.0 Range 8-16</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Note: The test databases are generally within the experience of Deck and Engine students in their second or above year, with the 20 items randomly selected from the databases arranged so that the first 10 are basic questions (e.g., general ship knowledge, safety and survival) with the remainder more advanced questions. The procedure is similar to ensuring validity and reliability, particularly through checking high and low scores. However for this study the procedure attempts to identify questions answered mainly correctly/incorrectly, perhaps through word and concept association. The questions are, for example, why did 85% of novices answer the (Advanced) Question #20 correctly, and what was the reason mariners score 0% on Question #2 and 100% on Question #10?</td>
</tr>
</tbody>
</table>

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Appendix C (Page 2 of 2)

Analysing the Data

This example shows novices’ responses to deck questions. The pattern is common to novices (engine questions) as well as for mariners (deck and engine questions). Females score about the same on the basic questions (1–10) and a little lower otherwise, noting that female numbers are only significant for novices. The 25-year and above group score best, as do those with English first language and very good English comprehension. In the First MCQ group, those whose experience started in primary education do best. The P Sec (Post-Secondary) group are not represented because of the small sample.

NOVICE SCORES

Novices (shown as ■) scoring above means of 5.0 (25%) through to 9.0 (45%). Novices score above 25% in 20 out of 22 tests; above 30% in 13/22 tests; above 35% in 12/22 test; above 40% in 8/22 tests, and above 45% in 4/22 tests.

“Trending with the Mariner Mean Scores” is where the Novices mirror the Mariners, that is, the greater the Mariner mean the greater the Novice mean and vice-versa. Novices did best with the advanced technology questions.
Appendix D

Ongoing Research: A Study to Understand the Language of Multiple Choice Questions.
The ongoing research follows IMEC 19 and IMEC 21 studies and seeks an explanation for the unexpected findings. Study participants are Maritime English and English Language teachers who answer MCQ tests on marine technology and analyse the reasons for their responses.

Collecting the Data - the Study Form

THE LANGUAGE OF MULTIPLE CHOICE QUESTIONS: A STUDY
Tick-box the response you think is correct, and give one (only) reason for your response.

<table>
<thead>
<tr>
<th>Question</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<td></td>
</tr>
</tbody>
</table>

Analysis Guidelines: The response is:
1. Knowledge
   - known because of association with maritime affairs/students.
2. Deduction
   - deduced through general knowledge (informed guessing).
3. Word/Concept Association
   - prompted by a word or concept in the stem or responses.
4. Language/Grammatical Clues
   - indicated by language or grammatical clues.
5. Guessing
   - pure (as opposed to informed) guessing.
6. Intuition
   - knowing or sensing without rational process.

Analysing the Data

Interpretation Examples for Test Subject #1
- correctly answered 9/20 or 45%.
- attributed 7 responses to knowledge, of which 3 (or 43%) responses were correct.
- attributed 4 responses to intuition, of which 1 (or 25%) response was correct.
- percentage score attributed to Knowledge is 15% (i.e. 3 out of 20 correct).
- of the total score of 45%, 15% is attributed to Knowledge and 30% is attributed to Other Factors.
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2 Seaways. 2007. Drown D. “Disparate exam methods: Does it matter?” (January), Holder L. “Getting it right” (May), and Smith P. “Multiple Choice Questions” (July). Nautical Institute, London.


25 Ibid.


27 Supra note 19.


30 Supra note 26.

31 IMO. c1991. IMO Model Course; 6.09: Training course for instructors. IMO London.

32 Supra note 16.
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At the end of 2010 there are many thoughts: STCW and the Manila Amendments, the ‘tanker for the future’ as seen by DNV, Vale’s 30+ Chinamax carriers, recently visited academies …

It was a privilege to be involved in expressing GlobalMET’s ‘voice’ during the Manila Diplomatic Conference in June which approved the Manila Amendments. With one of the agreed provisions being that there won’t be another major review of STCW for 10 years, one’s thoughts turn to what the new ship in 2020 is likely to be like and the competences required to operate such a ship. Without doubt the ship will be ‘greener’ and the development of marine technology will continue.

A ship launched in 2020 is likely to be highly automated, with many wireless sensors distributed throughout the ship, transmitting to monitors on board and in the offices ashore. What one asks will be role of the crew on such a ship and the competences needed?

Irrespective of how much automation there is, the vehicle will still be a ship, transporting goods and people by sea. One thing we can be very sure of, the sea will still be the sea, able to severely stress ship and crew in rough weather. Also, traffic is likely to be heavier at choke points such as the Malacca and Singapore straits, though there could be more control from ashore through VTS. A lot of the onboard tasks will involve monitoring onboard systems. And paperwork? What competencies will the MET providers be required to deliver and assess? Shouldn’t we now, with the luxury of plenty of time to tease out the issues, be initiating a ‘think tank’ of interested parties to identify the issues and propose development? As resolved at three of the conferences involving GlobalMET in November, we should!

Strong political pressures will force the industry to ‘clean up its act’. Technology will have a major role. DNV’s ‘tanker of the future’ (below) is very interesting. The three principle goals - improved environmental impact, use of technology and financial viability - have let to the concept of a VLCC with a V-shaped hull cross-section, dual-fuel (including LNG), with no need for ballasting. There is also the challenging Wartsila “Shipping Scenarios 2030”.

Much bigger ships are coming over the horizon. Vale’s order for 30+ 400,000 tonne dwt bulkers and Maersk’s likely order of several 18,000 teu container ships are indications of what the training of seafarers will need to address in 2020. What will be required to operate such ships efficiently, safely, cleanly and securely? What will life on board be like? How to live and work on a fully laden ship, westbound against the weather around Cape Horn, on a 40+ day voyage from Brazil to China, having already had a 40+ day ballast voyage from China to Brazil and being confined on board at the loading port?

Aptitude for such a life of exile, constrained to living on a moving vehicle for long periods with a small group of fellow crew members, will be essential. As will attitude. And how is the time on board to be spent constructively? Surely, over the next decade, the communications available to people at sea will improve so that all on board will be able to communicate with families, study online and also use online material to relax. At present there is much need to improve such communications. Surely we will see that improvement by 2020.

Recent visits to major academies have left no doubt about recent progress in India. After the 11th Asia Pacific Manning & Training Conference and GlobalMET AGM in Manila, I was privileged to visit five academies within two hours driving of Mumbai. The five academies - Anglo-Eastern Maritime Academy, Great Eastern Maritime Institute, Samundra Maritime Institute, Tolani Maritime Institute and Yak Training Institute and Diving Academy - large modern academies with fine facilities and a wide range of modern training equipment - clearly demonstrated the MET support now being given to Indian seafarers. In addition to short course work, Yak is providing full compression diving training and, at the time of the visit, was providing skilled local personnel to assist with the salvage of the container ship that sank following a collision in Mumbai Harbour.

Following the visits and conferences in Mumbai, Delhi and Chennai (please refer to the article in this newsletter), more time was spent at the very well equipped Singapore Maritime Academy, after which the recent developments at the Australian Maritime College showed clearly the strengthening role of research - the new wave tank and cavitation tunnel being examples of the fine new facilities available. The merger of AMC with the University of Tasmania indicates that research will play an even greater role into the future.

Turning now to GlobalMET and it’s role as a ‘voice’ for MET. Members can expect to receive a survey questionnaire in the near future, asking for input on how GlobalMET can be improved. GlobalMET intends to have two delegates at the IMO STW 42 meeting in the last week of January, at which there will be a statement on progress with the trial review and revision of the model course in response to the Manila Amendments, as well as on the new GlobalMET Deck Cadet Structured Shipboard Training Programme Work and Activity books, together with the tanker supplements. Members will also receive details of the GlobalMET Maritime Logistics International Forum to be held on 12-13 April during Singapore Maritime Week. This will be the first major venture by GlobalMET into the larger maritime logistics area and GlobalMET is very appreciative of the major support for this event provided in Singapore.

It is a pleasure to close expressing appreciation for the increased support received in 2010, to look forward to even more support in the new year and to wish all involved in the delivery of MET the very best for 2011.
The auditorium at the SCI Maritime Training Institute in Powai again provided a very good venue, this time for the 11th GlobalMET in India Conference “Year of the Seafarer – Charting a New Course”. As on previous occasions, the organisation was done by the India Chapter of GlobalMET, however, for the first time, the conference was held in collaboration with the Nautical Institute. Capt James Robinson, FNI, President of the Nautical Institute, travelled from Ireland to participate and to deliver a presentation.

Following the welcome on behalf of the India Chapter by Capt Kersi Deboo, the Opening and Keynote Address by Capt Rod Short described the Manila Amendments to STCW and ranged over the implications. The need to start ensuring the training is amended to meet convention requirements was stressed, as certificates issued from 1 January 2012 to new entrants are to certify that training is in accordance with the revised convention.

This was followed by the address by the Guest of Honour, Dr Sujata Naik-Tolani, Vice-Chairperson, Tolani Maritime Institute. Dr Tolani raised significant points which set the stage for discussion throughout the rest of the day; eg

- trebling of the number of Indian seafarers by 2015;
- significant improvement in quality must accompany increase in quantity;
- more marketing in the schools of seafaring as a career;
- clearer identification of career options ashore after seafaring;
- recruiting and retaining faculty likely to be a growing challenge;
- research into maritime education and training needs strengthening;
- there are serious seafarer social issues to be addressed;
- occupational health and safety should be second nature to the seafarer.

In his address as Chief Guest, Dr S B Agnihotri, Director General of Shipping, described the developments in recruitment and training of seafarers and proposed expansion of recruitment.
in the Philippines as ‘a wake-up call’ for India. He stressed there should be growth in both the officer and rating sectors and that more attention should be given to each seafarer being an ‘ambassador for India’. Dr Agnihotri described the steps already being taken to ensure that maritime education and training in India accords with the amended STCW Convention.

During the following session, which was chaired by Mr A Banerjee, Chief Surveyor, Directorate General of Shipping and coordinated by Capt S. Sawant, Training Superintendent, Wallens Maritime Training Centre, Capt Robinson spoke about the Nautical Institute and its next five-year strategic plan, Mr Martin Hernqvist, Managing Director of the Swedish Club Academy spoke about Maritime Resource Management training and Capt J S Loney, General Manager, Torm Shipping, spoke about the ILO’s Maritime Labour Convention and its implementation on board and some audit findings.

The holding of the 4th Honouring Living Legends Ceremony recognised the services to maritime education and training of Capt. Vincent C D’Paiva and Mr. S. Mukhopadhyay by the presentation of Lifetime Achievement Awards. This highly appropriate recognition of long service and dedication has become a very significant part of the GlobalMET in India Conferences. Master of Ceremonies was Capt. M. C. Yadav.

The first afternoon session was chaired by Mr J K Dhar, Director of the Mumbai Campus of the Indian Maritime University and coordinated by Capt T Panda of Bernard Schulte Ship Management. Dr Vatsal Singh, on behalf of the India West Branch of the Nautical Institute, spoke about new methods and approaches to building positive attitudes among seafarers towards learning. Dr Singh was followed by Mr Atul Nigam, Chief Executive of Dynamind, who described recent developments in e-teaching and his software, which customises learning methods for each student, based on strengths and weaknesses.

Capt M C Yadav used his slot in the final session, which was coordinated by Mr H Chandwani of Don Bosco Maritime Academy, to provide a detailed explanation of how India will implement the amendments to the STCW Convention. This was followed by Capt S Sule, Superintendent (Training), Anglo-Eastern Maritime Training Centre, who spoke on the challenge of going paperless, with reference to ECDIS implementation on board.
GlobalMET in India conference on 20th November 2010, Mumbai – a report

During the closing session conducted by Capt Rod Short, the following statement of outcomes was unanimously agreed as the statement of outcomes for the conference:

The participants in the GlobalMET in India Annual Conference, “Year of the Seafarer: Charting a New Course”, held at the SCI Maritime Training Institute on 20 November 2010:

RECALLING the IMO Diplomatic Conference in Manila in June 2010 and the agreed Manila Amendments to the STCW Convention;

NOTING the major significance of the changes required by the amendments and the relatively brief periods for implementation;

URGE all parties in the Indian shipping community:

- to support and assist the implementation of the changes; and
- to take a more collective approach to address the full range of maritime education and training and associated human element issues and ensure these matters are given the priority and action essential to their successful and timely introduction.

The Vote of Thanks was expressed by Capt Y Sharma, Head of the International Maritime Training Centre, in a unique manner depicting photographs shot by him during the day of the speakers, sponsors and delegates at the conference.

As with previous GlobalMET in India conferences, the 11th was marked by high levels of participation demonstrating deep knowledge of the many issues impacting maritime education and training. Serious concern about a number of entrenched issues, such the lack of training berths (which India has raised in the IMO forum on several occasions), about the need for improved teaching and assessment and the growing difficulties in recruiting and retaining faculty, were discussed at length.
The Nautical Institute, the Company of Master Mariners of India, Face of Shipping and GlobalMET collaborated on the organisation and hosting of the one-day seminar held at PHD House in New Delhi on 25 November. The theme "Seafaring in the Coming Decade" attracted very good speakers and a large number of participants, which, given the location so far from the sea, evidenced the widespread interest in India in seafaring as a profession, as well as the growing number of academies in Northern India.

Following the lighting of the lamp ceremony, the seminar opened with the Welcoming Address by Capt I Solanki, Chairman of The Nautical Institute (N&E). Following the Key Note Address by Capt J P Menezes, Deputy Master, CMMI India, Chief Guest Capt James Robinson, President of The Nautical Institute spoke about the global activities of the Institute and current developments.

The morning session, chaired by Capt I Kharbanda, was comprised of the following three speakers:
- Mr George Hoyt, founder of Newslink and Face of Shipping
- Capt Rod Short, Executive Secretary of GlobalMET
- Ms Aakriti, a serving seafarer.

The afternoon session, chaired by Capt M P Bhasin, was comprised of the following three speakers:
- Ms Naomi Rewari, Director, Applied Research International
- Capt Kuba Szymanski, Secretary General, InterManager
- Capt James Robinson, President, The Nautical Institute

The Vote of Thanks was given by Capt P K Mittal, Secretary, The Nautical Institute (N&E). The presentations and discussions left no doubt about the strong interest in India in seafaring as a profession and of the support of effective maritime education and training. It was recognised that, while India is well positioned to provide an even greater flow of highly competent seafarers for the global industry over the coming decade, more resources must be applied to achieving effective recruitment, training and retention of Indian seafarers.

With this in mind, participants unanimously endorsed the statement of outcomes agreed at the "Year of the Seafarer - Charting a New Course" conference in Mumbai five days earlier, urging support for the implementation of the Manila Amendments to the STCW Convention and for a more collective approach to the full range of MET and associated HR issues to ensure appropriate and timely action to address concerns.
The Nautical Institute again collaborated with GlobalMET on the organisation and hosting of the half-day seminar held at the Beverly Hotel in Chennai on 27 November. The theme “Leadership Training for Seafarers” also attracted very good speakers and a ‘full house’ of participants, despite it being a Sunday morning. This very good attendance was in no small part due to the hard work of the organisers, ably led as with past GlobalMET activities in Chennai, by the Convenor Capt Vivekanand, Pro Vice Chancellor of Vels University.

The first session was comprised of the following speakers:

- Capt Rod Short, Executive Secretary of GlobalMET
- Capt James Robinson, President, The Nautical Institute
- Capt Kuba Szymanski, Secretary General, InterManager

The second session was comprised of the following speakers:

- Commodore S Shekar, Regional Director, Maritime Foundation
- Capt Satya Mitra Bagga, Instructor, Maersk Training Centre, Chennai
- Capt K Vivekanand, Pro Vice Chancellor, Vels University

Capt James Robinson then honoured Capt Glen Aroza, former Master of M T Tosa, with the granting of Associate Fellowship of The Nautical Institute, in recognition of the professionalism displayed by Capt Aroza during his arrest and imprisonment following allegations that his ship had collided with and caused the sinking of a Taiwanese fishing vessel with the loss of two lives. Following inability to prove that there was a collision and also the inability to apply Taiwanese law to a Panama registered ship that was outside Taiwanese waters at the time of the alleged collision, Capt Aroza was released after some 12 months in jail.

As with the New Delhi seminar, this half-day seminar in Chennai concluded with unanimous endorsement of the statement of outcomes from the conference held in Mumbai on 20 November.

Review of the conference and two seminars left no doubt as to the value of such gatherings and discussions in key centres in India. GlobalMET is very grateful for all the support received. The high levels of participation, quality of presentations and lively debates are to be encouraged. As a result, GlobalMET will seek collaboration from The Nautical Institute, the Company of Master Mariners in India, InterManager, NewsLink and Face of Shipping, as well as key local interests, in organising a similar series during the last quarter of 2011.
GlobalMET, together with the Nautical Institute and InterManager, also played a significant role in the India Maritime Human Resources Summit, organised by Gateway Knowledge Forum in collaboration with the Indian Maritime University and held at the Taj Coromandel Hotel, Chennai on 27 November.

The one-day conference was opened by Chief Guest, the Honourable Union Minister of Shipping Thiru G K Vasan, who referred to seafarers as ‘unsung heroes’, lauded the efforts of the Indian Maritime University and called for more women at sea and a more gender friendly environment on board.

Minister Vasan’s address was followed by presentations by Mr A Mishra, Chairman of the Chennai Port Trust and Dr P Vijayan, Indian Maritime University Vice Chancellor. GlobalMET member institutions were represented Capt S Bhardwaj, Vice Chancellor of AMET University, Capt K Vivekanand, Pro Vice Chancellor of Vels University and Capt K N Deboo, Director and Principal, Anglo-Eastern Maritime Training Centre, as well as GlobalMET ExecSec Rod Short. Capt James Robinson, President of the Nautical Institute and Capt Kuba, Secretary General of InterManager also spoke.

There were four sessions:
1. Go to Sea Campaign;  2. Maritime Education in India and Abroad;  

This well attended conference identified and teased out many of the issues associated with the supply of Indian seafarers. It also emphasised that, although there are many areas of concern, recent years have seen considerable progress in ensuring the provision of quality seafarers for both the increasing number of Indian flag ships as well as for the global fleet. It was good to see GlobalMET, The Nautical Institute and InterManager, enjoy such a high profile.

The India Maritime Human Resources Summit concluded by endorsing the statement of outcomes agreed at the GlobalMET “Year of the Seafarer - Charting a New Course” conference in Mumbai a week earlier, urging support for the implementation of the Manila Amendments to the STCW Convention and for a more collective approach to the full range of MET and associated HR issues to ensure appropriate and timely action to address concerns.

Discussion panel comprised of L to R Vice Chancellor Bhardwaj, AMET University, Mr Das Sarma, Teledata Marine Solutions, Capt Kersi Deboo, Anglo-Eastern Maritime Training, Capt James Robinson, Nautical Institute, Capt K Vivekanand, Pro Vice Chancellor, Vels University, Rod Short, GlobalMET.
Recently Appointed to Directorship of GlobalMET Limited

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PERSONAL INFORMATION
Date of Birth : 30 December 1962
Place of Birth : Selangor, Malaysia
Sex : Male
Marital Status : Married

EMPLOYMENT BRIEF
A Chief Marine Engineer by profession with 10 years sailing experience and has been in a shipowner/operator company (MISC Berhad) for the last 18 years in various positions viz Superintendent, Fleet Manager and Senior Manager, Business Process Improvement and Capability Building in Fleet Management. Last post held was as General Manager of Human Resource Management (Sea) managing a pool of over 3000 seafarers. Headed the Emergency Response Team for crisis management and also the Company Security Officer (CSO) whilst in service with MISC Berhad.

He is currently holding the post of Chief Executive Officer of Malaysian Maritime Academy (ALAM) effective from 1 October 2010.

EDUCATION
Cambridge Higher School Certificate (HSC)
Setapak High School, Kuala Lumpur

Certificate in Business Management (2006)
University of Melbourne – PERMATA

PROFESSIONAL QUALIFICATIONS
First Class Certificate of Competency as a Marine Engineer Officer
Singapore Polytechnic

Advanced Diploma in Power Plant Management
Singapore Maritime Academy

INTERESTS
Photography, Golf and Reading
The Manila Amendments to the STCW Convention bring a substantial addition to Part A of the Code providing for compulsory ECDIS training.

In Part B, under ‘Goals of an ECDIS training programme’ (STCW/CONF.2/DC/3 ANNEX 2 Page 37), it is provided that the trainee should be able to

1. operate the ECDIS equipment, use the navigational functions of ECDIS, select and assess all relevant information and take proper action in the case of a malfunction;
2. state the potential errors of displayed data and the usual errors of interpretation; and
3. explain why ECDIS should not be relied upon as the sole reliable aid to navigation.

On the following page of the annex, under ‘Risks of over reliance on EDCIS’, it states that

Emphasis should be placed on the need to keep a proper look-out and to perform periodical checking especially of the ship’s position, by ECDIS-independent methods.

Given the rapidity of the adoption of electronic navigation, of which ECDIS is a core component, the site http://www.e-navigation.com/home/ could prove very useful to MET providers.

Vale Article

A Mega Order for Mega Ships

The rollout of the world’s largest dry bulk carriers by Brazilian mining giant Vale in 2011 will slash the cost of shipping commodities and choke off a recovery in the freight market for years.

China’s ravenous appetite for iron ore and coal - the two main commodities shipped in the dry bulk market by volume - has transformed the maritime industry, with mining and shipping firms building bigger and bigger vessels to meet its demand.

Vale, the world’s biggest iron ore producer, is scheduled to take delivery of the first of more than 30 400,000-tonne iron ore carriers in the first half of 2011. The ships, to be delivered through 2013, will surpass the largest bulk carrier now in operation, the 365,000-tonne MS Berge Stahl.

The arrival of these so-called Chinamax carriers will not only cut costs for Vale but will also lower freight rates for the entire industry, as the new vessels swell an already oversupplied market.

‘This will be the biggest factor affecting the market for at least a couple of years, with the big increase in supplies driving down the market,’ said Rahul Sharan, senior analyst at Drewry Shipping Consultants.

The Baltic Exchange’s Dry Index, a composite of global trade routes for dry commodities, has fallen nearly 30 per cent this year to 2,173 points due to ample tonnage and the expected flood of new vessels next year.

Vale’s gigantic ships, which will be longer than the 324-metre-high Eiffel Tower, are expected to exacerbate the oversupply problem and could push the benchmark index below 2,000 points next year, analysts said.

That translates into less money for shipowners, many of whom oppose Vale’s new carriers.
'We don’t need (Vale’s) ships,' said Torben Skaanild, chief executive of BIMCO, the world’s largest shipowners’ group.

'We have quite a huge inflow of capesizes of 150,000 to 180,000 tonnes coming to the market. If you start building 400,000 tonne ships, it is going to take them out of the market.' A Vale spokeswoman declined to comment on industry criticism surrounding its Chinamax vessels.

Credit Suisse estimated that Vale’s ships could displace as many as 168 capesize vessels, representing around 15 per cent of the existing fleet, forcing them into shorter routes from long-haul voyages.

'Given the size of these vessels and lower cash breakeven costs than current spot rates, we believe the likely deployment of these ships on the Brazil-China route could leave the capesizes with no spot cargo demand,' said the bank’s shipping analysts in a monthly research report.

Average earnings for capesize vessels, typically used to ship iron ore and coal, could tumble between 20 and 35 per cent next year to under US$25,000 a day, analysts said. Earnings for smaller dry bulk ships, which carry everything from grain to cement, are also expected to decline.

The chairman of China COSCO, the world’s largest dry bulk firm, told Reuters last month it strongly opposed Vale’s mega vessels and predicted the industry’s oversupply problem would prevent a recovery until 2013 at the earliest.

The global dry bulk fleet is expected to expand by 11 per cent next year to 594 million deadweight tonnes, outpacing demand growth of 8 per cent, according to Macquarie Securities.

'It looks like supply and demand could be back in balance by 2012, but much of this will depend on whether the current low-rate environment discourages new orders,' said Janet Lewis, shipping analyst with Macquarie.

The freight industry was battered by the economic downturn two years ago and has struggled to recover, with the dry bulk market still down more than 80 per cent from its peak in May 2008.

The volatility in the spot market prompted Vale to build its own fleet of mega ships, which will allow the company to better compete with Australian rivals BHP Billiton and Rio Tinto.

-- Reuters Singapore December 2010
Watchkeeper: A Tanker for the Future?

With impeccable timing, bearing in mind the debates that were taking place at Cancun in Mexico, DNV chose last week to launch its latest “concept” ship. Like its “Quantum” containership concept, this was an attempt to design a ship that would answer a number of the problems that beset owners today as they try and work out what the commercial and regulatory future might bring. The “Triality” concept is a VLCC, but one that attempts to tackle the serious problems of both harmful emissions and that of ballast water.

The name – “Triality” – sums up the three main goals of the design – environmental superiority compared to a conventional tanker, feasible solutions based on existing technology and financial viability, when compared to conventional VLCCs operating on heavy fuel. It is the end product of a dedicated, multi-disciplined team which has been working on the concept for some months. Whether it will ever find its way into cold steel, or attract shipyards or owners, it offers a challenging and very interesting view of what form future tankers might take.

DNV has for some time suggested that LNG will be increasingly regarded as a viable alternative to heavy oil fuel, and the concept ship incorporates this view, with the ship carrying two large pressure vessels forward of the island. The capacity of these tanks will give the tanker a 25,000 mile range. A twin engine/twin screw machinery arrangement is chosen, with dual-fuel slow speed engines specified, providing a 15.5 knot laden service speed.

Because of the propulsion system, the Triality concept ship offers a number of important environmental benefits when compared to a conventionally powered vessel; 34% less CO₂ emitted, 82% less NOX and 94% less SOX. But it also provides for the collection and condensing of Volatile Organic Compounds, which are otherwise vented into the atmosphere, when in a laden condition, preventing up to 500 tons of VOC emissions in a single voyage.

But there will be huge interest in the concept’s designed ability to eliminate completely the need for water ballast to be carried and thus treated, or pumped. With a large VLCC carrying around some 100,000 tons of ballast in a light condition, there are huge savings available here.

It is the design of the hull, which DNV believes will make this possible. The ship is wider and longer than current vessels and of a Vee-shaped cross section. This shape will be sufficient to submerge the propellers and to ensure the bow is deep enough to avoid slamming. Moreover the internal design provides for cargo tank arrangements which are five tanks wide with four longitudinal internal bulkheads, and arrangements that will provide for the ship to be loaded and discharged without heeling the vessel.

The classification society, currently presenting the design to ship owners and shipbuilders, will freely make the design available to anyone who wishes to develop it. We may be a long way from a completed vessel, but there are some exciting ideas here, for a ship that may have a capital cost of perhaps 10-15% but offers a substantially reduced life-cycle cost, and a huge environmental bonus as well.

Articles written by the Watchkeeper and other outside contributors do not necessarily reflect the views or policy of BIMCO.

20 December 2010
Ensuring Quality Article

Numbers are important, but will rarely provide the whole story. This is why the BIMCO/ISF Manpower Update needs to be considered carefully by any responsible shipping person thinking about manpower strategies in anything other than the short term.

A quick glance at the key points of the Update might provide some reassurance for those who had rather assumed the situation would have been a whole lot worse. After all, for the past five years there has been something of a general belief that the supply of manpower would be struggling to keep pace with the rapidly increasing size of the world fleet. But then, the economic downturn that emerged like a global whirlwind in 2008, threw everyone’s calculations into the melting pot. The double-digit shortage in the officer ranks has been converted by this financial brake into something rather more manageable.

But there are certain key words that the wise shipping person will focus upon as he or she analyses this useful and important survey of the global workforce. Possibly the most significant word of all is “quality”, because it is this desirable feature that must be aimed at by everyone concerned with maritime manpower. The numbers emerging from maritime colleges may be satisfactory in every way, but it is the quality of the officer corps, from Masters and Chief Engineers to cadets and ratings, that makes the real difference.

Because, while numbers may fulfil a ship’s legal manning requirements and qualifications give some reassurance, the demand for competence, experience, skill and seamanship goes far beyond the counting of heads. Ships are getting more technically demanding, and while there is a lot of helpful technology aboard them, the human element becomes ever more crucial. Liabilities become ever more onerous, and it is risks that may flow freely from ship to shore management, in the case of an incident, that demands great shipside competence.

Readers should also turn their attention to the issues of recruitment and retention, paying special attention to the latter, because it does seem that there is some difficulty in retaining people who have been carefully recruited and often expensively trained. It might be easy to make assumptions about the better opportunities ashore these days, and the way in which a better paid senior officer can afford to “swallow the anchor” rather earlier than once might have been the case. But it is also necessary to keep a finger on the pulse of on-board morale, which has not been helped in recent years by overweening bureaucracy, less enjoyment, a squeeze on numbers aboard ship, and those other worrying issues of constraints on shore leave, poor treatment in many ports and the perceptions of increased criminalisation of responsible officers.

It is also necessary to read the report with an intelligent knowledge that there is a difference between the general and the particular. The overall numbers may speak to us of officer shortfalls that appear manageable, but those who are manning specialised tonnage, or operate in sectors where only the crème de la crème in seagoing personnel is deemed acceptable, there may be quite critical discrete shortfalls of the quality of seafarers who can come up to their demanding standards.

* Articles written by the Watchkeeper and other outside contributors do not necessarily reflect the views or policy of BIMCO.

* Date: 08.12.10
GlobalMET extends, to all members and friends, best wishes for 2011 to be a year of further improvement in maritime education and training, to ensure the provision of the human resources essential to the operation of an efficient, safe, secure and clean global shipping industry. If shipping stops ...?

**TRAIN, TRAIN, RETRAIN, RETAIN!**

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