STCW REVIEW SURVEY REPORT

Contents

Executive Summary

Overview

1. The STCW review survey was launched to initiate engagement with maritime industry stakeholders and serving seafarers regarding the current STCW training requirements and to gather important information in the process to identify any training gaps and opportunities yet to be fully explored.

2. This survey enabled the UK Maritime & Coastguard Agency to receive feedback and propositions for change that are valuable to chart the necessary course towards seafarer training modernisation.

3. It also ensures that the MCA does not miss any chance to deliver impeccable value to our seafarers through the robust training and certification process, fully optimising the services we offer today, while correctly positioning the Agency for future technological advancements.

Findings and Recommendations

4. The pertinent findings, recommendations and suggestions for improvement are highlighted within the individual sections of the survey in concise graphs and bullet points to ensure that the relevant context remains clear.

5. Within this report there are some suggestions and sections with recommendations from respondents left undiluted to capture the genuine reaction towards those topics.

Conclusion

6. The overarching insight gained from this survey is that the competency requirements of the current STCW framework are still very relevant as they are. However, changes are necessary for the suggested areas to improve and align them with the overall direction of the maritime industry.

7. This survey highlights those areas that can be revisited and made fit for today's modern navigation, engineering, and electro-technical needs. An overwhelming number of respondents thought that specific topics should be taught/covered in a different way during basic training and some other topics should take a reduced importance as they are no longer as relevant to modern navigation.

8. To properly capture the need for these changes or not, an analysis of answers provided by respondents was completed. These answers were critical to the question of whether the

present STCW competency requirements, as is, are still relevant today. The recommendations provided by respondents regarding what could be added, removed or amended to make the STCW competency requirements suitable for modern training needs are included in the subsequent breakdown.

Introduction

Purpose of Survey

The purpose of the survey is to find out from the industry, especially serving seafarers, what can be added, removed or amended to/in the current STCW mandatory training requirements. It is to ensure that seafarers can receive/maintain the level of knowledge, understanding, professional competence and performance standard suitable and relevant to today's industry and ever improving navigating, engineering and electro-technical equipment needs.

It is only reasonable for seafarer's training to be made to reflect the modern nature of the equipment and machineries utilised at sea.

Maritime & Coastguard Agency

NAVIGATION/DECK SURVEY

ANALYSIS AND RECOMMENDATIONS

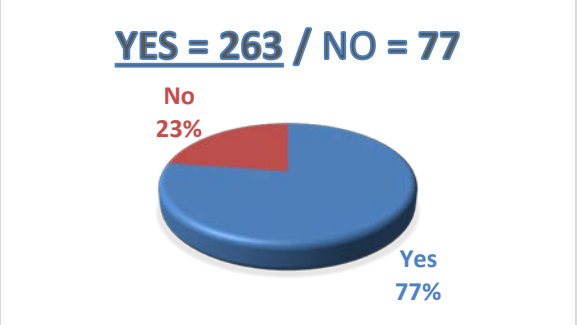
The summary report and recommendations of the Navigation/Deck survey is shown below:

Competence:
Plan and conduct a passage and determine position

Knowledge, understanding and proficiency in:
1. Celestial Navigation

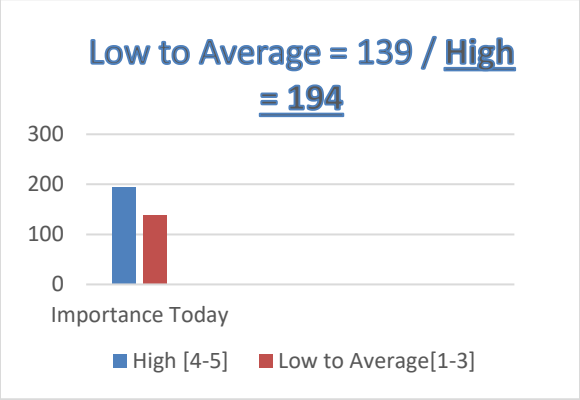
1.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 263** / No = **77**



1.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 139 / **High = 194**



1.3 **Summary of respondent's RECOMMENDATIONS:**

Respondents were split on the section covering celestial navigation and its importance today. There were strong sets of opinion on the use and importance of this subject in the plan and conduct of a passage and position determination.

Some respondents recommended that training requirements on celestial navigation should be removed as the modern nature of navigation does not require it anymore. Others recommended that it should be made compulsory as it is essential, because while the Navstar (GPS), GLONASS and other satellite systems can be jammed or turn off, the master still needs to confirm the ship`s position. Therefore, heavenly bodies such as the Sun, Moon and Stars have to be used for this purpose.

There were other recommendations from respondents, suggesting that while the basic understanding of celestial navigation is still required and an excellent skill to maintain, this should be taught at a reduced level without much emphasis on it anymore. The Nautical almanac should remain intact for those that still require practice and use for celestial observations.

The following are additional points raised for and/or against this topic;

- Some respondents recommended the removal of some celestial calculations in return for software programs which must be made mandatory for carriage on board.

- The basic understanding and principles should still be taught, and calculations should still be done in classwork, but there should not be an exam on it as it is no longer relevant to the job.

- There were people that suggested that only ‘old-time’ captains and senior officers know how to do it properly at present because they had to use it during their time when it was the only form of fixing a position on an ocean passage, and they had to be good at it. This is not the case anymore.

- Because of the commercial introduction of GLONASS, GPS and other satellite position fixing methods, taking sights by sextant is no longer relevant.

- The newer generation will not develop the competency needed to use a sextant and fix positions if they don’t have to use it regularly due to the presence of sophisticated position fixing equipment available onboard on modern ships and changes in bridge structure/construction.

- There is too much time spent on training in this area compared to more modern navigation and position fixing methods used at sea.

- Knowledge regarding plotting of celestial sight on ECDIS should be incorporated onto the main course if necessary.

1.4 Advisor’s Recommendation:

The availability of electronic means of position fixing means that celestial navigation skill is not as essential as it used to be. A modern-day navigator can sail without ever having to take celestial sights to determine its position but may use it to determine its compass error.

It means that part of the time spent on celestial navigation training can be dedicated to other relevant topics that are important to a navigator today.

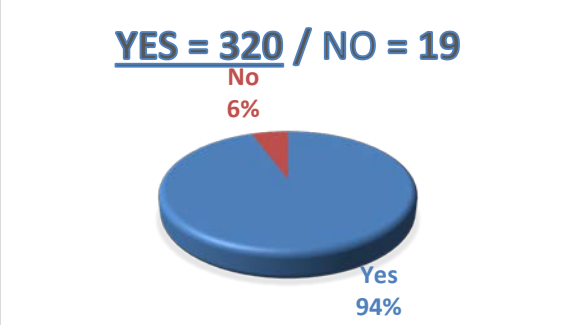
Good celestial calculation software should be approved and if required training on its use should be encouraged.

Knowledge, understanding and proficiency in:

2. Terrestrial and coastal navigation

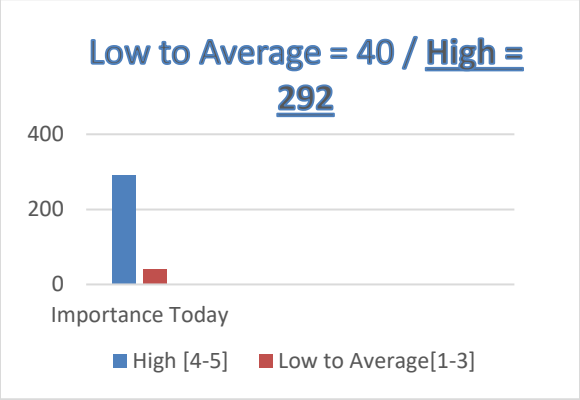
2.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 320** / No = **19**



2.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 40 / **High = 292**



2.3 **Summary of respondent's RECOMMENDATIONS:**

The majority of respondents (94%) agreed that this section was still relevant today. Considering the use of ECDIS is the primary means of navigation on most ships today, there is much argument in favour of focusing more time on training the officers on the practical use of

ECDIS, or time shared equally between both ECDIS and paper chart training as some ships are still using paper charts as their primary means of navigation.

Until paper charts are a no longer used, it will remain essential to train officers in their use and practices. Doing this would mean that enough time is spent on teaching officer parallel index techniques, chart/ENC corrections and maintenance on both paper charts and ECDIS in preparation for their time at sea.

This will ensure that the fundamental knowledge of the use of paper charts is not lost, while a considerable amount of time is spent on ECDIS training, in addition to the stand-alone ECDIS course that is also mandatory.

Dead reckoning by use of ECDIS should be highlighted and more simulator-based training should be used to follow up on passage planning and traffic scenarios.

Specific tide calculations, like secondary port calculations, can be removed as most vessels carry Total Tide software today. The requirement to be proficient/excellent at tidal calculations is somewhat redundant as software and resources such as Total Tide is used on almost all ships.

2.4 Advisor's Recommendation:

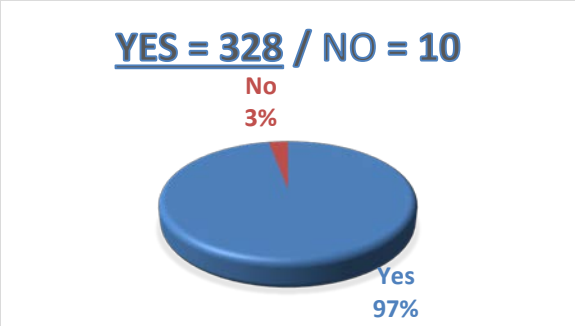
This section can be amended to place extra emphasis on the use of ECDIS on ships and robust training on the subject and competency assessment. There are many shipping companies using paper charts and ECDIS side by side due to ENC chart`s limitations. Therefore, delivering adequate training for both is currently essential.

Knowledge, understanding and proficiency in:

3. Electronic systems of position fixing and navigation

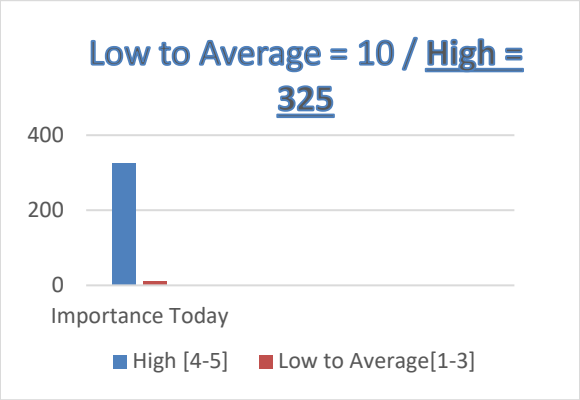
3.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 328** / No = **10**



3.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 10 / **High = 325**



3.3 Summary of respondent's RECOMMENDATIONS:

The majority of respondents (97%) agreed that this section was still relevant and vital today.

An overwhelming number of respondents recommended that LORAN C should be removed from the syllabus as it is not being used anymore on most ships, or it should be taught as a way of illustrating E-LORAN existence only.

Recommendations also suggested more emphasis should be given to other electronic means of navigation/position fixing equipment as they are the primary means now. Also, the requirement for more simulator training on bridge equipment and scenarios would be highly beneficial to safety.

On the other hand, training on detecting flawed results or errors from GPS, GLONASS, GALILEO and other systems can be increased; as well as first aid to recover a frozen system, indications that a system is not working correctly and other common pitfalls. As we live in the age of technology where these systems need to be used with the correct knowledge to prevent mistakes and dangerous over-reliance.

Passage planning on ECDIS should be covered in more detail and Dead reckoning by use of ECDIS should be highlighted.

3.4 Advisor's Recommendation:

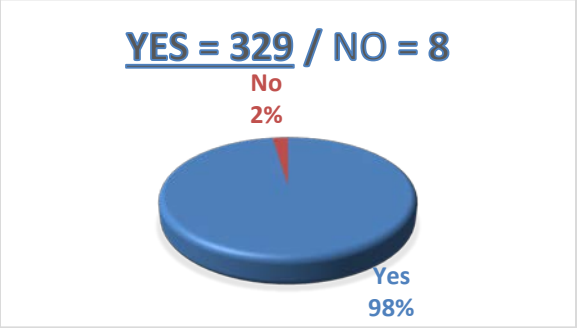
This section can remain the way it is. Mandatory critical equipment contingency planning and troubleshooting arrangement training can be added. The bridge equipment LORAN C has been excluded from the revised MNTB guidelines.

Knowledge, understanding and proficiency in:

4. Echo Sounders

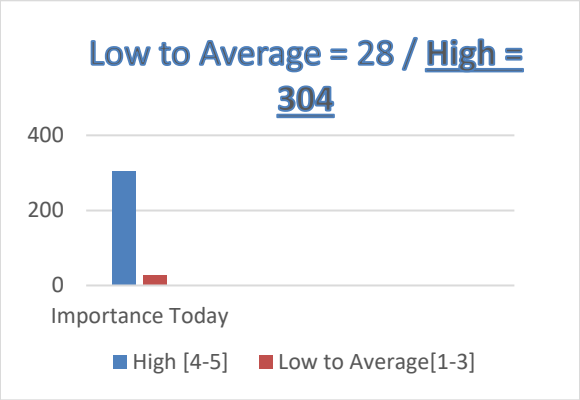
4.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 329** / No = **8**



4.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 28 / **High = 304**



4.3 **Summary of respondent's RECOMMENDATIONS:**

98% of respondents agreed that Echo Sounders is a critical and beneficial navigational equipment because knowing how much water you have under the keel will always be a relevant and vital piece of information. Otherwise, you may be aground and do not know it.

More can be done to train officers to acquire the necessary knowledge on how to set up the equipment properly for optimum performance.

Understanding of the safety margins, safety depths and how the echo sounder can assist in cross checking this should be emphasised.

4.4 Advisor's Recommendation:

This section can remain the way it is. Training on echo sounder safety depth and alarm setting should be emphasised, including system data retrieval/printout.

Knowledge, understanding and proficiency in:

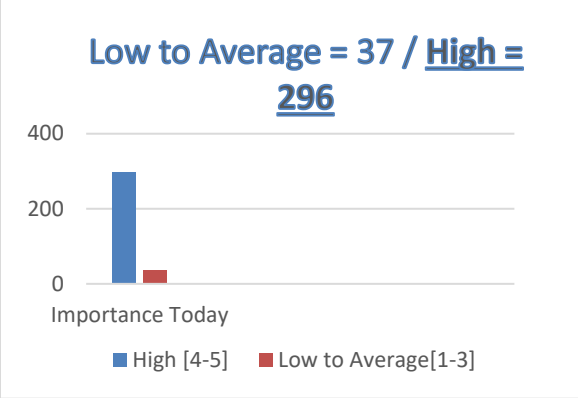
5. Compass Magnetic and Gyro

5.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 325** / No = **10**

5.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 37 / **High = 296**



5.3 Summary of respondent's RECOMMENDATIONS:

The majority of respondents (97%) agreed that this section was still relevant today.

A few respondents did recommend the removal of the magnetic compass from the syllabus and the need to correct the magnetic compass because a professional compass adjuster

mostly does this on ships today. There is also the availability of a GPS compass and Gyro compass.

They also recommended that the knowledge and understanding of how the various available compasses work and are needed, because an officer must understand the principles of that equipment to understand what happens when they press a button.

While Magnetic compass adjustment is still in the syllabus, compass adjustment should also be taught with more detail at the lower levels as the Master often tries to delegate compass responsibility to the OOW, even without proper experience.

They also recommended less in-depth knowledge of Gyro equipment and how it works but with more training on error and calculations.

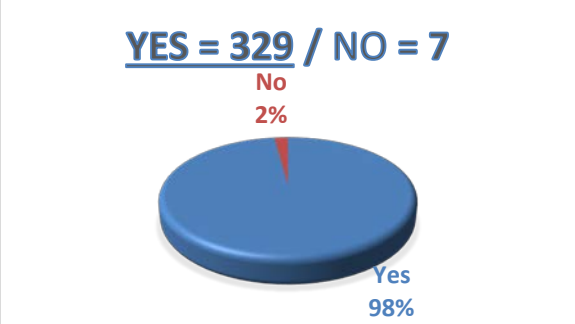
5.4 Advisor's Recommendation:

This section can remain the way it is.

Knowledge, understanding and proficiency in:
6. Steering control systems

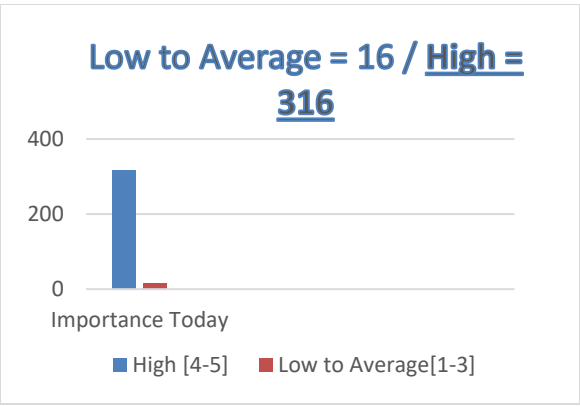
6.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 329** / No = **7**



6.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 16 / **High = 316**



6.3 Summary of respondent's RECOMMENDATIONS:

The majority of respondents (98%) agreed that this section was still relevant today.

On steering control systems, respondents recommended the addition of more training on the operational procedures and setting of this equipment using various control options; as well as in-depth training on the emergency procedure to be employed if the equipment fails or how to respond appropriately.

Training on the awareness of the loss of steering and changeover procedures, and knowledge of the emergency steering systems, including the solenoids, was also recommended. The training also depends on the type of control system carried on an individual ship. But if the right training is given to an officer, they will most likely be able to apply this knowledge on any vessel they sail on.

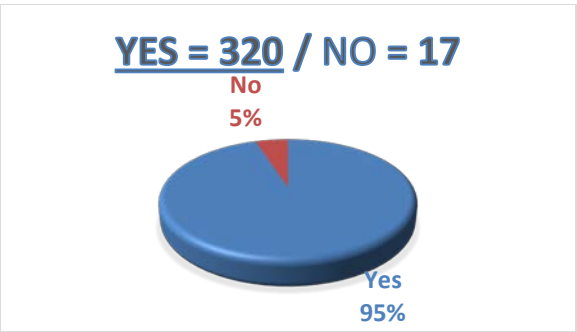
6.4 Advisor's Recommendation:

This section is well written and can remain the way it is.

Knowledge, understanding and proficiency in:
7. Meteorology

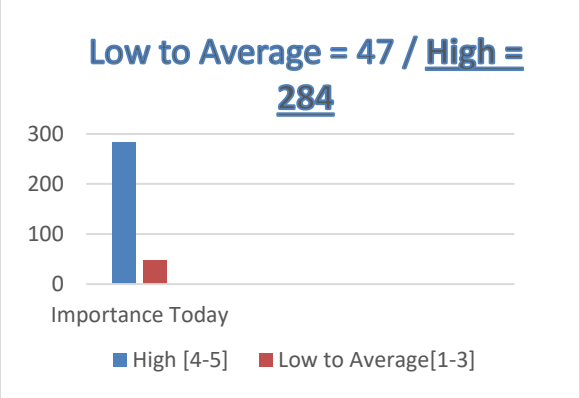
7.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 320** / No = **17**



7.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 47 / **High = 284**



7.3 Summary of respondent's RECOMMENDATIONS:

95% of the participants agreed that this section was still relevant today.

Respondents recommended more training on the use of modern/electronic weather equipment as weather fax and other outdated equipment are mainly redundant these days. More emphasis should be placed on modern means of gathering weather information, i.e. the internet, errors from different sources and their limitations, including electronic weather routing systems and services.

Respondents did question the teaching time allocated for equipment like Barograph and aneroid barometers, recommending that this should be removed as it is not often used or even applicable. Also, a standardised teaching criterion to avoid some lecturers over complicating the subject.

7.4 Advisor's Recommendation:

This section can remain the way it is. However, training on meteorological equipment rarely used onboard a modern ship should be removed from the syllabus. Optimum training time to

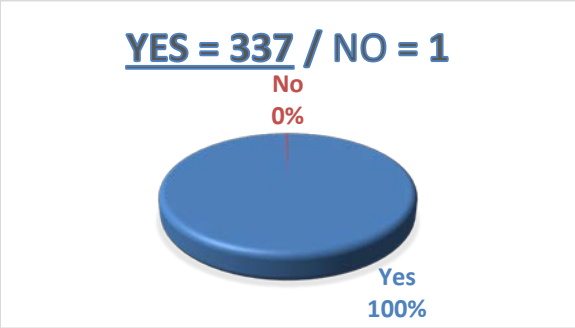
be provided for modern equipment, software and online systems that seafarers use or have available to them daily.

Competence:
Maintain a safe navigational watch

Knowledge, understanding and proficiency in:
8. Watchkeeping

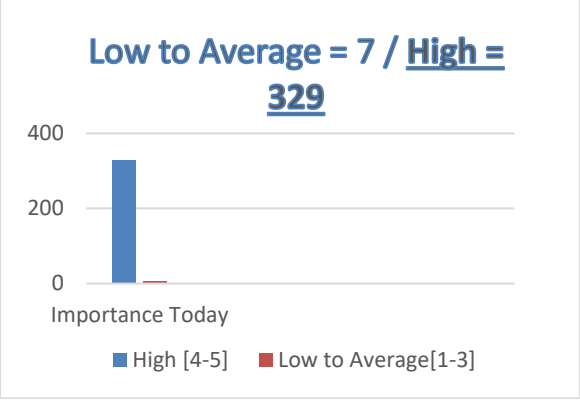
8.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 337** / No = **1**



8.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 7 / **High = 329**



8.3 **Summary of respondent's RECOMMENDATIONS:**

100% of respondents agreed that this section was still relevant today. Most respondents agreed that this section is well written and should remain the way it is.

Others recommended that improvement could be made in the areas of simulator use where the MCA will require that cadets get X amount of hours per week in the simulator to develop their decision making and situational awareness skills while working under pressure.

This simulator training is needed with various situations and scenarios so that the cadet is prepared for the task of an Office of the Watch, as bridge watchkeeping is where the OOW spends most of their working time onboard.

Bridge watchkeeping simulator time will therefore deliver well-prepared officers ready to face the maritime industry. The simulator training should be planned with acceptable practices of bridge watchkeeping on board.

8.4 Advisor's Recommendation:

This section is generally well written and can remain as is.

More simulator time should be made available as part of the training program to help Officers and Cadets achieve all-round knowledge and the understanding needed to demonstrate competence in preparation for sea service.

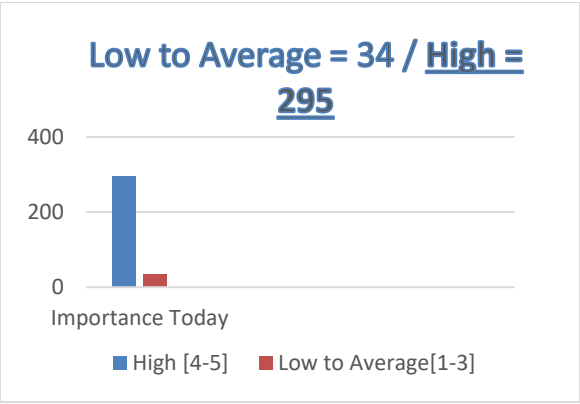
Knowledge, understanding and proficiency in:
9. Bridge resource management

9.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 326** / No = **10**

9.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 34 / **High = 295**



9.3 Summary of respondent's RECOMMENDATIONS:

Respondents did recommend adding bridge alarms management to the topics that should be covered under Bridge resource management. At the same time, some suggested integrating Bridge Resource Management with NAEST or HELM courses and removed from here.

9.4 Advisor's Recommendation:

Bridge resource management involves the proper coordination of bridge equipment, personnel, and procedures for the overall goal of safe navigation and watchkeeping. It involves effective communication, good situational awareness, and adequate prioritisation of resources. There should be more practical elements in HELM courses.

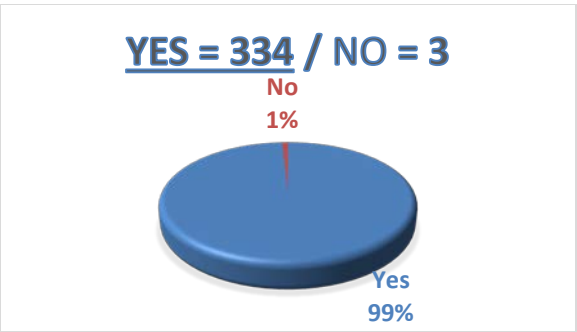
This section is generally well written and can stay the way it is.

Competence:
Use of Radar and ARPA to maintain safety of navigation

Knowledge, understanding and proficiency in:
10. Radar Navigation

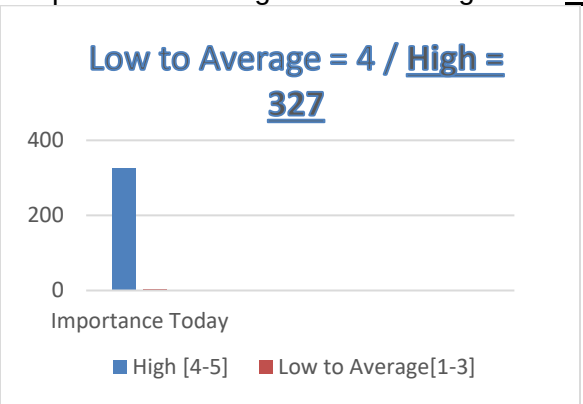
10.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 334** / No = **3**



10.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 4 / **High = 327**



10.3 Summary of respondent's RECOMMENDATIONS:

The majority of respondents (99%) agreed that this section is well written and still relevant today.

Respondents recommended that RM True Trails should be added as best practice, more should be taught about radar overlay functionality and additional practical simulation training.

Others suggested that maintenance and troubleshooting of Radar equipment should be taught, including the interface of the radar and other bridge equipment.

10.4 Advisor's Recommendation:

This section is well written and can remain as is.

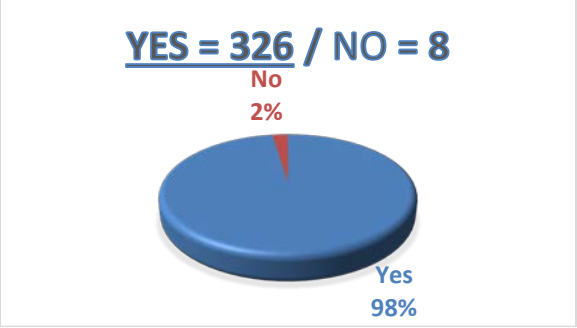
Simulator time should be encouraged as part of the training program to help Officer cadets to use the radar and ARPA for practice, so that the knowledge and understanding needed to demonstrate competence can be gained. Training should emphasise the limitations of Radar/ARPA equipment.

Knowledge, understanding and proficiency in:

11. Principal types of ARPA, their display characteristics, performance standards and the dangers of over reliance on ARPA

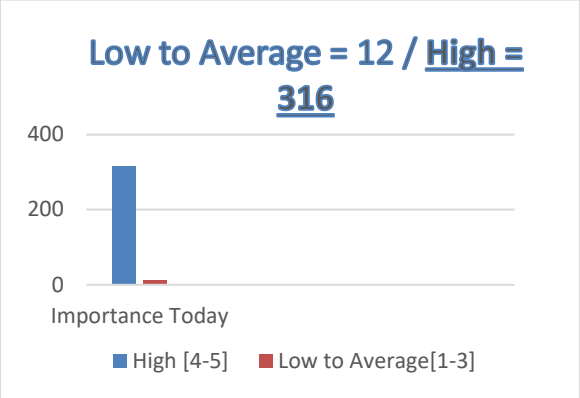
11.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 326** / No = **8**



11.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 12 / **High = 316**



11.3 **Summary of respondent's RECOMMENDATIONS:**

The majority of the respondents (98%) agreed that this section is still relevant and important today.

Some recommended the addition of manual plotting techniques to the ARPA section. In contrast, others recommended the total removal of manual plotting techniques, as it is irrelevant to the modern bridge, because it only serves as a distraction to the OOW who must deal with other navigational functions simultaneously.

11.4 Advisor's Recommendation:

This section is well written and can remain the way it is.

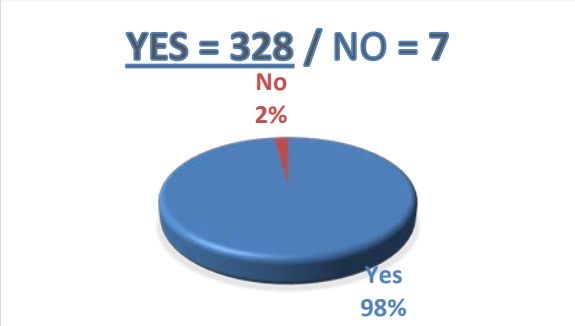
More simulator time should be made available as part of the training program to help Officer cadets use the radar and ARPA for practice to ensure that the knowledge and understanding needed to demonstrate competence can be gained.

Competence:
Use of ECDIS to maintain the safety of navigation

Knowledge, understanding and proficiency in:
12. Navigation using ECDIS

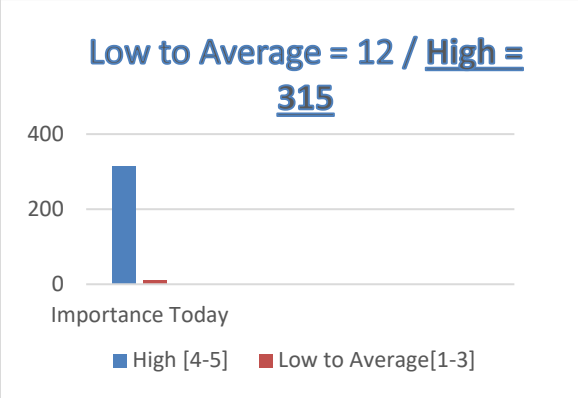
12.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 328** / No = **7**



12.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 12 / **High = 315**



12.3 Summary of respondent's RECOMMENDATIONS:

98% of the respondents agreed that this section was still relevant today.

Respondents recommended a few changes to this section. Suggesting that:

- More time should be given to ECDIS training and made part of the full syllabus of training instead of it being a standalone short course. ECDIS is now a modern ship navigation equipment which is here to stay, and too little time is spent on this at college when compared with time spent on paper chart navigation.
- Training should include chart correction and update procedures, use of various functions, Ts & Ps, Notice to Mariners, license and data update, maintenance, ECDIS user Cybersecurity awareness and system freeze or overload response.

Respondents also recommended a Standardised ECDIS user display and operation as there are too many differences between manufacturers. Until this happens, type-specific training must also be emphasised with robust passage planning practice on ECDIS.

12.4 Advisor's Recommendation:

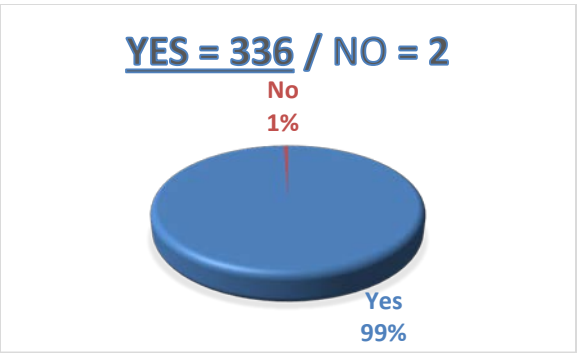
This section is well written but could do with some amendments that will promote better understanding in system, software and chart updates; such as maintenance and fault response measures to ensure a smooth practical use and all-round knowledge of the ECDIS equipment. The training should emphasise the limitations of ECDIS.

Competence:
Respond to emergencies

Knowledge, understanding and proficiency in:
13. Emergency procedures

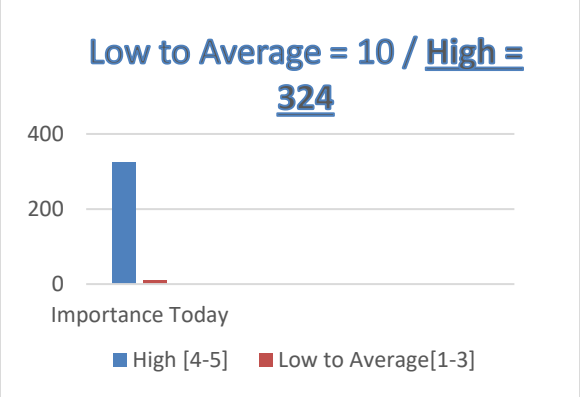
13.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 336** / No = **2**



13.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 10 / **High = 324**



13.3 Summary of respondent's RECOMMENDATIONS:

Although most respondents (99%) agree that this section can remain as is, some recommended more scenario-based bridge simulator exercises covering the various kinds of onboard emergencies and manoeuvres.

13.4 Advisor's Recommendation:

This section is well written and can remain the way it is.

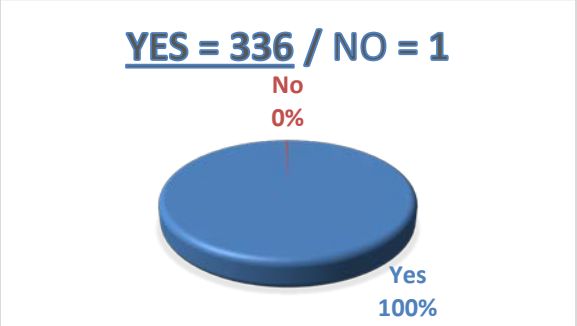
Simulator training on responses to the different onboard emergencies, if introduced, can provide improved knowledge and understanding needed to prepare the Officer Cadets for their time onboard as OOW.

Competence:
Respond to a distress signal at sea

Knowledge, understanding and proficiency in:
14. Search and Rescue

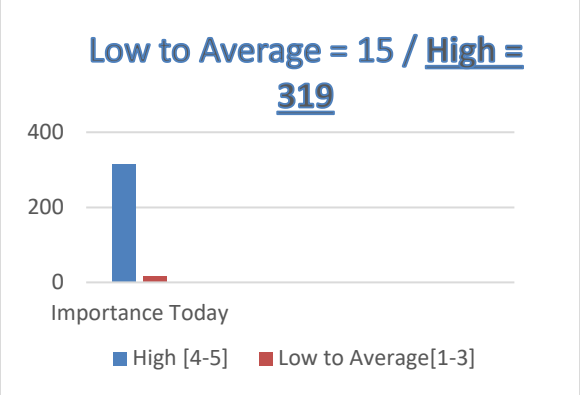
14.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 336** / No = **1**



14.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 15 / **High = 319**



14.3 **Summary of respondent's RECOMMENDATIONS:**

The majority of respondents agreed that this section can remain as is and that this section was still relevant today.

Some suggested that more simulator training exercises, covering distress situations at sea, should be added to training scenarios.

14.4 Advisor's Recommendation:

This is section is generally well written and can remain the way it is.

More simulator training/exercises covering distress situations at sea should be added and encouraged for improved training. A better understanding of the IAMSAR manual content should be gained through the simulator exercise scenarios.

Competence:

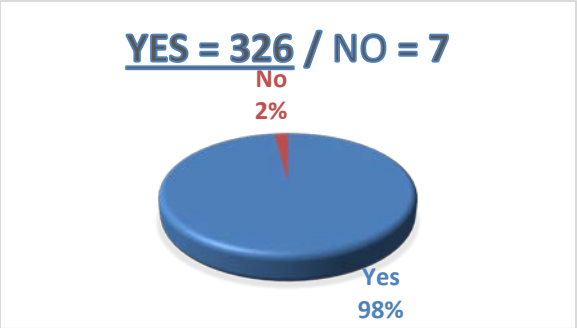
Use the IMO standard Marine Communication Phrases and use English in written and oral form

Knowledge, understanding and proficiency in:

15. English language

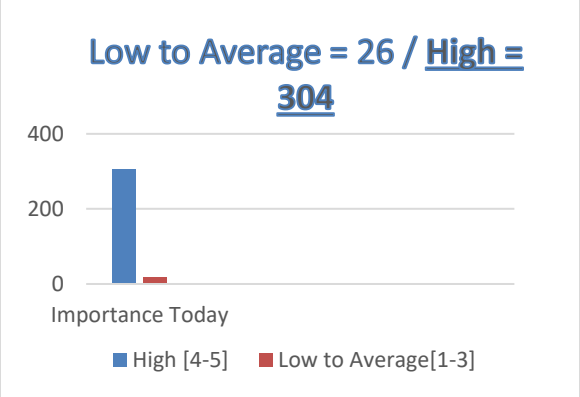
15.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 326** / No = **7**



15.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 26 / **High = 304**



15.3 Summary of respondent's RECOMMENDATIONS:

98% of the respondents agreed that this section was still relevant. Most respondents agreed that the English language standard should be improved to assist with general onboard communication, during distress and emergencies.

More training is required in the area of written and spoken maritime English for all nationalities.

15.4 Advisor's Recommendation:

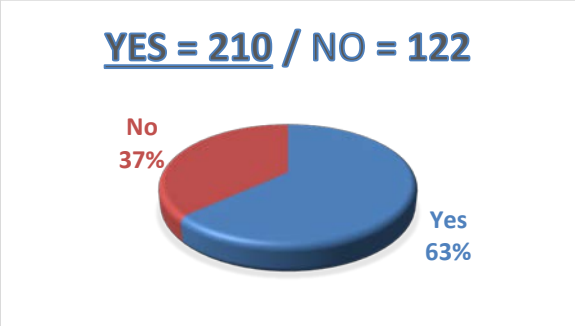
This is well written and can remain the way it is.

Competence:
Transmit and receive information by visual signalling

Knowledge, understanding and proficiency in:
16. Visual signalling

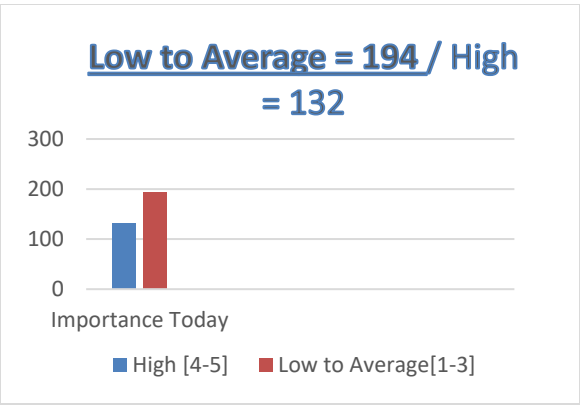
16.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 210** / No = **122**



16.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: **Low to Average = 194** / High = **132**



16.3 Summary of respondent's RECOMMENDATIONS:

A majority of respondents (63%) agreed that this section was still relevant today. However, a high number of respondents gave a low to average grade when it came to the importance of this competence today.

Most agreed that the knowledge of flags and distress signalling is still relevant to today's navigator, but not so much for Morse Code signalling, which is rarely used at sea, if at all.

An overwhelming number of respondents recommended that Morse Code signalling is not essential today and should be removed from the competence requirement. There is not enough time on a modern ship for Morse Code signalling and communications when dealing with distress and emergencies in real time.

16.4 Advisor's Recommendation:

This section can remain the way it is, although with less focus on Morse Code signalling at the training level.

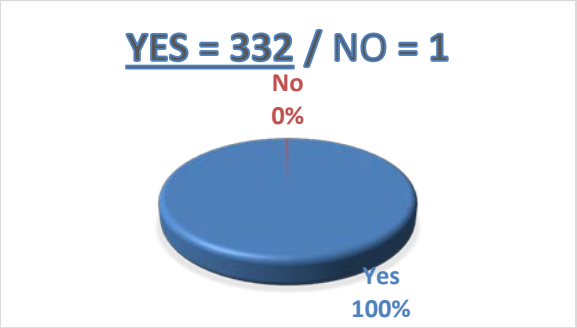
Even though Morse Code signalling is rarely used at sea, it is not yet obsolete as certain elements of COLREG sound signals in restricted visibility, identification of buoys, lights and some offshore installations can be related to Morse Code. The same goes for flags used for signals during pilotage, carrying dangerous goods, diver(s) below and distress signalling.

Competence:
Manoeuvre the ship

Knowledge, understanding and proficiency in:
17. Ship manoeuvring and handling

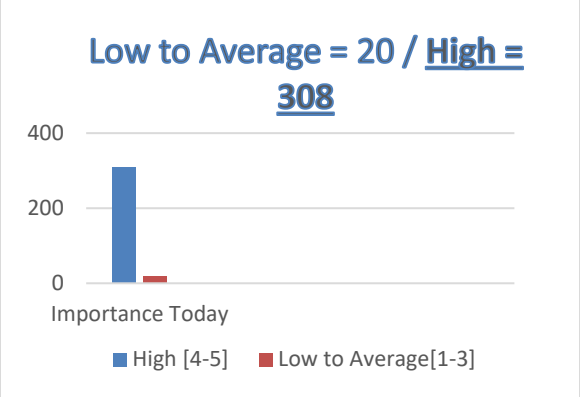
17.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 332** / No = **1**



17.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 20 / **High = 308**



17.3 **Summary of respondent's RECOMMENDATIONS:**

The majority of respondents agreed that this section was comprehensive enough the way it is.

Some suggested amendments to include more simulator training for enhanced learning using different scenario-based situations, locations, ship design and propulsion etc., and to cover all types of propulsion, steering and power systems now used on a modern ship.

17.4 **Advisor's Recommendation**:

This section is well written and can remain the way it is.

More use of simulator training in this area can be encouraged and training on interaction and the squat effect.

Competence:

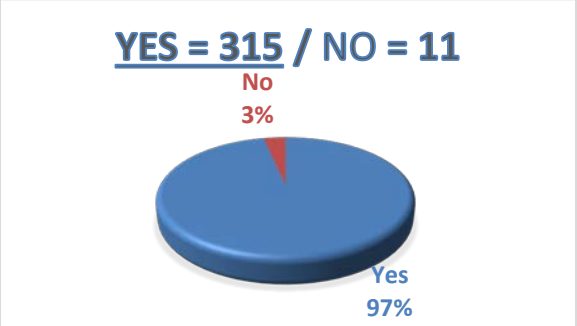
Monitor the loading, stowage, securing, care during the voyage and the unloading of cargoes

Knowledge, understanding and proficiency in:

18. Cargo handling, stowage and securing

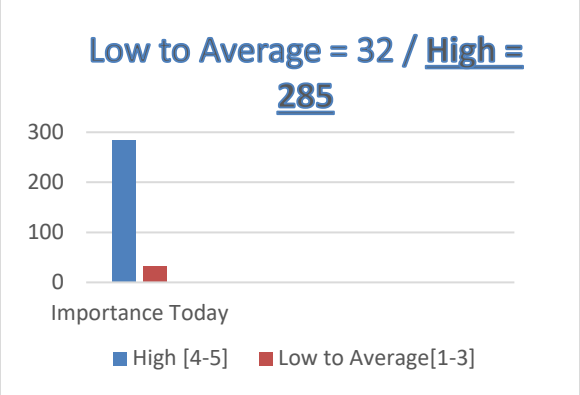
18.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 315** / No = **11**



18.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 32 / **High = 285**



18.3 **Summary of respondent's RECOMMENDATIONS:**

Most of the respondents agreed that this section is comprehensive enough as it is.

18.4 **Advisor's Recommendation:**

This section is well written and can remain the way it is.

Some of the comments and suggestions seem to be directed at colleges and how they can improve on training delivery.

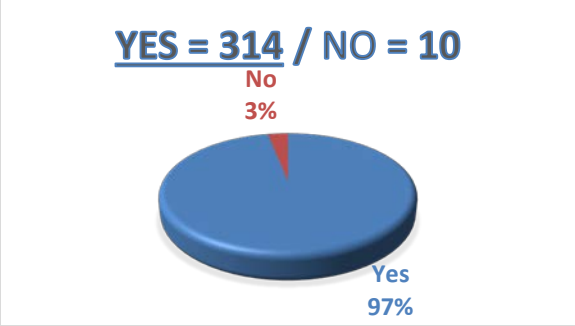
Generally, training delivery should be modernised to reflect actual practices and modern cargo handling equipment/procedures. This can be done through the removal of all the outdated topics and the addition of emergency situations, responses and case studies.

Competence:
Inspect and report defects and damage to cargo spaces, hatch covers and ballast tanks

Knowledge, understanding and proficiency in:	
19.	Knowledge and ability to explain where to look for damage and defects commonly encountered due to Loading and unloading operations, Corrosion and Severe weather conditions

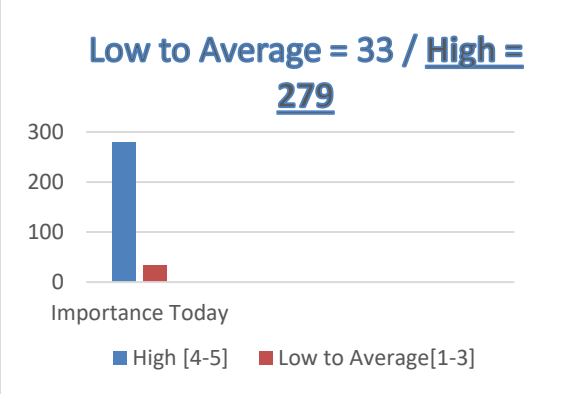
19.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 314** / No = **10**



19.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 33 / **High = 279**



19.3 Summary of respondent's RECOMMENDATIONS:

Most of the respondents agreed that this section is comprehensive enough as it is.

19.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:
Ensure compliance with pollution prevention requirements

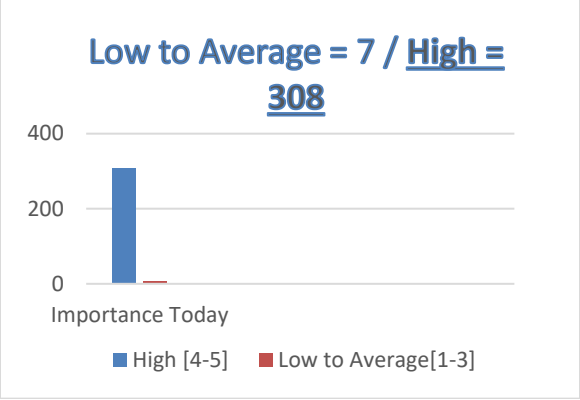
Knowledge, understanding and proficiency in:
20. Prevention of pollution of the marine environment and anti-pollution procedures

20.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 319** / No = **2**

20.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 7 / **High = 308**



20.3 Summary of respondent's RECOMMENDATIONS:

99% of the respondents agreed that this section is comprehensive enough as it is. Training on environmental compliance should continue and be strongly emphasised.

20.4 Advisor's Recommendation:

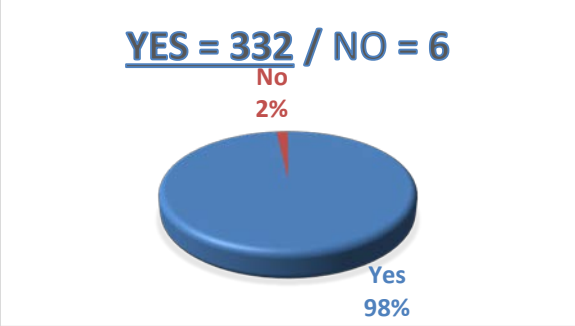
This section is well written and can remain as is.

Competence:
Maintain seaworthiness of the ship

Knowledge, understanding and proficiency in:
21. Ship stability, Ship construction

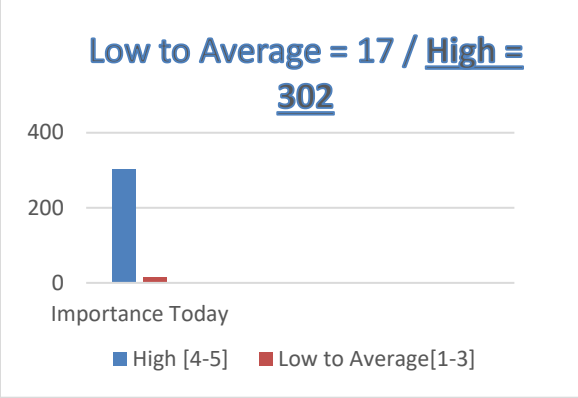
21.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 332** / No = **6**



21.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 17 / **High = 302**



21.3 Summary of respondent's RECOMMENDATIONS:

98% of respondents agreed that this section should be amended to limit or remove long and complex stability calculations that are rarely practiced onboard. However, there should be an increased focus on the use of stability electronic software, loading computers and systems used on ships. It should include training on the use and interpretation of details in the intact stability and damage stability booklets.

21.4 Advisor's Recommendation:

This section is well written and can remain as is.

There are different types of software that can be used for ship stability computation which are highly recommended. Training on their correct use is highly recommended.

Competence:

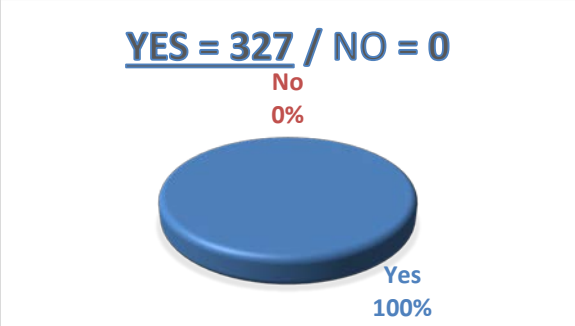
Prevent, control and fight fires onboard

Knowledge, understanding and proficiency in:

22. Fire prevention and fire-fighting appliances

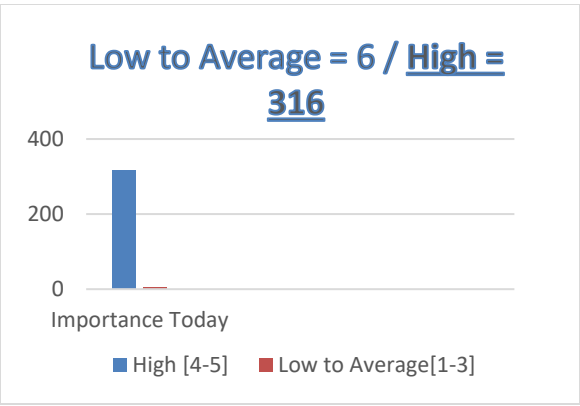
22.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 327** / No = **0**



22.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 6 / **High = 316**



22.3 Summary of respondent's RECOMMENDATIONS:

None.
100% of the respondents agreed that this section was still relevant today. This section is well written and can remain as is.

22.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:
Operate life-saving appliances

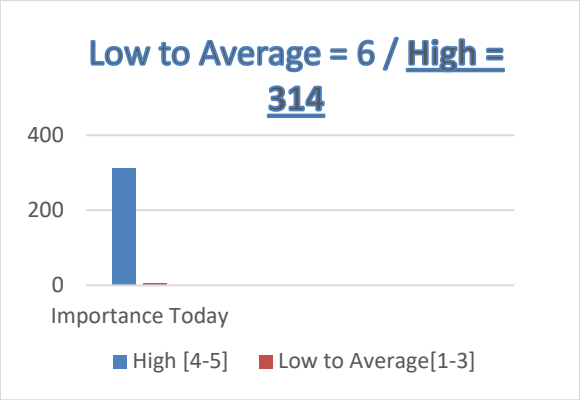
Knowledge, understanding and proficiency in:
23. Lifesaving

23.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 324** / No = **0**

23.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 6 / **High = 314**



23.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is still relevant today. There was a recommendation for the addition of modern lifesaving apparatus such as Marine Evacuation System (MES) to LSA training, as this equipment is present on cruise ships. This included how to maintain equipment certifications and the dangers involved in launching and recovery operations.

23.4 Advisor's Recommendation:

This section is well written and can remain as is.

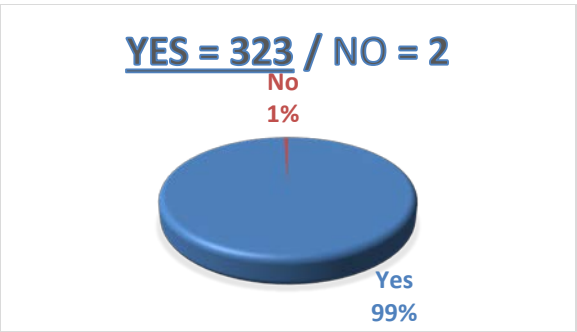
Most recommendations from respondents are already covered in this section, including some LSA items that might not be individually listed. The training on the operation, use and function of all types of LSA, including Marine Evacuation Systems (MES), is essential to all seafarers whether the equipment is present onboard or not.

Competence:
Apply medical first aid onboard ship

Knowledge, understanding and proficiency in:
24. Medical aid

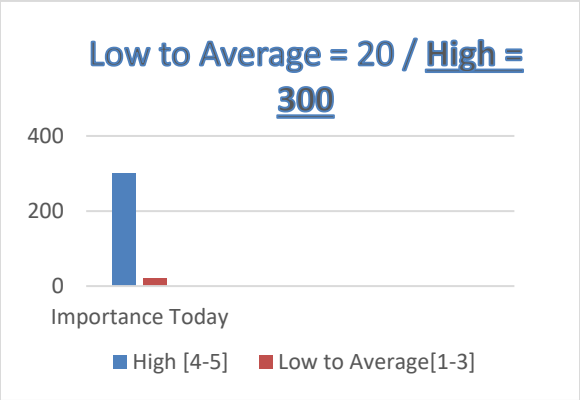
24.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 323** / No = **2**



24.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 20 / **High = 300**



24.3 Summary of respondent's RECOMMENDATIONS:

Most respondents agreed that this section should remain as is.

A recommendation was made for the addition of AED training and Mental Health training at operational and management levels, and five-yearly refreshers for this competency.

24.4 Advisor's Recommendation:

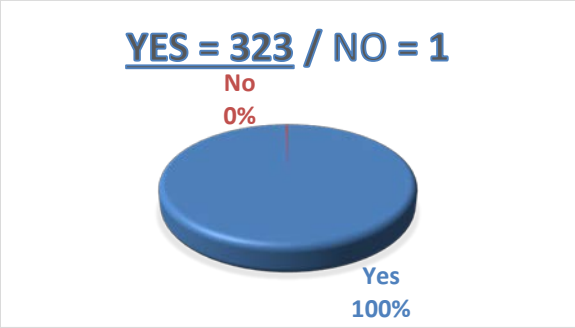
This section can be updated to cover Mental Health training at a level appropriate and applicable to all seafarers.

Competence:
Monitor compliance with legislative requirements

Knowledge, understanding and proficiency in:	
25.	Basic working knowledge of IMO conventions concerning safety of life at sea, security and protection of the marine environment

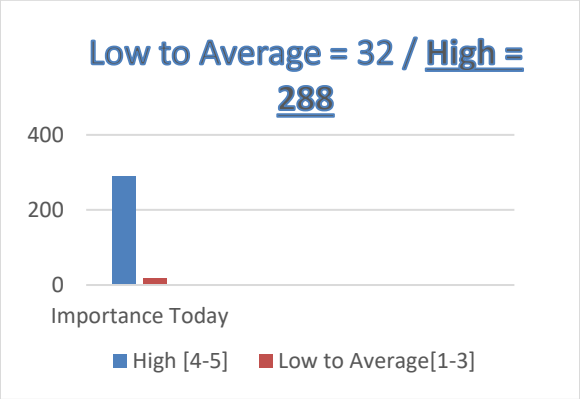
25.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 323** / No = **1**



25.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 32 / **High = 288**



25.3 **Summary of respondent's RECOMMENDATIONS:**

100% of the respondents agreed that this section is still relevant today and can remain as is.

25.4 **Advisor's Recommendation:**

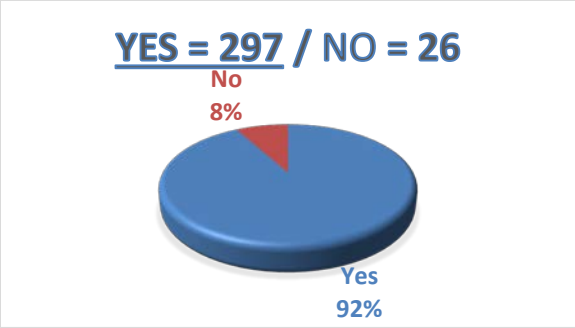
This section is well written and can remain as is.

Competence:
Application of leadership and team working skills

Knowledge, understanding and proficiency in:
26. Working knowledge of shipboard personnel management and training

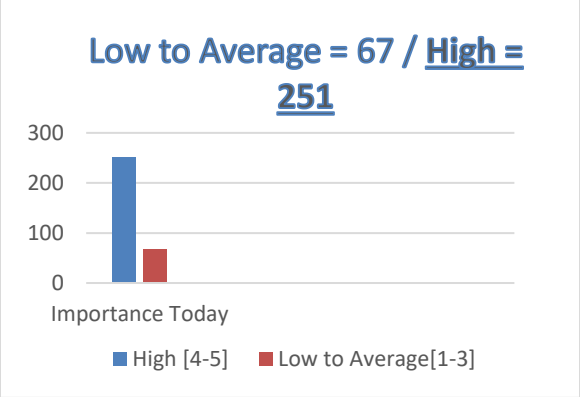
26.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 297** / No = **26**



26.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 67 / **High = 251**



26.3 **Summary of respondent's RECOMMENDATIONS:**

The majority of respondents (92%) agreed that this section is still relevant today and should be kept as is.

Recommendations were made for the addition of training on Coaching and Mentoring of less experienced Officers and Ratings, including the addition of equality and diversity training.

26.4 **Advisor's Recommendation:**

This section is well written.

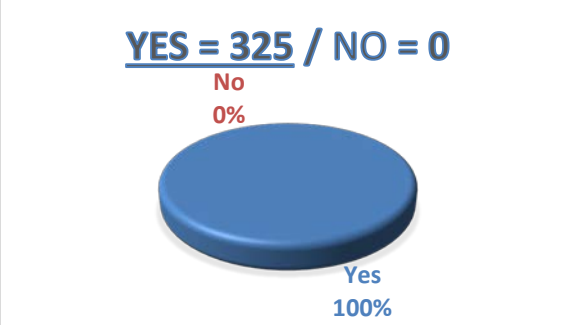
Competence:
Contribute to the safety of personnel and ship

Knowledge, understanding and proficiency in:

27. Knowledge of personal survival techniques, Knowledge of prevention and ability to fight and extinguish fires, Knowledge of elementary first aid, Knowledge of personal safety and social responsibility

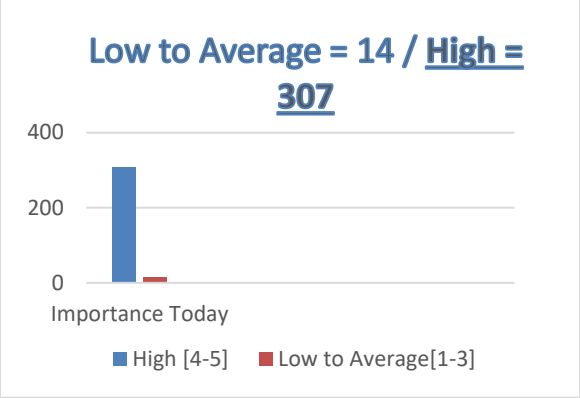
27.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 325** / No = **0**



27.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 14 / **High = 307**



27.3 Summary of respondent's RECOMMENDATIONS:

Most respondents agreed that this section should remain as is.

27.4 Advisor's Recommendation:

This section is well written and can remain as is.

What areas of Seafarer's training could be introduced or enhanced to reflect today's onboard operational requirement?

The following points are raw suggestions and recommendations from respondents stating what could be introduced or enhanced to reflect today's onboard operational requirements:

- Mandatory training in Enclosed Space procedures, theory and practical.
- Enclosed space rescue techniques.

- Much more effective simulator-based assessment especially on testing Coll Regs and bout buoyage

- Fighting fatigue; human / seafarers rights; anti- piracy defense measures

- Critical incident and response training.
- Leadership and conflict management.
- Identify crew psychological issues.

- Software and hardware maintenance capabilities. Ship staff should have a good working knowledge of repairing computers for software and hardware related problems.

- PSC, FSC and Vetting inspections, observations
- Automation

- The STCW refresher course should be expanded to include changes in electronic systems - GMDSS, NAEST, ECDIS

- Much greater use of electronic charts, total tide etc. in training colleges. There is a disconnect in what is seen in college vs at sea.

- more computer IT training, basic changing of computer parts, software use and basic fixing of linked computer systems. Also related to cyber security - viruses. More systems rely on these parts than ever - firefighting system, stability computers, ballast and draft gauge systems with little understanding of common problems or ways to do basic repairs.

- Troubleshooting basic guidance on failure of key equipment

- Mental health to be included as a major subject due to crew reduction, stress and isolation onboard

- More training in basic administration skills. Courses to increase the computer literacy of officers would be an advantage.
- Overhaul the requirements of electronic navigation to reflect increased use of ECDIS.
- Rationalize GMDSS training to make it more relevant.

- Stress management should be introduced.

- Stop teaching Gyro to an engineering level of detail. Stop Teaching Morse Code, no body uses it anymore. Stop setting an exam on Celestial as it is not used as a primary means of navigation deep sea anymore, retain the fundamentals and knowledge in classwork; no need to examine though. Introduce ECDIS in place of the aforementioned obsolete areas, and emphasize how important it is to understand everything about ECDIS; integrity of source information, where this information is sourced itself, limitations and common errors and misinterpretations that have led to groundings and accidents etc.

- Social media guidance
- Resilience

- as mentioned before, SAR could expand on large scale rescue operations

- more enhanced training regarding the use of modern electronic position fixing systems, stability calculation software and celestial navigation software

- Electronic navigation, ECDIS usage, Large and high-speed ship handling, software-based celestial, tidal, magnetic compass calculations

- Introduction to commercial operations for Master and Chief Mate's unlimited
- Understanding of vessel certification and not just their validity
- Carriage of cargoes under IMSBC code and its applications
- Rest hours and its application with regards to deviations

- ECDIS Management on ships using Paperless Navigation
- Reduce calculation, more practical, especially in navigation and stability

- Improve understanding of electronics and satellite communications to manage bridge nav equipment better

- More intense ECDIS training with higher percentage markings for a PASS
- Introduce elements of mental health and wellness

- Most of the facilities onboard are in modern version, it is recommended to have an updated equipment on shore facilities in order to align with the ones onboard.

- Computer software training.
- More sea time as cadet.
- Drop sextant.
- Reduce practical chartwork and focus on ECDIS.
- Enhance the training on radar use and actually looking out the window.

- Have a better understanding of all ship types and not just focus on bulkers container and tankers

- Internet and mobile device safety

- Knowledge should be refreshed regularly. Deck officers and ratings opening book one time per five year. As result, received knowledge not in use and forgotten. Online refreshment course should be available.

- Compulsory and affordable manned model ship handling course
- Emergency ship handling (loss of rudder, propulsion, bad Wx, ECDIS failure etc.)
- Shipboard emergency - simulator: fire, grounding, rescue etc.
- Compulsory NSAP for all offers every 5 years
- Compulsory MCRM course

- Training for the Equipment which are now absolute and hardly used can be removed and training for latest technology and equipment shall be done.

- Damage control course.
- Specially how to respond during flooding or collision or grounding or such emergencies.

- No new courses. No new regulations. No Simulator courses. All refresher courses to be scrapped. ISM Code and ISPS Codes should be scrapped.

- Physiological tests and ability to work under pressure. More competence required to deal with depressions in seafarers.

- As aforementioned, more focus on modern electronic nav/stability/meteorology equipment rather than old, outdated paper. Much of the content of the syllabus is from the 1980's - I wasn't even born at that point.

- More time on ECDIS and use of simulation in day to day training

- Understanding of mental health issues.

- Electronic forms of navigation equipment encouraged.
- More relevant to understand the tech used 24/7 rather than sextant work which is extremely rarely used.
- Mental First Aid courses
- Medical Care courses for all ranks of Officers OOW,

- As indicated in the survey, more use of simulation in training and MCA assessment, moving away from smartie boards and wooden models!

- More training required on fatigue management and health.

- Generally speaking, knowledge of the now omni-present Integrated Bridge Systems and their pitfalls are lacking, as is basic computer knowledge, yet computers are omnipresent on all bridges. Alarm fatigue is becoming a real problem, and seafarers need to be trained better in how to deal with alarms and recognize the symptoms of alarm fatigue. Not an STCW problem, but rather SOLAS, but IBS need to be modified so that a fault causes one alarm on the entire bridge, rather than causing every single system on the bridge to go into alarm. Alarms need to be accompanied by better descriptions as to what triggered the alarm.

- Rationalize CoC requirements for harbor/ coastal vessels, in particular C/E position on tugs far too expensive/involved for companies to take on engineering apprentices.

- Mental health covered within social responsibilities course

- HELM course updated to reflect real onboard ship experiences. Improvements required to leadership development of Cadets.

- First aid training so at least 50% of crew are trained to the same level

- Proper rope work, too many people come out of college not actually knowing how to splice or tie a bowline in anger.

- Good PC skills are unfortunately a necessity and puts extra strain on the rest of the crew if not available.
- Painting/Chipping/Welding/practical maintenance needs to be improved drastically before we end up with a generation of seafarers who have really tidy desks and the ship rusts around them.

- Enclosed space rescue and training

- More up to date applications of Modern navigation and cargo handling.

- Easier access to and accreditation for CPD as is common practice for most working professionals
- Significantly greater computer-based training to replace long handed calculations which are not used at all on ship any more
- More bridge simulator training, to be much longer and to include a much greater range of scenarios
- Simulator training for other aspects of the job e.g. stability/cargo simulator, SAR, command & control of an onboard emergency

- Seafarers well-being and state of mind / spotting the signs when a crew member is not in the right head space being able to approach and talk.

- The need to understand cultural differences within crews and how these can impact on the safe operation of ships.
- The need for moral courage in challenging unsafe behaviors and how support can be found.

- More focus on manual methods of navigation and seamanship, as they are never used outside of cadetship which means the skills disappear.

- Some of the equipment training should be updated, especially for UK near coastal tickets. Items such a LORAN C, SAT C and SSB is becoming less relied upon.

- All of these subject areas are essential, some maybe outdated but the skills learned by practicing them are essential. The Syllabus should have more emphasis on the future and digitization and Automation.

- Better training in basic seamanship skills, these are becoming scary, even the British cadets are getting worse.

- Aptitude tests for writing skills, information management and technical thinking.

- Mental health and social aspects could be improved. How to deal with difficult situations onboard, how to cope away from home - not in a patronizing way but if you don't get on with your crewmates, things can be VERY difficult deep sea.

- More emphasis on modern navigation methods e.g. ECDIS, GPS, Gyro compass, fibre-optic gyro, Bridge resource management etc. Too much time is spent on paper chart work, celestial navigation, magnetic compass, tidal calculations. While these things cannot be ignored entirely, they are not used in day to day operations and currently have a disproportionately large amount of time spent on them during training. Too many new officers come onboard knowing about chartwork and celestial nav but unable to properly use an ECDIS, something is wrong there!

- The syllabus and questions for the written Chief Mates SQA exams has at points become farcical. I appreciate this survey is for STCW but when studying your HND and Chief Mates written prep great focus is weighed towards the written SQA syllabus. With questions being asked such as 'Outline the contents of the IAMSAR Vol 3 CASEVAC Cards" (NOV 19) and State the chapters of the IMO routing guide. These assess no competence, demonstrate no skill and provide no insight to an officer's effectiveness. Additionally, until July 2019 questions were still being presented with candidate being asked to interpret IMO Routing guide data sheets despite the publication having been withdrawn for some time.

- It is incredible that the MCA believe that assessing a candidate's ability to do a double approximation calculation for a sunrise rendezvous is a skill 21st century seafarers must be assessed on. These exams bear no relation to the work being carried out at sea. A radical rethink is required, and outdated elements of the examination syllabus should be removed.

- Something to reduce the over-reliance on Electronic systems for collision avoidance and safe navigation.
- Something to make navigators think what is happening and not be over-influenced by the need to keep close to the charted track on ECDIS when COLREG situations arise. This encourages small alterations in breach of Rule 8.

- CPD - Re-Validation of key knowledge and skills. Enhance simulator training and realistic scenarios on a regular re-validation program. Consider more prescriptive requirements placed on ship operators through SOLAS/ISM.

- I.T. Many officers are lacking in PC skills and have poor report writing skills.

- Do not reduce cadets 4 years training period / Sea time

- Experience is key many of our young officers lack situational awareness on the bridge due to reduced time spent watch keeping.
- Budget skills and general management on the whole should be more of a focus. I now spend more time balancing the books and dealing with crewing than ever before. Office skills / spreadsheets and the like would be really useful for the modern day deck officer.

- ECDIS tickets should have a 5-year refresher as all other STCW tickets

- All crew, especially Masters and senior Officers should have training to learn proper communication between crew.

- Use of common planned maintenance software AMOS etc.

- On ships- real situations, by instructors

- Focus on ships certification.
- Requirements, what is covered, how to conduct a survey with PSC, Flag, Class etc.

- Seafarer Training and competence examinations should focus more on practical application and operations. E.g. Application and compliance with COLREGS at Sea, Use of Traditional Nav Aids and equipment is getting lost - e.g. most Deck Officers cannot take a sight and are using unauthorized apps and software for sight calculations. Another example is that Chief Officers do not use the trimming tables during final stages of loading on Bulk Carriers and rely purely on an excel based program.

- More in depth ship handling and maneuvering training

- Automation and systems electronics
- Mental Health Training for all Seafarers

- More realistic training on the emergencies like - collision, flooding, grounding, engine and steering failure.....

- While shipping can be slow to respond it has been transitioning to digital products for the last couple of decades. The importance of the syllabus staying relevant by teaching proper use of the tools that seafarers use day to day and their limitations cannot be stressed enough.
- Weighting of knowledge that is largely only recalled for exams needs to be reduced, this would be sextant, sailing calculations, advanced manual stability calculations, magnetic compass and Morse. These parts of the courses would instead be better served by transitioning to the modern digital tools used to accomplish their tasks and instilling a sense of their limitations so digital tools are not followed blindly.

- Ship handling for cadets

- ELECTRONIC FOR ENGINERS

- Ensure that a working knowledge of the various maritime Organizations (who they are and what they do) are included in Basic Training.
- More simulation time SHOULD be included in the initial phases of Cadet Training, not just used for the final assessment (Outcome 8).
- Quality of sea time and monitoring of Training Record Books for Cadets seems to vary enormously depending on the type of ship the Cadets serve in. Better quality control of these aspects is required.

- I think there needs to be more importance placed on watchkeeping practices and simulators.
- Not enough experience in managing a bridge and resources.
- When I was a cadet, was in the Simulator 3 times, for NARAS & for a tour. Not enough, as said previously, needs to become a more practical knowledge of dealing with traffic. Not just throwing emergency situations into simulator but traffic situations and how to deal with them.

- Train the trainer should be part of Chief Mate CoC. Too many officers state they have not been taught how to train and at Chief Mate level, this should be part of the role. It does not need to be at the level of writing courses/lessons but different training methods, how to conduct adequate drills.

- Greater uniformity of ECDIS, and ECDIS type specific training should be a course run by an expert, not a dry eLearning course copied and pasted from the instruction manual

- More in depth ship handling modules for deck officer trainees - with a lot of UK officers now mostly on UK coastal, this is crucial in areas of strong tides.

- Better understanding of Master's responsibilities, obligations and accountability in the workboat and towage sectors

- During CoC training. More emphasis on modern techniques and less on old fashioned techniques that are rarely if ever used even in emergencies.

- In general, the training covers most of what it should. If the information learned is frequently revised.

- basic first aid should be renewed every 3 years

- For OOW level, oral exam should be scrapped and replaced with simulator assessment.

- I think in general the training I received was of a very good standard however I think, especially for my sector the focus is on very antiquated methods and equipment. I think a lot of the skills need to be re-assessed for their value in this century. Whereas in the past skills like Morse code, signal flags, would be invaluable they have very small practical application for the modern seafarer and in my opinion do not deserve the amount of time spent training in them. The same goes for a lot of the stability and sailings math's which is always done on computer programs and will never be carried out by a bridge officer in the way we are taught. My opinion would be that the training is a lot more practical with more focus on COLREGS and the actual day to day duties of watch keeping, navigation on ECDIS, ISM, drills, dealing with emergencies like bridge equipment failures, record keeping etc. that form the basis of a OOW's duties. Ideally this would be done through integrated bridge simulators to make it more applicable and similar to what the seafarer can expect in their work.

- More training in how to deal with mental stress / mental health for seafarers. The people making decisions should sail on a modern vessels, of all types, it should not be created by old captains who have not sailed for the last 20years (who don't know how to create a route on an ECDIS!)

- All officers should have completed mentorship training and each ship should have at least one dedicated mentor.

- On Crew Transfer Vessels there needs to be more certification for the crew. At present it is only for the Master.

- More training time spent inside bridge simulators. The time spent in these simulators are very beneficial. More time is needed. Oral prep courses are also very informative. These courses should be much longer.

- The MCA need to catch up with technology, a lot of what you teach/expect from Officers is way, way out of date.

- Though the electronics has taken over a large tranche of the OOW duties, seafaring is still a practical profession, more emphasis could be placed on the practical seamanship side of the profession, along compulsory simulator courses which expose the candidate to emergency situations such as failures of gyro, steering, engines and total power. As well as fire and MOB.

- EDH for the lowest deck positions and rank

- Higher standard of English required in the marlins test for those sailing in UK waters/ships.
- Combine the HELM courses, incorporate more mental health, stress and discrimination awareness.

- I will not recommend any further training until some of the requirements are removed from mandatory shore-based programs. Most, if not all of the training requirements can and should be done ONBOARD the vessel (as in the past). There is NO NEED to force the seafarers to spend their hard-earned pay and vacation time learning things they can learn while onboard their vessel. Usually better than in a shore-based training center.
- There is NO NEED to require renewal of basic safety or firefighting or lifesaving or PSSR! These things have not changed since I started going to sea professionally in 1977! The very few items that have changed, have been things that could've been covered in an email. They are covered in weekly drills. Why spend a week and $1000++++? NO reason except money for the training centers.
- This overload of so-called training is forcing a LOT of good, competent people out of the business and needs to be stopped. Or is it the purpose simply to replace all seafarers for autonomous ships?

- Efficient deck hand course within 18months if being on board

- Basic social psychology training onboard the ship. To make people to understand each other easier. To reach the goal of reducing the stress onboard.

- Make sure foreign crews have a better understanding of technical English

- More simulator training.

- Respect of working hours in reality - not just on the paper.

- Possibly giving UK Cadets DP training to help ensure they find work after finishing collage. Too many cadets are now leaving collage and are unable to find work

- Refresher training on GMDSS, personally not done any since 1993

- Should be looking at more simulator time for cadets so they understand practically ship handling. Also cut out all the irrelevant course subjects like celestial navigation, and loran C and teach them about what real life is like onboard a ship.

- Do courses in college on the maintenance of LSA and FFA.
- Do more practical and simulator time in college to get more maneuvering experience.

- Communication on board and hi-tech area, cos more and more documents are online or other digital form, so advanced computer knowledge is more and more necessary. Is funny when old officers don't know how to open a file with documents... And they are in charge of it!

- Elementary First Aid (EFA) should be added to the refresher every 5 years along with Firefighting and Sea survival. As onboard yachts, if you are an RYA school, they require a first aid certificate less than 5 years old or all RYA certificates are invalid. Also, any stewardess, chef, or deck crew who have been in the industry over 5 years that aren't at the level where they require a week long medical course (which is refreshed every 5 years) will be onboard without a valid first aid certificate! With no means in place to encourage them to refresh their skills.

- Today's modern marine industry is so diverse that it is not possible to deliver enough training in the time frame currently allowed.
- My suggestion would be to have a complete overhaul of the current system and create a modular based competency structure.
- For example, the initial training would include all of the basic layers of competency relevant to any vessel type.

- This would be followed by specific training in a particular sector of the industry which could be tailored to that particular vessel type. This could be a month-long course which would be referred to as a "bolt on Module" which could have a 5-year refresher requirement. An Officer would have to complete such bolt on training prior to joining a ship of that type if they had not previously done the course.
  For example, the following modules could be introduced as a minimum: General cargo ships, Chemical tankers, Oil tankers, Bulk carriers, Car carriers, Cruise ships, ROPAX/ RORO, Commercial yachts, Container ships

- Digital/electronic systems knowledge, maintenance and basic trouble shooting.
- HELM(o) and (m) need to be relooked at and a better course structure created. 10 days of being read at is the worst way of teaching and nothing is learnt or retained when classes are falling asleep.

- Basic helicopter training.
- More advanced medical techniques as standard.
- More ship handling as standard. A seafarer may never drive a large vessel over 24 meters between passing their Yacht master, to completing their Master 3000 and being handed the control of a vessel up to 3000gt. Definitely needs more training.
- More emphasis on learning your rights as a seafarer, learning about your contract, hours of rest, what you are and are not entitled to.
- MUCH more emphasis on people management, people skills, cooperation, anger management, leadership styles, being approachable, calm and considered.
- There is too much content to learn within the course timeframe. Each course should be at least 2 weeks in length. Every module I attended I heard the same thing "Do you want to learn about everything, or just the stuff you need to pass the exam". This approach is a complete failure to the system. Students are becoming qualified too soon in their career. Actual sea time is being logged fraudulently. There must be a better, modern way to ensure the quality of graduates in this industry.

- The college time spent on paper charts needs to be spent on ECDIS
- Stability needs to be more operationally taught
- Emphasis on MCA orals of working knowledge and not knowing so much by heart or verbatim

- More training in simulators, more training on modern and new technologies and systems.

- More practical then classroom-based lectures.
- More opportunities to use the simulators.

- More opportunities to put lectures into practice.
- CEL nav needs modernization. Good as a backup. To be treated as this. More time on the technology found on the bridge as this is the way the industry is going.

- Training in Microsoft excel!!

- TRAINING NEEDS TO BE MORE SHIP BASED; MANY LECTURERS AT COLLEGES DO NOT HAVE UP TO DATE KNOWLEDGE OF WORKING PRACTICES. LECTURERS SHOULD BE REQUIRED TO UNDERTAKE REFRESHER TRAINING AT SEA (GO ON A VOYAGE) ON A VARIETY OF SHIPS. COLLEGES ENCOURAGED TO ASK CURRENT MARINERS TO GUEST LECTURE. LECTURERS SHOULD BE KNOWLEDGEABLE AND EXPERIENCED IN WHAT THEY TEACH, I HAVE SEEN LECTURERS TEACHING TANKER WORK WHO HAVE NOT SAILED ON A TANKER AND WERE STILL TEACHING ABOUT SINGLE HULL SHIPS WHICH WENT OUT YEARS AGO,

- There is less and less time spent on deck during the cadetship. I think we should have practical training in the college on basic topics such as how to mix paint, steel preparation. Understanding different materials. Basic use of power tools such as a drill, angle grinder and needle gun. Along with more time on some of the aspects of the EDH course.

- More simulator time at college, compulsory trip on foreign going vessel (general cargo, bulker, tanker, car carrier etc.) and an offshore vessel (not ERRV) during cadetship.
- Never allow the Foundation Degree guys to skip written at Chief Mates again.....it's a mistake. What you learn at cadet level should not carry you through to completion. The refreshing and deeper understanding mid-career/ a few years later is vital.

- Mandatory first aid training as part of drills incorporated into MGN 71 or similar

Further Comments (regarding STCW Review):

The following are raw comments and suggestions from respondents:

- Outdated sections/topics should be removed (e.g. LORAN) and any modern equipment or procedures not included should be included (e.g. use of binoNav for navigation etc.).

- We need a much higher standard. Cannot get much lower than present standards
- The load of onboard training shall be reduced. Seafarers shall embark ready to respond and perform in emergencies
- The MCA should take a more proactive role in shutting down some to the profiteering companies who are not providing quality training and are only in it to make money!
- Believe there should be less emphasis on principles behind equipment e.g., radar, echo sounder, GPS and more emphasis on their limitations (I realize they are linked).
- Please and seriously take a look at Cadets suggestions. We are not all idiots and some of us have been in different professions beforehand that have had to move with the times. If the MCA is sincere about wanting to attract more British Seafarers to choose a career at sea, then we need to update things to reflect the job of a modern-day seafarer, especially in this age of increasing automation. Will there be Deck Officers in 50 years? We need to retake our place as the world's leading maritime nation and produce the best Officers in the world.
- Good questionnaire.
- yearly refreshing STCW should be removed as there is Drill on board on weekly basis, because these courses are very expensive, and seafarer has no choice - he/she has to do these courses to join the vessel.
- more enhanced training concerning the application of the COLREGS, enhanced bridge watch keeping procedures and tools for enhanced situational awareness
- My command experience of 17 years and shore management experience of 12 years tells me that there is a serious erosion of knowledge of basic principles of navigation, ship stability and seamanship among junior officers. Senior officers onboard today have no time for mentoring or training juniors, this needs to be shifted ashore to the extent possible. The FAL convention needs serious enforcement to reduce the ridiculous amount of paperwork that Agents are outsourcing to the Master due to easy email communication. Master and CE are PC bound and tying their experience to the chair instead of making their presence felt.
- Take input from younger stakeholders. Not just the grey beards running the national admins and in senior positions ashore.

- It all needs looked at. It requires modernization.

- Revalidation courses are not needed if the candidate has sailing experience.

- Refresher training for STCW courses should be conducted with the help of online module course, instead of personally attending the course at training institutions.

- Damage control course.
- Specially how to respond during flooding or collision or grounding or such emergencies.

- Even during my cadetship starting 2013 almost everything I learned in college was so outdated it wasn't even applicable while I was on board. All reasonable sized ships are now full ECDIS and over certain tonnages have electronic stability equipment. I'm now halfway through my Chief Mate's and I've learned how to make a passage plan on paper charts and stability on paper, but I'm none the wiser where the electronic ECDIS/Stab computer on my actual ship is concerned. What I'm learning in college per the SQA syllabus is irrelevant to my actual work on board.

- Smaller certification regarding near coastal and 30'NM limits needs to be simplified.
- Smaller tickets to be amalgamated, get rid of confusion amongst some ranks.

- What countries actually perform a Oral Examination to attain a CoC (Deck or Engine) and subsequently how easy is it for another non UK attained CoC country to be issued a Uk CeC? Troubling times ahead for agencies blatantly advertising on LinkedIn and other social media sites to assist non Uk CoC holders in obtaining UK CoCs? (Seaworthy Manning ltd agency is one to be asked the question)

- Jumping into the sea every five years isn’t necessary. Refreshing equipment is necessary.
- First aid should be added.
- Close scrutiny of all countries training standards as ability to follow RoR in good time is shocking low by some vessels.

- Seafarers are saturated with short course additional certification. Any changes made should relate to base syllabus for operational or management certificates and not result in more additional training with personal financial burdens attached.

- Celestial navigation has no place in the modern application on ships. As carrying a sextant is optional and not carried on any ship I have worked on.

- Nowhere in this survey has it been mentioned who this survey is commissioned by
- The questions appear to only be geared towards an OOW and I suspect that you will get a very different answer looked at from a different perspective from a Captain.

- I feel that the training programs are more down to the individual student doing modules in his own time, having them signed off by a mentor then moving to the next course module without any real depth of knowledge about the subject. Personally, I feel the proper and most valuable way is attending college for 3 months, attending proper tutorials with a lecturer for chart work - Met. - Navigation- stability and G.S.K. After obtaining pre- Lim courses, Electronic Aids, radio Cert (G.M.D.S.S).- E.D.H.- Lifeboat etc. The training today is to stop/start and drawn out taking years to obtain a C.O.C.

- Seafaring remains an activity undertaken a long way from help and out of the public eye, in the rush to embrace new technologies and systems do not forget the dark and stormy night in the of ocean when the only thing left between the loss of the ship and crew is the knowledge gained in training and through experience.

- More practical skills should be taught to officers, the standard of cadet Seamanship is falling. They should have to spend at least 3/6 months working as an AB or EDH before being allowed to qualify.

- Celestial navigation not so relevant today. Prioritize more important items on syllabus e.g. safe look out, not over reliance on one bit of equipment, especially electronic. Back to basics with ‘looking out of the window’

- Cannot reiterate how important it is to raise the standard of English. Absolutely shocking and appalling how so many watchkeepers, do not understand English or the COLREGs, something needs done very soon!

- If we are leaving the EU, the MCA and the UK, need to do what they can to make this work. Shipping accounts for a lot of our imports and exports. We need to ensure we can rebuild a UK/British merchant navy, we need to make trading areas more obtainable or at least be offered in conjunction with 30-150NM CoC’s. The smaller licenses like these will probably be doing most of the trade with us and the EU, if you brought back a class 5 system (should never have been removed). Furthermore on the reverse side of the CoC you have trading areas for persons who have a class 5

CoC, that's fine but as you don't issue these anymore you need to be put training areas for 30-150nm? As quick reference. My masters-OOW are tug only, because i work mainly on tugs but if you proceed to sea on a vessel of more than 80grt and over 24m waterline length, why can't you sit the Unlimited route? Why are tug crews restricted? Seems to be unfair. In most cases a tug master will go on to be a pilot of some description, so seems to me it's double sided. In most cases cross channel ferry Officers and crew will never sail around the world and will in most cases stay within the 150nm limit, why is it different for them? Everyone will come back and say well it's the tonnage, but in most cases tugs we'll exceed 80grt and generally are bigger than 24m. But the UK have always been good at restricting ourselves. In most cases the UK training weather for a 500grt or an unlimited route is much higher/harder and generally better than other nations.

- increase validity of documents, if the Seafarers actively working it's not necessary to do course every 5 years. The training drills are on board monthly. BUT course like medical is good to refresh knowledge every 5 years.

- Traditional skills should not be lost. They are the absolute basis and most reliable back up for dealing with ever increasing technology and electronic systems. Fundamental principles of watch-keeping have not changed. Technology and other demands on ship's crews and shore management have changed. Leadership and Management On Board and Ashore should be a renewed focus. Active CPD and re-validation should be part of the normal culture in our industry. I see a wide variety of standards at the moment (Good and Bad)!!!

- Company have stopped paying for refresher training this is expensive for a seafarer

- Monthly training onboard should maintain competence following basic STCW courses. Having to redo the courses every five years is an unnecessary financial burden

- With STCW having more requirements to revalidate short courses, and with there still being far too many collisions and other maritime incidents... Is there really a need to conduct frequent refreshers when the biggest issue seems to be over-reliance on ECDIS / GPS and poor passage planning.

- Company should arrange all the updates STCW courses

- The entire syllabus needs bringing up to date. Seafaring traditions and "the old-fashioned way" are nice to learn about and very quaint, but rarely useful.

Unfortunately, most of the STCW teachers and lecturers teach by reflecting on their experience at sea, this retrospective method of teaching will never be as proactive and preemptive as the industry needs to be.

- Renewal of courses every 5 years seems to be a bit much for certain courses such as firefighting and basic safety training especially for those actively sailing. As there are many onboarding trainings schemes, drills and computer-based training

- Basically, all of the mentioned topics, are essential for safe operations in worldwide shipping. It should never be considered to lower the standards required by STCW

- STCW courses are a bit gimmicky.
- PST refresher isn't very helpful as it's just getting into a raft mostly.
- Advanced firefighting isn't useful at all - it doesn't teach you anything at all. Could be far better.
- Basic FF is far better as its practical and you can learn something i.e. attack nozzles now available whereas weren't when i was a cadet.

- Crew members are not able to handle vessels the same way that they used to. This is due to the fact that the same importance is not put on this item and when called on to steer vessel they find it harder due to the electronic steering systems compared with the older hydraulic systems which were slower in response.

- The STCW refreshers could be reviewed. In my personal opinion this appears to be a money-making scheme. Is it really helping refresh knowledge of seafarers? For example, personal survival. You go to the course and have the contents of a life raft listed and then jump in a swimming pool. This for me seems hugely unnecessary as this information is available on board your vessel, and who is going to forget how to jump into the sea?

- I gained nothing practically from HELM O. This time could be better served in a simulator.

- I do have a recommendation specific to my sector. We have a large number of stewards and stewardesses who have a lot of responsibility and duties in emergencies, most often related to managing the mustering of crew and guests but do not do any training past basic STCW.

- I think it would be very beneficial for there to be some mandatory courses for these crew members such as AFF, crisis management, HELM, SSO, medical first aid and

Medical care. In an emergency on a yacht it it likely that the deck and engineering officers would be busy dealing with other aspects and therefore it would be extremely helpful for senior crew in other departments to have this training to spread the load and improve standards across the board.

- Monitoring and recording of oral examinations by video and sound. (personal safety requirement) No STCW certification should include multiple choice options.
- UK CEC certification should not include any international examination that has had multiple choice answers. UK CEC certification should include an English examination paper as proof that the candidate fully understands and can write English. (the common language of the sea).

- One of the most important things that I consider important is revision of the COLREGS rules and regulations.
- They need more simplification.

- Scrap the GMDSS, as its outdated and doesn't reflect on board equipment or operational requirements. Internet and phone via satellite are reliable, fast and efficient.
- Again, once you do the GMDSS course, you'll never need 90% of it again.

- The standard of STCW courses needs thorough investigation as many seafarers are joining with 'valid' certificate but lacking the basic knowledge and skills.
- Being able to refresh all 4 STCW courses in one day in an 'approved' provider overseas for 200euro compared to the UK where each refresher course is a day and £200+ each raises a lot of questions to their validity.

- I believe STCW is nothing but a ruse. So, shipowners can replace sailors from more expensive countries with sailors from cheaper places. That is ALL that it has accomplished. It has not made things any safer, the people are NOT any better trained than they were before. It's all about $$$. If not, then prove it by removing the requirement for shore-based training and assessments!

- PRODUCE A CREDIT SIZE CARD WITH ALL YOUR TRAINING CERTIFICATION ON WHICH IS EASIER TO CARRY AND ACCESS FOR COMPANIES TO CHECK THE DATA BASE FOR AUTHENTICITY. INSTEAD OF CARRYING MORE WIEGHT OF CERTIFICATES IN YOUR BAG THEN WIEGHT IN WORK GEAR, AND GETTING THREATEND WITH DISCIPLIN IF WE DON'T HAVE THEM

- We must retain the orals exams process.

- STCW still works mostly
- The maritime schools/ education facilities have to be checked that they comply with the level of training which is needed to safely conduct navigational watch.

- I think the MCA could do more to help UK CoC holders to achieve higher tickets. As it stands it's much easier to gain another nationalities CoC then get it converted to a CeC.

- CEC given to anyone who applies dilutes the difficulties we have to obtain a COC and the high regard a British Ticket is held worldwide

- The present STCW refresher courses are from my experience, a waste of time. Too many training establishments have seen an opportunity to make money and do not deliver valuable training. Some course lecturers do not even have a MN background and do not recognize a CoC as ID! I did not gain any benefit from having done the familiarization courses. The level of competence can be ensured through other means. For example, for the seafarer to keep a log of all emergency training conducted on board ship.

- Add more IT knowledge as official requirements, this is future and every year even deckhands have more to do online.

- I welcome this review and I hope it can be used to implement significant changes within the training and certification system to better reflect the challenges faced by the modern navigational Officer.

- STCW helm is a waste of time

- Advanced firefighting could include more for the management of teams and use of resources in an emergency on a larger vessel, e.g. passenger

- The STCW short courses I have attended have all been fantastic.
- Keep as is.

- By far the biggest problem with the current system is poor quality lessons and lecturers. Many of my 'lessons' were just the lecturer reading through the notes verbatim. I could get an audiobook to do that. Being a master mariner does not automatically make one a good teacher, so the industry and colleges need to invest, or be forced to invest time and money in teaching their lectures how to teach. Whatever system is currently in place is not working! I truly value having some

interesting and experienced mariners teaching me, and listening to their experiences, but they need to be taught how to teach.

- Generally, the subjects are still fine but it's up to the colleges to bring them up to date with modern content.

- CONSULT WITH LEGAL AND INSURANCE INDUSTRIES TO SEE WHERE FAILURES ARE OCCURING, ADDRESS THESE. STCW SETS THE BAR TO LOW, DEMONSTRATING COMPETENCIES NEEDS TO BE RIGOROUS NOT JUST A COUPLE OF HOURS IN A CLASSROOM OR A RECORD BOOK BEING SIGNED.

- As and aside from the actual training, although I personally had a very good experience, the number of colleagues who were let down by their training providers was shocking. There is absolutely no accountability to these organizations whose sole job it should be to ensure their cadets are placed on suitable ships for training purposes and to ensure they get the necessary sea time before their final phase.

- Finally, I should point out I still think that UK cadets gain the best cadetship overall by far and particularly those who have gone down the HNC/D route. I'm still not sure why an FD route seems to be able to 'short cut' or condense the course by so much, making it far more attractive for employers to take on an FD trained officer as they will have a much shorter study leave when training for Chief Mates

- Reduce the importance of manual calculations when it come to the old stuff that's rarely used, focus on the modern systems. A better understanding of mechanical and electro-tech, and administration systems.

- More simulator time. We are 40 years behind the aviation industry.
- Remove PSSR

ENGINEERING SURVEY

ANALYSIS AND RECOMMENDATIONS

The summary report and recommendations of the Engineering survey is shown below:

Competence:
Maintain a safe engineering watch

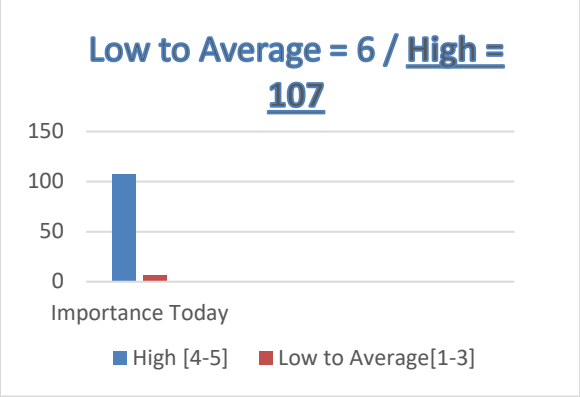
Knowledge, understanding and proficiency in:
1. Thorough knowledge of principles to be observed in keeping an engineering watch

1.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 113** / No = **1**

1.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 6 / **High = 107**



1.3 **Summary of respondent's RECOMMENDATIONS:**

The majority of respondents agreed that this section is well written and still relevant today. However, respondents recommended the addition of training in:

- Ship-Shore relation (Management).

- Operation of fixed systems and reversionary modes.
- Ability to understand UMS modes and operations.
- Greater understanding of vessel verification of compliance.
- Understanding of control systems/network links, etc.

Suggestions for amendments related to providing more detail on how to demonstrate competence as the current requirements are very vague.

While other recommendations were for the training of engineers for:

- Good computer knowledge as almost everything is based on this currently.
- More hands-on experience at the college level before Officer cadets serve at sea.
- Understand the limitations of automation and the importance of the five senses to compliment automation.
- More emphasis should be placed on a detailed knowledge of Engineering/machinery Plant.
- Emphasis on not just understanding emergency procedures but being competent in carrying them out.

1.4 Advisor's Recommendation:

This section is well written and can remain as is.

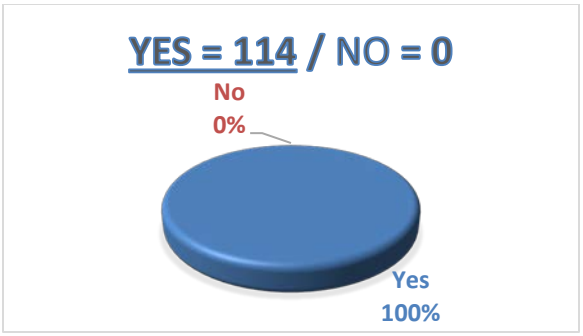
However, consideration and attention should be given to training for STCW competency in manual operation and man-machine or human/machine interface. This should be stressed as the EOOW needs to understand what to do in the event of automation failure.

Competence:
Operate Main and Auxiliary machinery and associated control systems.

Knowledge, understanding and proficiency in:
2. Basic construction and operation

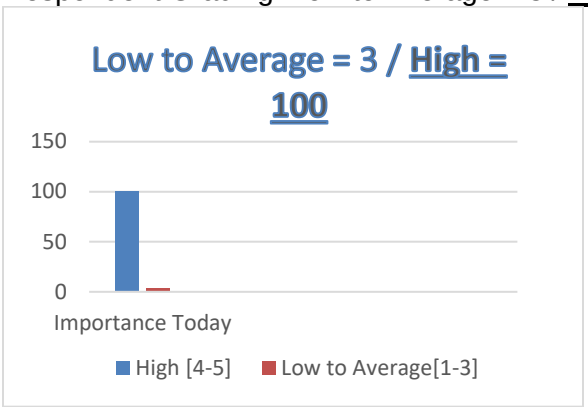
2.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 114** / No = **0**



2.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 3 / **High = 100**



2.3 Summary of respondent's RECOMMENDATIONS:

All respondents (100%) agreed that this section is still relevant today.

However, respondents also recommended the addition of training in:

- Statutory and classification proficiency.
- Creating and interpreting 3D CAD models.
- More emphasis on manual operations of systems. I.e. hand operation of valves and manual starting over computer-aided systems to prepare for scenarios in an emergency.
- Removing interpreting machinery diagrams.

2.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:

Operate fuel, lubrication, ballast and other pumping systems and controls

Knowledge, understanding and proficiency in:

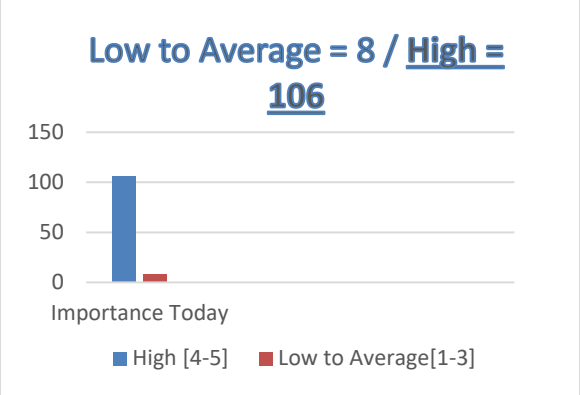
3. Operational characteristics of pumps and piping systems, including control systems

3.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 113** / No = **1**

3.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 8 / **High = 106**



3.3 **Summary of respondent's RECOMMENDATIONS:**

99% of the respondents agreed that this section is still relevant and important today.

However, recommendations were made for the addition of training to/in:

- Demonstrate the ability to access SSOW, review and validate.
- Ballast water Treatment plants.

And amending:

- The section which mentions the operational characteristics of pumps and piping systems, which make no reference as to how to demonstrate the competency or understanding the characteristics.
- To include the choice and usage of different Instrumentation and Control Systems, which are not covered either.

3.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:
Operate electrical, electronic and control equipment

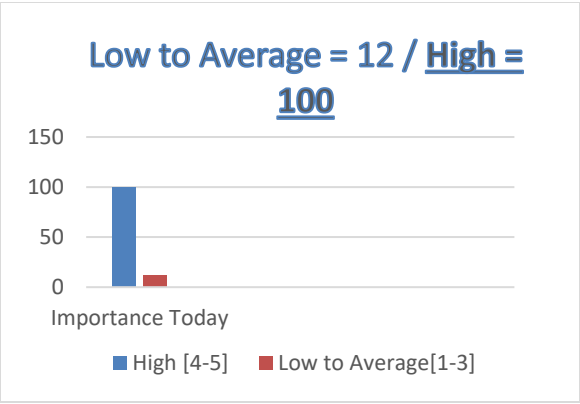
Knowledge, understanding and proficiency in:
4. Basic Configuration and operational principals of Electrical equipment, Electronic and control systems

4.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 110** / No = **2**

4.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 12 / **High = 100**



4.3 Summary of respondent's RECOMMENDATIONS:

98% of the respondents agreed that this section is still relevant and important today.

However, recommendations were made for the addition of training regarding:

- More in-depth knowledge of automation/electronics compared to what is usually received at average marine mechanical faculties.
- Cybersecurity associated with control systems.
- Basic repair skills for electrical and IT equipment. With a focus on networking and basic IT systems to help modern-day marine engineers who do not have an ETO on board.

Also, recommendations were made to amend:

- Basic Configuration and operational principles updating to "Detailed knowledge and understanding of electrical equipment and electronic and control systems".
- Possibly include elements of Machinery Control and Surveillance Systems as these are the key control systems today. Also, the inclusion of the reversionary methods with the control systems.
- Electrical, Electronic & control equipment as this is a topic that has grown vastly. It may be necessary to split this topic into three parts - i.e. 1 Electrical, 2 Electronic, 3 Control.

4.4 Advisor's Recommendation:

This section is well written and can remain as is.

However, automation and control systems has expanded tremendously in scope over the years and needs to be split into three parts of Electrical, Electronic control systems, and Pneumatic control systems.

Competence:

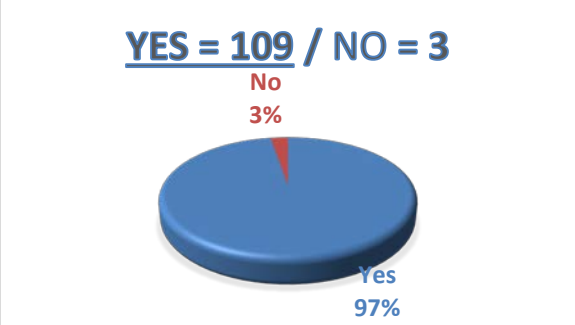
Maintenance and repair of Electrical and Electronic Equipment

Knowledge, understanding and proficiency in:

5. Safety requirements for working on board electrical systems, Detection of electric malfunction, Construction and operation of electrical testing and measuring equipment, Function and performance tests.

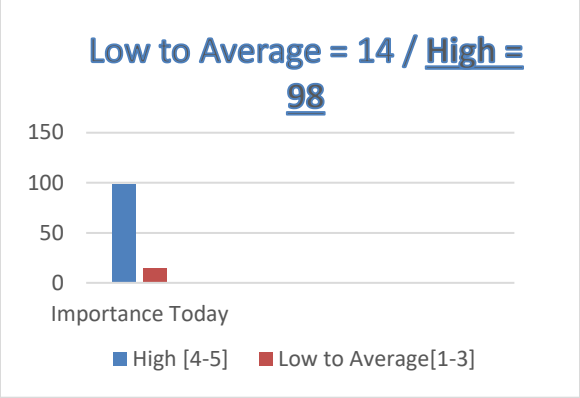
5.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 109** / No = **3**



5.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 14 / **High = 98**



5.3 **Summary of respondent's RECOMMENDATIONS:**

99% of the respondents agreed that this section is still relevant and important today.

Some respondents recommended for additional training to include:

- Deeper knowledge of electronics/automatics than the current standard for a marine engineer.

- Digital control and network systems.

5.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:
Appropriate use of hand tools, machines tools and measuring instruments for fabrication and repair on board.

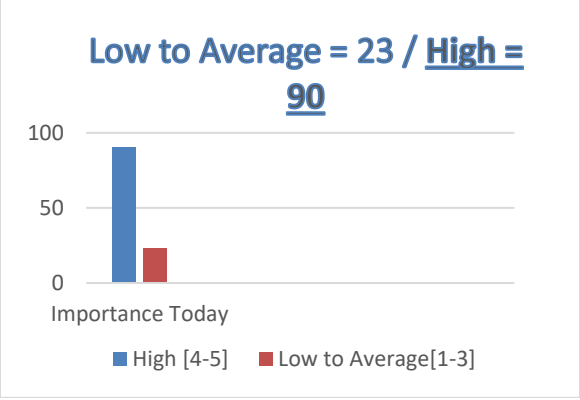
Knowledge, understanding and proficiency in:
6. Characteristics and limitations of materials used in construction and repair of ships and equipment

6.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 112** / No = **1**

6.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 23 / **High = 90**



6.3 Summary of respondent's RECOMMENDATIONS:

The majority of the respondents agreed that this section is still relevant and vital today.

However, recommendations were made for the addition of training to:

- Understand the various methods and strengths of joining materials.
- Basic understanding of metallurgy.
- An amendment to the requirement of high proficiency in machining, as spares are not made anymore.

Some feedback was received recommending the removal of this part because the scope of the training is losing relevance compared to the importance of electronics/automation ability to diagnose/repair/operate.

6.4 Advisor's Recommendation:

This section is well written and can remain the way it is.

Competence:
Ensure compliance with pollution prevention requirements

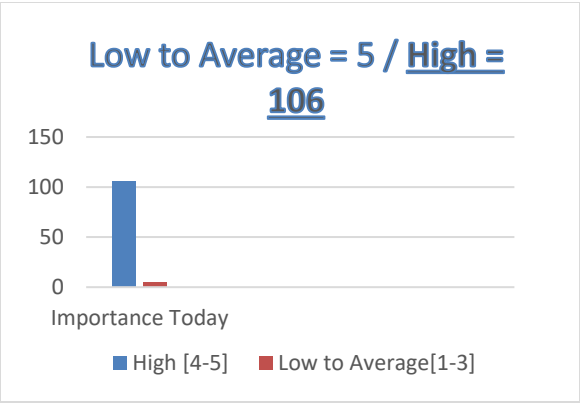
Knowledge, understanding and proficiency in:	
7.	Prevention of pollution of marine environment, Knowledge and precautions to take, Anti-pollution procedures and importance of proactive measures

7.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 111** / No = **1**

7.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 5 / **High = 106**



7.3 Summary of respondent's RECOMMENDATIONS:

99% of the respondents agreed that this section is still relevant and essential today.

However, a recommendation was made for the addition of training about MARPOL surveys and audits.

7.4 Advisor's Recommendation:

This section is well written and can remain as is.

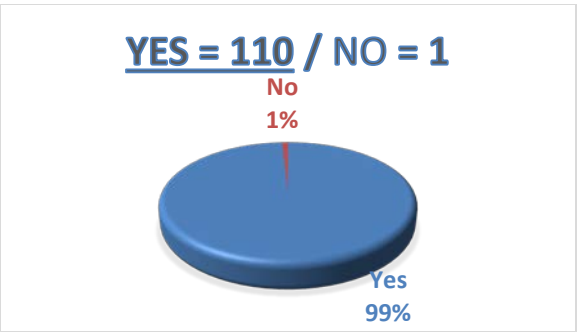
However, this section should be firmly highlighted during training as it has always been important to do so.

Competence:
Maintain seaworthiness of the ship

Knowledge, understanding and proficiency in:
8. Ship stability and construction

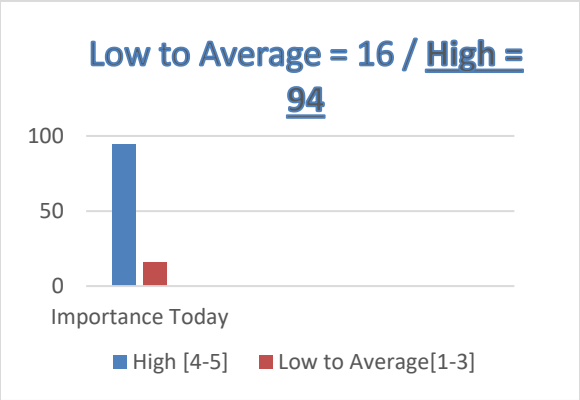
8.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 110** / No = **1**



8.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 16 / **High = 94**



8.3 Summary of respondent's RECOMMENDATIONS:

99% of the respondents agreed that this section is still relevant and important today.

However, recommendations were made for the addition of training regarding:

- Methods of stopping water ingress into the vessel in the event of damage.
- Material grading knowledge.
- Understanding the importance of in-water, and dry-dock surveys, including the potential impact of the seaworthiness of the vessel.

8.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:

Prevent, Control and fight fires on board

Knowledge, understanding and proficiency in:

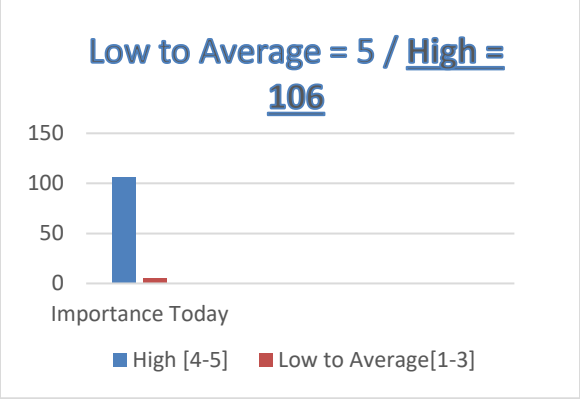
9. Fire prevention and fire-fighting appliances

9.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 110** / No = **2**

9.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 5 / **High = 106**



9.3 **Summary of respondent's RECOMMENDATIONS:**

The majority of the respondents (98%) agreed that this section is still relevant and important today.

9.4 **Advisor's Recommendation:**

This section is well written and can remain as is.

Competence:

Operate lifesaving appliances

Knowledge, understanding and proficiency in:

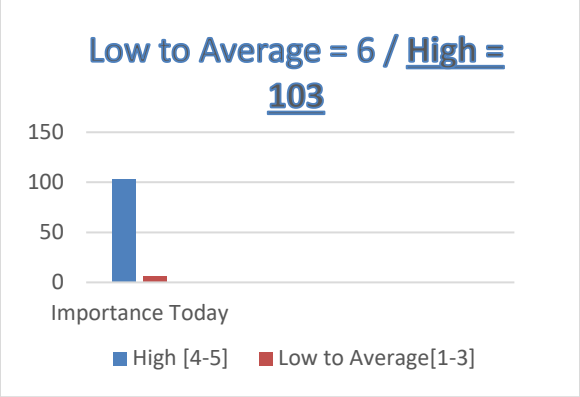
10. Life saving

10.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 110** / No = **2**

10.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 6 / **High = 103**



10.3 **Summary of respondent's RECOMMENDATIONS:**

98% of the respondents agreed that this section is still relevant and important today.

However, there was a recommendation for the addition of modern lifesaving apparatus like Marine Evacuation Systems (MES) to LSA training as this equipment is present on cruise ships. This included how to maintain equipment certifications and the dangers involved in launching and recovery operations.

10.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:
Apply medical first aid on board ship

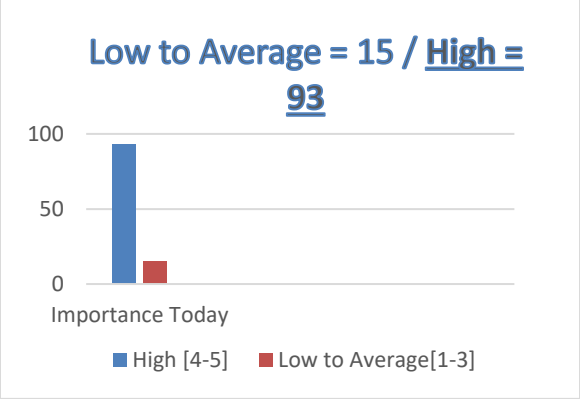
Knowledge, understanding and proficiency in:
11. Medical first aid

11.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 109** / No = **2**

11.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 15 / **High = 93**



11.3 Summary of respondent's RECOMMENDATIONS:

The majority of the respondents (98%) agreed that this section is still relevant and important today.

Some respondents did recommend that five-yearly refresher training should be part of the STCW requirement for the First Aid course to ensure that knowledge and competency are maintained. Also, more training in the use of the defibrillator.

11.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:
Monitor Compliance with legislative requirements

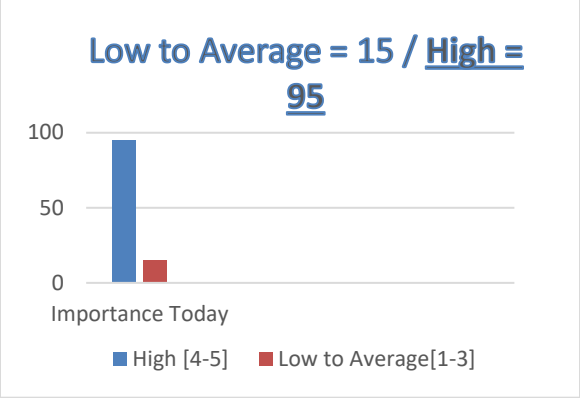
Knowledge, understanding and proficiency in:	
12.	Basic working knowledge of IMO conventions concerning safety of life, Environmental protection and security

12.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 111** / No = **1**

12.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 15 / **High = 95**



12.3 Summary of respondent's RECOMMENDATIONS:

The majority of the respondents (99%) agreed that this section is still relevant and important today.

12.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:

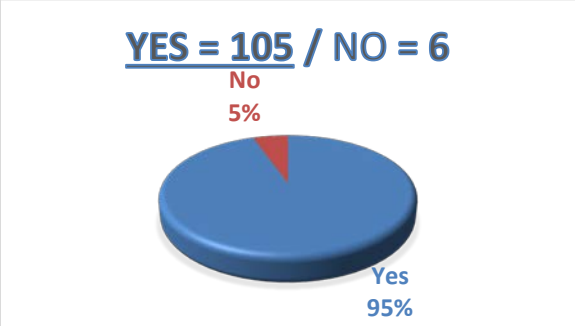
Application of leadership and teamworking skills

Knowledge, understanding and proficiency in:

13. Working knowledge of Shipboard man management

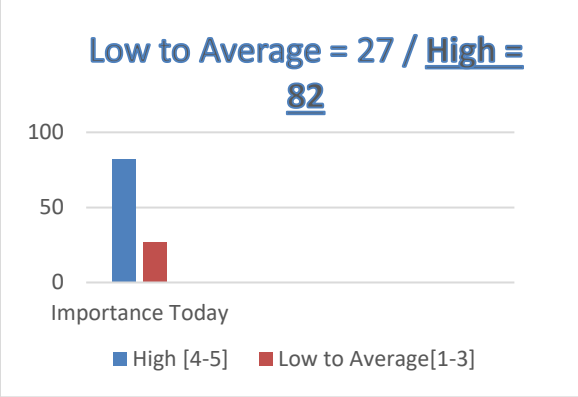
13.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 105** / No = **6**



13.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 27 / **High = 82**



13.3 Summary of respondent's RECOMMENDATIONS:

The majority of the respondents agreed that this section is still relevant and important today.

However, recommendations were made for the addition of training in:

- Mental Health Awareness, self-harm, suicide, bereavement and loss and differences in gender/religion.
- Diversity and Inclusion.
- Empathy and management of different cultures.
- Coaching and mentoring techniques.

13.4 Advisor's Recommendation:

Even though this section is well written, it will be beneficial for training in shipboard leadership and management to include compulsory education in dealing with mental health issues/awareness, mentoring, diversity, and inclusion.

Competence:
Contribute to the safety of Personnel and ship

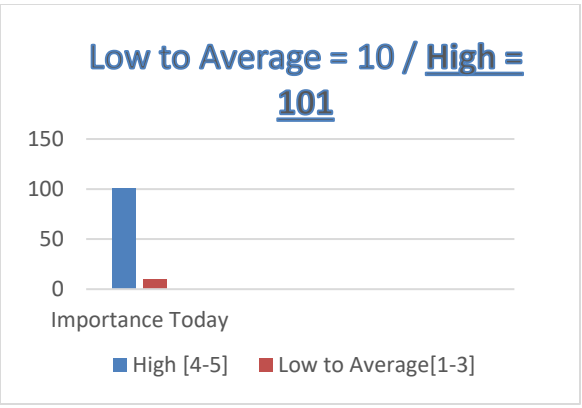
Knowledge, understanding and proficiency in:
14. Knowledge of personal survival techniques, Knowledge of prevention and ability to fight and extinguish fires, Knowledge of elementary first aid, Knowledge of personal safety and social responsibility

14.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 111** / No = **1**

14.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 10 / **High = 101**



14.3 Summary of respondent's RECOMMENDATIONS:

99% of the respondents agreed that this section is still relevant and important today.

However, a recommendation was made for the addition of training to cover Enclosed Spaces preparation and entry due to the high number of fatalities caused by incorrect entry into enclosed spaces.

The enclosed space training course should be encouraged.

14.4 Advisor's Recommendation:

This section is well written and can remain as is.

More consideration should be given to the enclosed space training course offered by various training institutions.

What areas of Seafarer's training could be introduced or enhanced to reflect today's onboard operational requirements?

The following are raw suggestions and recommendations from respondents stating what could be introduced or enhanced to reflect today's onboard operational requirements:

- Deeper understanding of electronics/automation than is currently taught at average marine university (other than electrical engineer courses), absolute dependency on great (average is not sufficient on most modern ships) understanding of electronics/electrics/automation processes for everyone, engineering and deck department, not only electrical.

- Electrical and electronic knowledge needs to be enhanced particularly with respect to how systems are interlinked

- ISM, ISPS, and MLC basic audit familiarization course should be mandatory for every seafarer onboard

- Good understanding of automation system, but with system knowledge which allows for manual correction when automation fails.

- Commercial aspects of the ships, importance of avoiding breakdown, commercial losses, general idea about chartering and effects of commercial pressure.

- See experience to the next grade of license should be extended. 24 months for 2/e license, 36 months for C/E license.

- The training received today is all still relevant, certain areas i feel will start to be reduced, such as electrical aspects of ships, due to the rise of ETO's. Training in this is still required, but a more in depth hands on approach should be taken in this aspect of training, most newly qualified engineers are not able to use a multimeter due to lack of training, and the idea that it is not there job to know.

- Counter terrorism/piracy shipboard defense.

- Refresher courses for Medical First Aid

- All Seafarers Training
- Would recommend bringing in Mandatory Enclosed Space training, including it as part of the 5 yearly STCW refresher training (bringing this to a full 5-day week).

- Junior Engineering Officer Training
- Additionally, the inclusion of dedicated Coaching, Mentoring and Management training would be hugely beneficial.
- HELM(O) is not fit for purpose, as it covers logistically planning an expedition to the Antarctic.
- Useful.

- Senior Engineering Officer Training
- Consider the inclusion of additional Safeguarding, Mentoring and Management Training. Again, HELM(M) is not fit for purpose, and appears as a 'that will do' training course with no real benefit.

- Areas of engineering training which can be enhanced is the amount of workshop time during Cadetship to include basic fitting/turning/welding skills particularly prior to the first sea phase even by reintroducing a 6-week workshop package.

- Engineers should have a greater focus on engine room management and international law/ governance. ERM should be mandatory.

- Especially with regards to the newer vessels coming into service, more instrumentation understanding across the board would be beneficial even for those who have completed training prior

- Reintroduction of Class 2 written examination. Experience levels in actual engineering principals being lost with introduction of management level exam.
- Candidates moving straight to management principals rather than Engineering. 2nds paper Engineering, Chiefs paper management. Think we have lost this with new system.

- Most of the "generic" statements that appear in STCW are almost timeless. However, the detailed structure that is constructed by flag states, to meet the "generic" statements, needs to be reviewed and move with the times. Knowledge and skills associated with machinery construction, dismantling, assembly and overhaul should take precedence over "skills associated with making new components". Fault finding and problem solving associated with modern machinery and control systems is vital as is an understanding of the science that drives the machinery and associated systems. In the very near future "waste heat recovery" and advanced embedded systems will

drive the quest for efficiency and the sophisticated plant will need to be managed by engineering officers with exceptional and extensive knowledge and ability of the plant, as they will need to gather information about the plant operation from remote sensors rather that from more physical inspection

- Mental health awareness - prevent bullying culture and work out understanding seafarers with anxiety and depression

- Longer cadetships and more sea time requirement between CoC's.
- More workshop time for trainees.
- Hands on is beneficial, but the current balance between study and sea time does not fully prepare candidates for the career they have chosen.
- More emphasis on sketch and describe because many of newly certified engineers struggle with giving engineering explanations to the issues they face.
- More diagnostic/fault finding training.

- More electronics / plc fault finding training.
- Improvement of "hands on" workshop skills.

- Metaskills; Working with Others; Cultural Awareness; Social Inclusivity; Personal, Social & Learning Competence; Mental Wellbeing
- Digital Competence; Cyber Security

- Increased operational understanding, knowledge of statute and how to understand manuals and fault find on equipment.

- I don't think enough emphasis is placed on shipboard security. It can be just as dangerous as a fire breaking out aboard the ship.

- Basic Understanding the Class and Flag survey structure

- Coaching and mentoring training.
- Management training to include department coordination and workload management.
- Mental health awareness.

- Perhaps more academic and vocational training on automation and control systems, while I believe it is of fundamental importance to be able to understand and operate systems and equipment manually the modern trend is towards automated control using touchscreens and remote operation. It has become increasingly necessary to understand the links between control systems and the machinery itself.

- Also, the importance and different approaches to RCM and MMS, certainly our cadets seem to rely entirely on in-house training for the use of our computerized maintenance systems.

- Use of more automated equipment and reversionary modes.
- Requirement to comply with Company ISM and Ship specific Standing Orders
- Elements of Risk Assessments and Standard Operating Procedures - basis of operating procedures
- Limitation of ship specific power and propulsion equipment (Slow Speed/Medium Speed, Direct Drive/CPP, Diesel/Diesel Electric Drive etc)
- Emphasis - hands on skills; requirement to think out solutions to problems rather than just highlight them; move away from just being an 'operator' back to being an 'operator maintainer'; increase in legislation awareness; increase in recording maintenance, defects and defect rectification for records and audit purposes.

- Having completed the HELM operational course I do understand the relevance of what is being conveyed however I must admit it was exceptionally boring. I am not sure what could be done to better the course, perhaps 2 relatively intensive days would be easier to stay focused on than making it last 3 days would be a start.

- Ensure ALL vessels comply to the same standards, and not just "go by the spirit of it"

- Not yet finished my cadetship however going to sea with only my NC level 6 earlier this year gave me little understanding of how equipment worked onboard however in the middle of sitting my HNC now and it being a lot more intense I feel I will be better prepared for my next sea phase
- Possibly a higher level of management training to keep up with shore-side management terminologies & systems.
- All kind of areas onboard of could be improved for better operational requirement.

- Too much confusion between routine work and everyday work safety.

- More electrical, electronics, hydraulics, instrumentation & control related syllabus need to be added for the Marine engineering competency examination.
- Now a day's too much training going on "ON BOARD SHIP" which is too stressful for seafarers.
- Need to stop / remove all unnecessary thing.

- Increased sea time required between applying for CoC's. 36 months to achieve Chief Engineer Certificate is dangerous and very likely to result increase in on-board accidents and injuries due to lack of experience.

- Simulator training is being used in many colleges now and while this is useful it is not a substitute for the real thing. From my experience with Cadets and Junior Officers, there seems to be a lack of enthusiasm towards general watchkeeping (the bread and butter) - all they want to do is be an engineer from the control room! This leads to a lack of familiarity with their plant and engineering knowledge. This shows in Oral examinations.

- I think this is coming from an over-emphasis on much simulator training in the colleges.

- I think the practical aspect of an engineer's job needs to be driven home more and simulator training should never be accepted as an alternative.

- Ships today are getting more and more advanced with high emphasis being placed on electronic components and advanced technology. Introduction of fault finding by remote access and cyber security means that older seafarers are being left behind. There is an increased amount of computer-based workloads and very little in the way of IT training throughout the cadetships.
- safety.....

- Consider introducing voluntary legislation & engine room machinery quizzes for seafarers to test their knowledge on so they know where they are falling short. This may would be helpful to people looking for promotion or those who just want to know what they have forgotten since training. These quizzes could be completed via a company website or email link.

- Not so much training but more education for seafarer's mental health and how mental health can affect seafarers working at sea

- As more and more operating systems are becoming computer based, having a basic knowledge of how to restart, reboot and override computer controls.

- More focus needs to be on manual operation of systems when computer-controlled systems fail. Anything from manual synchronizing of generators to OWS operation should be covered as many young officers I see don't understand how to carry things out manually of know what they are looking at when trying to manually operates systems.

- More on alternative propulsion and power generation systems.
- Alternative fuels & their safety issues including LNG, Batteries, Ethanol, Hydrogen etc.
- High Voltage should be a integral part of a CoC not an additional course, especially as you can be asked HV questions in your CoC exam but your CoC doesn't qualify you to sail on HV ships.

- Experience to the next license grade should be extended, 24 months for 2/E, 36 months for C/E.

- A clearer route for non-qualified individuals to gain a CoC.

- Ensure that training is continually checked and followed. It is very difficult to work with people who learn what they need to pass and then forget it all.

Further Comments (regarding STCW Review)

The following are raw comments and suggestions from respondents:

- For any practicing seafarer the revalidation of various courses should be stopped. Any updates on training should be made compulsory on behalf of owners.

- First Aid training should need to be renewed every 5 years

- There are too many short courses needed to ensure compliance. It should be possible to package all the statutory courses together.

- Look at increasing the amount of sea time between the OOW, Second Engineer and Chief Engineer CoC's to at least 18 months between each grade, as to increase the practical engineering knowledge as well as introducing more control/electronic training into the syllabus.

- It is appreciated that asking over 170 nations to agree more than "generic statements" about the competency requirements is a difficult task. However, agreeing a greater level of detail at IMO will help to move toward raising the "Global" base level standards of shipboard officers and ratings. A greater appreciation of how people from different nationalities can work together in a coherent team will grow in importance.

- STCW for older seafarers not available

- Skills, qualifications and experience are not keeping pace with increasing ship complexity and exponential rate of technical refresh

- Qualifying sea time is impacting on quality of certified personnel, is at an alarmingly low level. This is with regards Second Engineer to Chief Engineer.

- I was fortunate to do my cadetship with Maersk and it was done to a very high standard. I do believe that perhaps nowadays some shipping companies are doing it for the wrong reasons and as a result there are some people coming into the industry who have not experienced the standard of training that I did, which ultimately leads to unsafe working practices.

- I realize that cadets sailing on FoC ships may not be entirely within the MCA remit however if there was some way to audit the level of training on board it would be an improvement for the people undergoing training and the future of the industry.

- Ensure 1st aid training is updated to all

- Many changes requiring to redo expensive courses

- Feel that most onboard training covers STCW requirements and that 5-year refresher courses are just overkill

- I also think colleges and training providers need to be reminded that courses are there to assist and teach crews, not simply a money-making ploy**.**

- Today's vessels are very busy. Some Chief Engineers may not like allowing new British Cadets on starting of Main and Aux. engines and allow them just to stand by and watch. Same goes for handling the pumping.
- With mixed crews usually there might be no problems with their training and some engineers will help in their education. On the other hand, some will view them with suspicion as a threat to their future!!

- Every 5 years interval all the short courses to be attended in a MCA approved training center.

- LNG is starting to become more popular in the industry. Is it time to have to expand requirements for proficiency?
- The introduction of Management Level EK's and fast tracking CoC's is a dangerous endeavor by the MCA.
- Already very inexperienced 2nd and Chief engineers with minimal sea time (36 months) are appearing on-board vessels, often suggesting dangerous procedures due to lack of proper experience, as these officers are normally promoted to senior positions within months of obtaining their "senior" ticket, junior officers and crew are compelled to follow orders.
- I fully expect within 5 years for a death to occur on-board a vessel due to under trained senior officers making poor/uneducated decisions. There is no substitute for experience and with the fast tracking of CoC's and leaving decision of promotions to shipping companies who are desperate for "bums on seats" the MCA is creating a very dangerous working environment. The lack of experience of some of the senior officers now appearing on vessels is quite terrifying.

- Whilst it may seem pertinent to undertake these reviews, and they are welcome and necessary in light of technological developments, the fundamental importance of the competencies within STCW remain extant, and indeed their contents require little change as indeed the fundamentals of merchant shipping have changed little - despite the technologists finest efforts.

- do sub tickets as in for cars a full driving license or just for automatic cars

ELECTRO-TECHNICAL SURVEY

ANALYSIS AND RECOMMENDATIONS

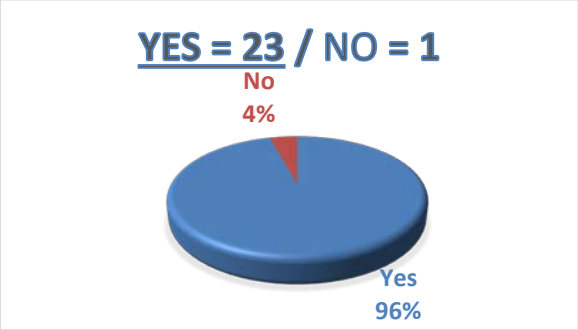
The summary report and recommendations of the Electro-technical survey are shown below:

Competence:
Monitor the operation of electrical, electronic and control systems

Knowledge, understanding and proficiency in:
1. Basic understanding of the operation of systems

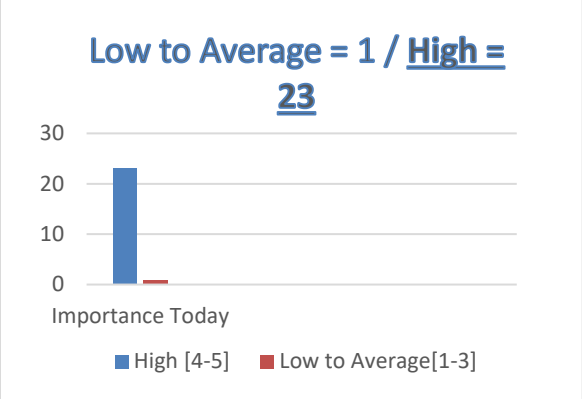
1.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **1**



1.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 1 / **High = 23**



1.3 **Summary of respondent's RECOMMENDATIONS:**

The majority of respondents agreed that this section was highly relevant.

Some respondents recommended additional training in Elevator/Lifts operation and maintenance, and for GMDSS equipment to be added to the already present competence requirement.

1.4 Advisor's Recommendation:

This section is generally well written and can remain as is.

Competence:
Monitor the operation of automatic control systems of propulsion and auxiliary machinery

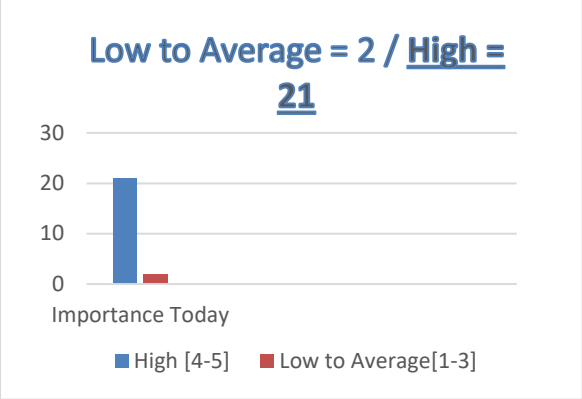
Knowledge, understanding and proficiency in:
2. Preparation of control systems of propulsion and auxiliary machinery for operation

2.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

2.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 2 / **High = 21**



2.3 Summary of respondent's RECOMMENDATIONS:

Although most respondents agreed that this section can be kept as is, recommendations were made for an amendment to give more emphasis to training on DE propulsion systems.

2.4 Advisor's Recommendation:

This section is well written and can remain the way it is.

Competence:
Operate generators and distribution systems

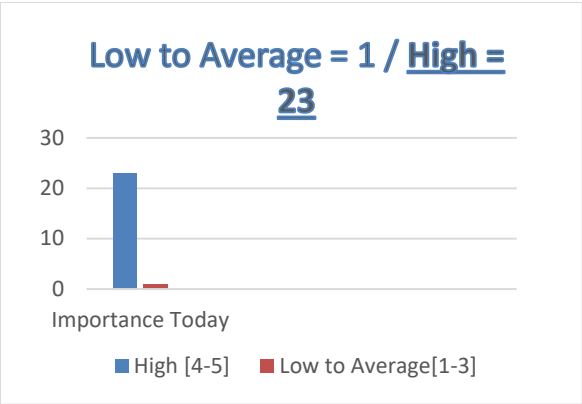
Knowledge, understanding and proficiency in:	
3.	Coupling, load sharing and changing over of generators, breaking connection between switchboards and distribution panels

3.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

3.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 1 / **High = 23**



3.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is important and relevant for today's competence requirement and can be kept as is.

3.4 Advisor's Recommendation:

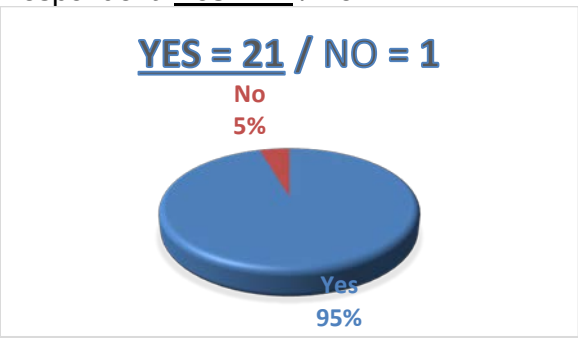
This section is generally well written.

Competence:
Operate and maintain power systems in excess of 1,000 volts

Knowledge, understanding and proficiency in:	
4.	Knowledge of High-voltage technology, Safety precautions and procedures, Electrical propulsion of the ships, electrical motors and control systems, Practical knowledge, Safe operation and maintenance of high-voltage systems, including knowledge of the special technical type of high-voltage systems and the danger resulting from operational voltage of more than 1,000 volts

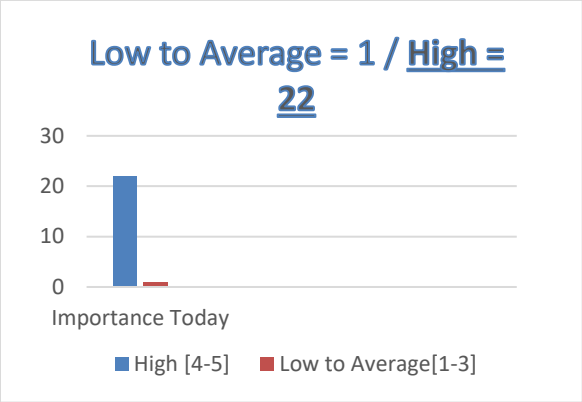
4.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 21** / No = **1**



4.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 1 / **High = 22**



4.3 Summary of respondent's RECOMMENDATIONS:

95% of the respondents agreed that this section is well written and still relevant today.

4.4 Advisor's Recommendation:

This section is generally well written.

Competence:
Operate computers and computer networks on ships

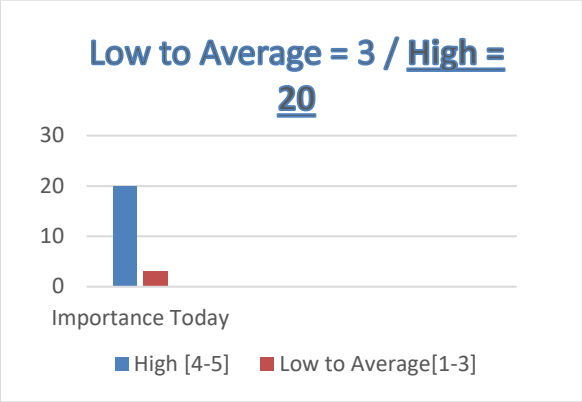
Knowledge, understanding and proficiency in:
5. Understanding of main features of data processing, construction and use of computer networks on ships, bridge-based, engine-room-based and commercial computer use

5.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

5.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 3 / **High = 20**



5.3 Summary of respondent's RECOMMENDATIONS:

All the respondents agreed that this section is relevant today. Some recommended that training on network security, understanding of integrated bridge and/or engine room systems should be added.

5.4 Advisor's Recommendation:

This section is generally well written.

Competence:
Maintenance and repair of electrical and electronic equipment

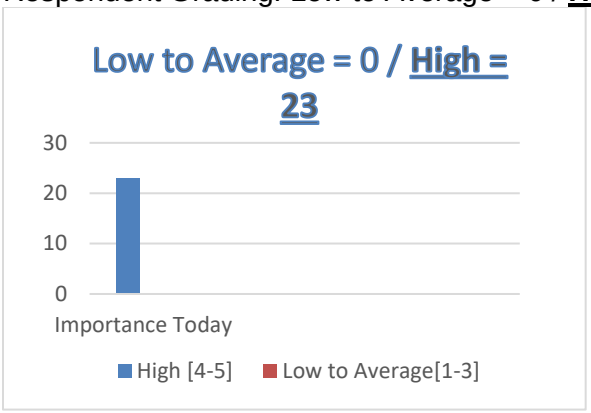
Knowledge, understanding and proficiency in:	
6.	Safety requirements for working on shipboard electrical systems, including the safe isolation of electrical equipment, maintenance and repair of systems and equipment, switchboards, electric motors, generators and DC electrical systems and equipment

6.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

6.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 0 / **High = 23**



6.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is well written and still relevant today.

Recommendations were made for more training on fault finding on both AC and DC electrical systems, and training on Navigation equipment repairs to be added.

6.4 Advisor's Recommendation:

This section is well written and can remain the way it is.

Competence:

Maintenance and repair of automation and control systems of main propulsion and auxiliary machinery

Knowledge, understanding and proficiency in:

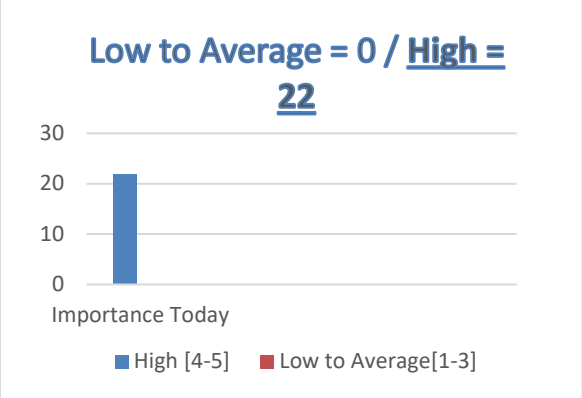
7. Appropriate electrical and mechanical knowledge and skills, Safety and emergency procedures, Safe isolation of equipment and associated systems, Practical knowledge for the testing, maintenance, fault finding and repair

7.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

7.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 0 / **High = 22**



7.3 **Summary of respondent's RECOMMENDATIONS:**

All respondents agreed that this section is well written and still relevant today.

7.4 **Advisor's Recommendation:**

This section is well written.

Competence:
Maintenance and repair of bridge navigation equipment and ship communication systems

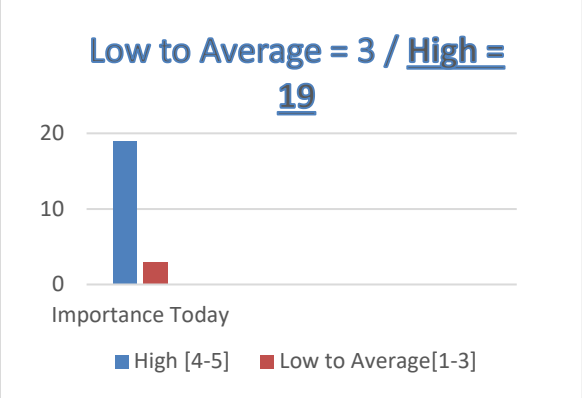
Knowledge, understanding and proficiency in:	
8.	Knowledge of the principles and maintenance procedures of navigation equipment, internal and external communication systems, Equipment operating in flammable areas, Practical knowledge: Safe maintenance and repair procedures

8.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 22** / No = **0**

8.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 3 / **High = 19**



8.3 **Summary of respondent's RECOMMENDATIONS:**

The respondents agreed that this section is well written and still relevant today.

Suggestions were made for the addition of training on Installation of Satellite Navigation and Communication Systems, and for more time to be spent on such a complex subject for effective learning.

8.4 Advisor's Recommendation:

This section is well written.

Competence:
Maintenance and repair of electrical, electronic and control systems of deck machinery and cargo-handling equipment

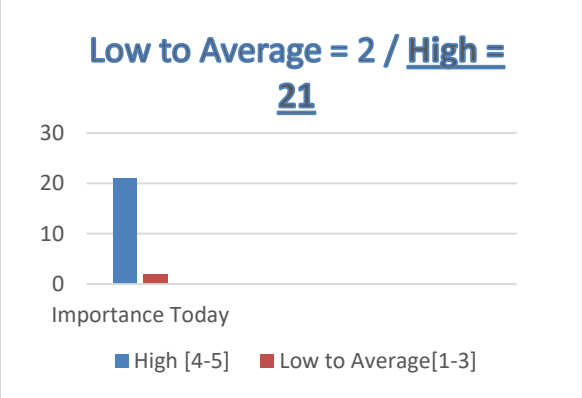
Knowledge, understanding and proficiency in:	
9.	Appropriate electrical and mechanical knowledge and skills, Safety and emergency procedures, Safe isolation of equipment and associated systems

9.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

9.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 2 / **High = 21**



9.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is well written and still relevant today.

9.4 Advisor's Recommendation:

This section is well written.

Competence:
Maintenance and repair of control and safety systems of hotel equipment

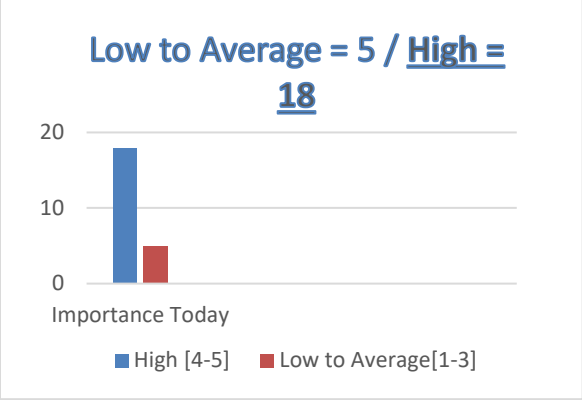
Knowledge, understanding and proficiency in:
10. Electrical and electronic systems operating in flammable areas, Safe maintenance and repair procedures

10.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 22** / No = **0**

10.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 5 / **High = 18**



10.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is well written and still relevant today.

A suggestion was made for the addition of training on maintenance in complex electrical hazardous areas.

10.4 Advisor's Recommendation:

This section is well written.

Competence:
Ensure compliance with pollution-prevention requirements

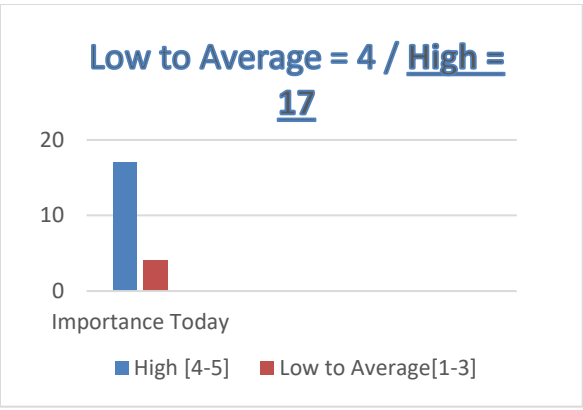
Knowledge, understanding and proficiency in:	
11.	Prevention of pollution of the marine environment, Knowledge and precautions to take, Anti-pollution procedures and importance of proactive measures

11.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 22** / No = **1**

11.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 4 / **High = 17**



11.3 Summary of respondent's RECOMMENDATIONS:

The majority of respondents agreed that this section is well written and still relevant today.

11.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:

Prevent, control and fight fires on board

Knowledge, understanding and proficiency in:

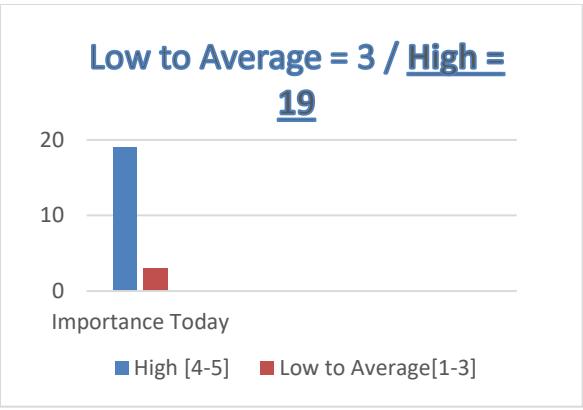
12. Fire prevention and fire-fighting appliances

12.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

12.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 3 / **High = 19**



12.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is well written and still relevant today.

12.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:

Operate lifesaving appliances

Knowledge, understanding and proficiency in:

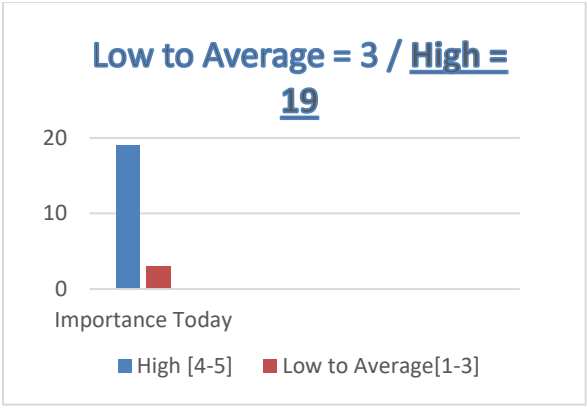
13. Life saving

13.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

13.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 3 / **High = 19**



13.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is well written and still relevant today.

13.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:
Apply medical first aid on board ship

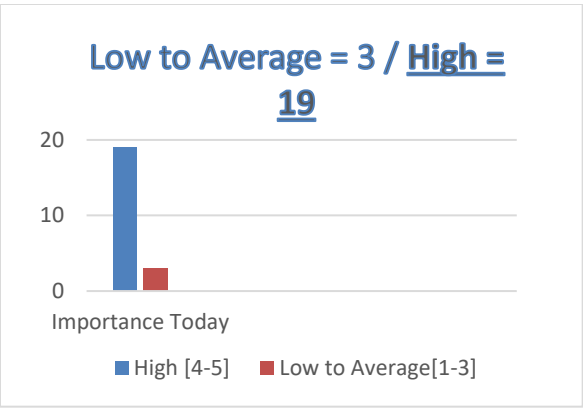
Knowledge, understanding and proficiency in:
14. Medical first aid

14.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

14.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 3 / **High = 19**



14.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is well written and still relevant today.

14.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:

Application of leadership and teamworking skills

Knowledge, understanding and proficiency in:

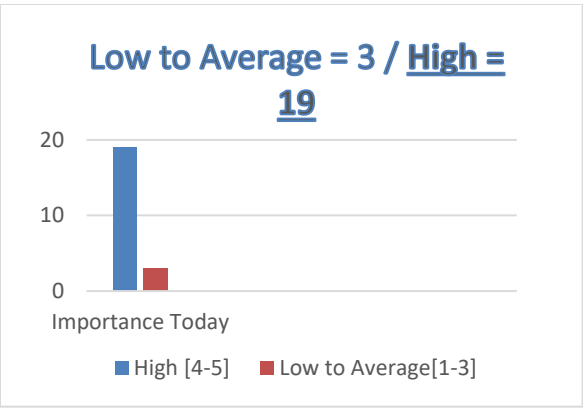
15. Working knowledge of Shipboard personnel management

15.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

15.2 **IMPORTANCE** of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 3 / **High = 19**



15.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is well written and still relevant today.

15.4 Advisor's Recommendation:

This section is well written and can remain as is.

Competence:
Contribute to the safety of personnel and ship

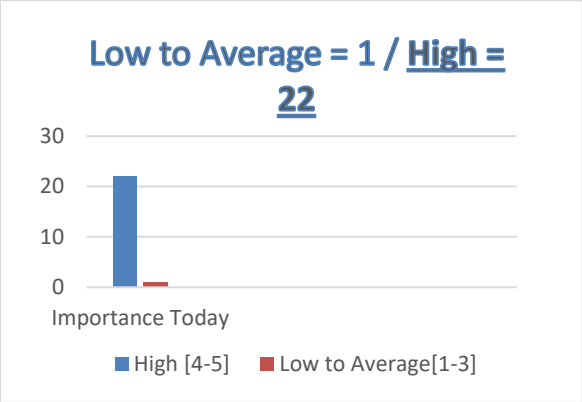
Knowledge, understanding and proficiency in:	
16.	Knowledge of personal survival techniques, Knowledge of fire prevention and ability to fight and extinguish fires, Knowledge of elementary first aid, Knowledge of personal safety and social responsibility

16.1 Is competency requirements **still relevant TODAY?**

Respondent: **Yes = 23** / No = **0**

16.2 IMPORTANCE of Competency **TODAY?** Grading: 1 – 5 [1=Low; 5=High]

Respondent Grading: Low to Average = 1 / **High = 22**



16.3 Summary of respondent's RECOMMENDATIONS:

All respondents agreed that this section is well written and still relevant today.

16.4 Advisor's Recommendation:

This section is well written and can remain as is.

What areas of Seafarer's training could be introduced or enhanced to reflect today's onboard operational requirements?

The following are raw suggestions and recommendations from respondents stating what could be introduced or enhanced to reflect today's onboard operational requirements:

- Enhancing sat coms and computer network information/ knowledge
- ETO's are required to take STCW courses yet aren't "required crew members for a vessel" this should be amended as the increase in ships electrics & monitoring systems make them one of the most important crew members for the safety of the vessel & all modern ships.

- Lift maintenance, operation and safety.
- In-depth networking, satellite navigation and communication system knowledge,

- I think the syllabus covers most aspects but maybe more in-depth study or practical work on motor drive units would be useful as most automation systems use some sort of drive or inverter. Also, DC bus drive units are becoming popular. In addition, the theoretical and practical elements of high-power propulsion converter systems should be taught along with the developments in the semi-conductors used. This may be already covered in the DEP course.

- As mentioned before, we need more teaching on IT systems. It is ridiculous to be sent on board with so many TRB tasks on computers yet have zero understanding due to no teaching from college on this. Network management on computer systems would be very useful to learn and I am confused why this is only on the TRB and not in the ETO course.
- There should also be a task on low insulation and earth fault finding.

- more familiarisation of passenger lifts, maintenance and safety procedures.
- familiarisation of distributed control systems (DCS) bridge /engine room.
- include better computers instruction, how to rebuild a crashed network system.
- incorporate Microsoft training courses.

- regular updates of firefighting first aid (every 5 years) as procedures change.

- For the ETO training course, more time should be spent on plant operation from both the electrical and mechanical point of view to give a better overall understanding.
- Less time should be used for modules such as management as they only apply to senior cruise ship electrical staff (and in my experience were of no value to anyone).

- Complex electrical hazardous areas 1-4
- The ETO certification should place more emphasis on the principles, operation and maintenance of PLCs and computer systems in the maritime environment. With increasing automation, and therefore heavier reliance on these systems, the ETO cadetship should be amended to reflect this.

- Keep as a competency but remove from the TRB. This is impossible to complete at sea without the tuition. Make a college module/short course on this.

- This is very difficult to do on ship. This is not taught at all in the ETO cadetship and therefore we are sent to sea without any IT skills to complete this task. Moreover, this is usually the chief engineer's job and completed by contractors outside of the company. Therefore, when it came to complete these tasks in the TRB my understanding was theoretical. I am not the only one to have struggled, please speak to other cadets or newly qualified ETOs and they will say the same.

- Some of the TRB tasks are very vague - test or maintain an ECDIS? Test or maintain the gyro? (this is a technician job, as a cadet I am not allowed anywhere near it!) Could there be further clarification and realistic goals set

Further Comments (regarding STCW Review):

The following are raw comments and suggestions from respondents:

- The Course gives you a good base to work on ship as it stands

- There is a need for a senior ETO certificate for many reasons. The cruise industry has a rank structure for ETOs but no defined method of promotion in line with engineers. There is no emphasis on further education or lifelong learning which makes the ETO career a bit of a dead end.

- The 5 year STCW refresher training and HELM course should be removed, every single seafarer I have met 100% agrees with that suggestion, in addition most training centres understand we only attend to get the certificate, they realize we just go there get the certificate and go back to being on leave, it’s a paper work exercise which is not beneficial and cost us our leave and money. Most vessels carry out varying drills once every week so why do seafarers need to do a refresher during their leave every 5 years?