NOVATEUR PUBLICATIONS
INTERNATIONAL JOURNAL OF INNOVATIONS IN ENGINEERING RESEARCH AND TECHNOLOGY
[IJIERT] ISSN: 2394-3696 Website: ijiert.org
VOLUME 10, ISSUE 3, Mar. -2023

ANALYZING THE EFFECTIVE OF TRAINING NEEDS ANALYSIS IN SHIPPING INDUSTRY

Ravindra Balyan
Research Scholar, Livingstone International University of Tourism Excellence And Business Management (LIUTEBM)

Dr. Deepchand Dhankher
Mentor, Livingstone International University of Tourism Excellence And Business Management (LIUTEBM)

ABSTRACT
The number of people killed in maritime incidents rose by 10% in 2014, as reported by the IMO. The international governing organisations reported 799 fatalities or missing people Compared to the commercial aviation business, which had 641 fatalities in the same year, the number of deaths in the maritime industry was much greater (IATA, 2015). In order to accomplish the goals, a combination of techniques was applied. DP operators within Floatel Int. were polled to determine the most important factors and topic areas for training. It was in the interviews that the survey's findings were finalized and analyzed. Because of this lack of familiarity, the simulator trainer was unable to make use of the results in any way, shape, or form except for in the case of Follow Target.

KEYWORDS: Accommodation vessels, advanced marine operations, critical elements, simulator training.

INTRODUCTION
Training needs analysis is crucial for every business. the procedure is often based on a thorough performance evaluation, which takes into account a variety of elements such as the company's mission goals, the competence and expertise of its employees, output, inputs, and expenses. If a corporation adopts a methodical approach to training and development, that is, if it adheres to a set of formal stages, it has a better chance of seeing a return on its training expenditure. The first of them is determining what kind of training is required, so it's obviously quite important. Because without it, it's hard to tell whether training programmed are effective.

The term "need" may be interpreted in a number of different ways, but it always refers to a discrepancy between what is needed and what is already on the market. argues that "one of the main goals of doing a training needs analysis is to identify the discrepancy between the status quo and the ideal. training is what's needed to fill in the is". The evaluation seeks to point in the direction of training, persons to be trained, and training material in the us. Education is required. Diagnosis is mostly an exercise in data collection and interpretation.

it has been proposed that this study might be more fruitful if it used many methods, including quantitative and qualitative approaches. simultaneously Several different definitions of TNA exist. said that by using suitable and sufficient data gathering techniques, training needs assessment may aid in identifying particular organizational difficulties and those that demand some type of training solution. Getting the ins is often accomplished by developing effective training interventions based on collected empirical data.

Moreover, if a requirement is identified with the aid of a performance analysis, training needs assessment encompasses the research of several methods in which instructional and informative schemes and materials

may be established and produced. The phrase "needs analysis" is utilized in this study since it is more widely used in the literature and is the most known word to most training experts. TNA is only useful to businesses if the training provided is in line with their actual demands. TNA plays a critical part in the growth of both the workforce and the management skills of organisations, thus it is essential that managers use the information-gathering techniques that will help them to effectively identify the skills workers most need to improve.

LITERATURE REVIEW

Qiao, Weiliang& Liu, Yang & Ma, Xiaoxue& Lan, He. (2021) Unlike the new safety concept (safety-II) encourages workers to look at "how and why things go correctly," as opposed to the old safety management strategy (safety-I), which concentrates on "what goes wrong." In this article, we investigate and explore the cognitive distinction between safety-I and safety-II, as well as their relationship in the marine shipping industry. To achieve this goal, we undertake a survey of seafarers and maritime professionals and use semi-structured interviews to collect primary data on safety-I and safety-II. The information gathered from mariners and sailors is then processed using empirical statistical techniques and fuzzy analytic hierarchy process (AHP) methodology. The results show that safety-I perspectives place a premium on person elements, while safety-II perspectives place a premium on organisational factors, both of which are essential for developing an organization's capacity for resilience. Based on the data and conversations, this article suggests viable safety countermeasures that combine elements of safety-I and safety-II. This research stands out from the pack because it is the first to examine the safety issues associated with marine shipping operations from a post-NST safety-II viewpoint.

Hannaford, E.; Hassel, E.V (2021) Little is known about how the increasing prevalence of autonomous technology in the maritime industry can effect Licensed Deck Officers. This research looks at the pros and cons of more automation on board, specifically as it pertains to the Licensed Deck Officer, in light of the potential for reduced or eliminated personnel. The qualitative methods used were literature reviews, questionnaires, and in-depth, semi-structured interviews with key informants. The Likert Bar Graph, a rating scale tool, is used to display the survey's findings. The information obtained from the interviews was analysed using a theoretical thematic framework. The research plan involves making sure the SMEs questioned are credible, knowledgeable, and objective. The safety of both the crew and the vessel has been shown to be a major barrier to the widespread use of autonomous boats. Licensed Deck Officers may be negatively impacted by personnel reductions and greater shipboard automation, as they may become too reliant on sensors, lose situational awareness, and become complacent, all without seeing a corresponding decrease in their workload or level of weariness. First, maritime authorities must deal with new rules regarding navigation, personnel, and legal responsibility. Although the maritime sector is notoriously sluggish to adopt new ideas, the mariner is always one step ahead of the curve. Insights gained from this research will aid industry players in foreseeing and adapting to the disruption that will be caused by autonomous ships.

Abercrombie, John (2021) The need to train seafarers for the autonomous future has become more pressing as the advent of autonomous ships has moved from science fiction to the realm of possibility. Changing our approach to training for autonomous ships is necessary because of the evolution of seafarer education as new technologies have brought more complex navigation systems and equipment. The extent to which ships can

make decisions independently, the types of commerce in which they participate, and the ways in which the responsibilities of crew members have shifted as a consequence of this are at the heart of the debate. The extent of the shift necessary is shown by the fact that fully autonomous ships will be controlled by computerised processes and that sailors on board would need to be enabled to monitor, maintain, and perhaps repair these systems. This research will provide a model of autonomous vessels and certain assumptions regarding human participation before making recommendations for how maritime education may be updated for the autonomous era.

Shan D. (2020) This chapter addresses the problems of occupational health and safety that Canadian sailors face. Jobs on the water are some of the most dangerous in the world. As a consequence of oceanographic trends and technological improvement, the Arctic is becoming more accessible to ships, which poses serious health and safety concerns for Canadian mariners. Based on findings from two research projects on seafaring OHS, including qualitative semi-structured interviews with 25 Canadian seafarers and a preliminary legal review of Canadian maritime OHS law, this chapter presents some common OHS challenges faced by Canadian seafarers and the gaps in current Canadian maritime OHS law. Challenges include increasing Arctic maritime activity due to climate change, more mobility due to job, and insufficient legal protection.

Gregorio S. Ochavillo (2020) The purpose of this study was to see whether maritime students were ready for the first-ever change in maritime education from face-to-face to online learning when the COVID-19 epidemic broke out. The study was descriptive-normative in nature, and the participants were marine science majors entering their second or third years. Online responses were collected using a Google Forms questionnaire. To ensure everyone's safety and health, the whole town was placed under lockdown. Challenges were also encountered while attempting to connect to the internet. Measures of frequency and percentages were used as statistical tools. The majority of maritime students, or 7 out of 10, are unprepared to deal with the paradigm shift, the report found, because they do not have access to a personal computer for schoolwork, do not have internet connectivity at home, do not have access to internet shops, and are concerned primarily with their own personal well-being. Nearly three-quarters of them opted for in-person instruction. In light of the problems that have delayed the start of the 2020-2021 school year, a catch-up framework in maritime education has been presented as a potential solution. Laboratory topics requiring the use of a simulator were scheduled for the latter half of each academic year, whereas lecture-based courses took precedence early in the year. This will guarantee that students learn by doing, operating simulators as part of their coursework. Marine students may still complete their degrees within the legally allowed time frame even with the COVID-19 epidemic because to the catch-up mechanism. Once implemented, this framework will be helpful to policymakers, administrators, parents, and educators.

Shan, Desai &Lippel, Katherine. (2019) Transportation options must be flexible while sailing the seas. Ships are floating workplaces with the ability to link up with and cut ties to the mainland as needed. Multiple individuals often move inside and across countries. Workers in the maritime industry come from all over the world, and they use a wide range of transportation modes to go from where they live to where they work. Sailors' mobility increases their risk of injury or illness on the job, and the ineffectiveness of regulations meant to protect them may make the situation much worse. This exploratory study uses a combination of legal analysis and twenty-five semi-structured interviews with Canadian seafarers, managers, and key informants to inquire into the ways in which occupational health and safety may be

compromised for Canadian seafarers working on the Great Lakes and the St. Lawrence Seaway as a result of employment-related geographical mobility. The results show that there are several occupational health and safety problems, and that there are limited legislative measures available to safeguard seafarers from commuting-related occupational threats. Seafarers have little protections when it comes to their health and safety on the job, and they are actively discouraged from addressing systemic hazards.

TRAINING & STANDARDS

Over 80% of maritime incidents may be traced back to human error on board, meaning that the current mandated Maritime Education and Training (MET) system has space for improvement. Even though each of a mariner's many duties and responsibilities may have its own unique character, all of them are crucial to the ship's smooth and safe functioning. As a result, efforts should be made to educate and train people such that human error is as little a risk as possible.

There has never been a universally accepted certification system; instead, in the past, different ship owners and governments each established their own. The United Nations established the Inter-Governmental Maritime Consultative Organization in 1948 since there were no international regulations in place at the time. In 1982, the group's name was changed to the International Maritime Organization to reflect its global scope (IMO). One of the original goals of the group was to improve technological components of the marine sector in order to boost safety. In the 1970s, data showed that human error was the leading cause of maritime mishaps. International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers 1978 was so drafted (STCW78). Signatory states are obligated to fulfil, and ideally surpass, the requirements of the Convention on Training in an attempt to prevent maritime accidents. However, the STCW78 had several significant shortcomings. The International Maritime Organization (IMO) had little sway at the time, therefore it was left up to individual governments to interpret certain criteria. An unsuccessful convention was updated because of a lack of defined norms. On February 1, 1997, the updated and revised STCW95 came into effect. Among its many features was the notion of Competency-Based Training and the highest attainable levels of competency (CBT). To be certified, seafarers must "show their competence to do the duty for which they are going to be certified." Competency-based education goes under a few different names: performance-based, outcome-based, and criterion-referenced.

CBT has an emphasis on daily performance and reveals consequence rather than input, making unequivocal claims about conduct and outcomes. The amended convention has not been very successful thus far in achieving its goals. It has been argued that the CBT approach is not very helpful for operators, and that the MET system has inconsistencies.

Issues with IMOs CBT approach

Written training discrepancies are explored in this article, as are the contradictions in the procedures of training for and evaluation of competence in the marine sector. Supporters of the method argue that it brings more of a connection between classroom instruction and actual job requirements. Some critics of cognitive behavioral therapy (CBT) say it fails to take into account human agency and learning. Exploratory qualitative research was conducted by Emad and Roth to better understand the discrepancies in the present MET system, which is designed to enhance operators' skills. Participants in the research had just completed a Transport Canada-run conditional course for a second-level certificate of competence, which was developed in line with worldwide standards. Several commenters have voiced their disappointment that the instruction they have received has not helped them too much. Upon receiving their certificates, one of the

attendees said something along the lines of: "Now I am qualified (air quotes), but actually I didn't learn too much, learnt a tiny bit" Such a quote shows how operator experience goes against the goal of the MET system.

Theoretical education

The MET programmed seeks to better equip students with the theoretical knowledge necessary for seagoing navigation as one of its primary goals. However, this goal is not being met by the present system. Although getting a certificate of competence does not need college enrollment, college is where most maritime instruction takes place. The most important thing for students is that their lecturers adequately prepare them for certification exams. This is challenging for professors since they have to spend time ensuring their students are ready for the tests with appropriate responses. Knowledge that can be used in real-world circumstances aboard should be taught instead. The following is the disgruntled statement made by a professor at one of Canada's marine universities: "From here my students after completing my course go back to TC to be examined and to me it is a hurdle. Too much of my time is spent helping students become exam-ready.

Problems arise when the focus shifts from helping seamen acquire practically useful knowledge and skills on board to helping them pass tests.

Practical training courses

Research demonstrates that trainees have a more favorable impression of their hands-on training than their theoretical education. Participants found it reassuring that there was a direct correlation between their training and real-world scenarios. Users felt they could use what they learned in this course to their future work on ships. Practical training courses are exemplified by those conducted in simulators, the goal of which is to provide the most realistic simulation possible for the purpose of enhancing the trainee's learning experience.

In the course of completing numerous tasks, students are assessed. The students are accepted if the assessor is certain that they have what it takes to complete the task while at sea. This training comes "quite near to competency-based requirements and provides the desired outcome," the authors write.

On board training

The last piece of the MET system calls for formalized training and growth of competence while on the job. Students go to this section of the MET system in large numbers. However, in terms of results and quirks, the on-board training function falls short. The lack of on-board direction is the primary source of trouble (Emad & Roth, 2008, p.266-267). There is potential for improvement in the level of communication and collaboration between regulatory agencies, training institutions, shipping firms, and officials on board. expressed the problem in their writing.

The efficiency of MET is compromised because "there is no oversight of mariner training on board ships and there are no guarantees that students really achieve the requisite abilities."

To meet the MET need for on-board experience, another option exists. The second choice is less regimented; it doesn't include any kind of on-the-job training or supervision. However, if you choose for the less regimented option, you'll spend more time on board. Last but not least, on-board training is seen as an essential feature of the MET system, despite the fact that its effectiveness is questionable.

Certification assessment

In order to determine whether the goal of imparting the necessary skills and information to the trainees has been met, it is necessary to conduct an assessment of the training programmed. Research cited in the article shows that tests may get in the way of learning. The Piece Paradoxes in the MET system may be seen, for example, in the way that training and evaluation of competence are handled differently. Some aspects of the MET become roadblocks on the path to the CBT's goal.

Instructors and students alike have doubts about the administration's certification tests. A student doubted the veracity of several of the questions and their apparent ramifications in practice. The professor is aware of the issue with outdated examinations; the lecturer claims that the examinations were prepared over 40 years ago. In order to please their customers, whose major purpose is to pass the certification exams, institutions are sometimes compelled to teach pupils outdated material rather than relevant lessons of the present.

The purpose of the existing evaluation system is to determine whether or not marine officers have the knowledge and expertise to safely and efficiently operate a vessel, however its design falls short in this regard. Because exam questions are chosen at random from a pool of potential questions, students may see the same questions on more than one exam. Since the questions on an exam can be anticipated with some degree of certainty, students and teachers alike place a premium on memorization. New questions have been created by the government (here, Transport Canada) in order to increase the size of the question bank. In light of the fact that students and institutions will soon get familiar with the new questions in advance of examinations, this fix is just a stopgap.

Human mistake happens even among the most capable persons, therefore the contradiction discovered in Emad and Roths' (2008) research does not show that poor competence among officers is the cause of accidents at sea. However, the assumption that officers are competent exists despite very little evidence supporting the concept, due to the certification of personnel without proper examination of knowledge and expertise (Emad & Roth, 2008, p.268-269).

Emad & Roth (2008) conclude with a plea to the IMO and the test administrators to take the initiative and advance the standards.

The International Maritime Organization (IMO) and examination administrators must do more than draught CBT rules; they must also plan for a smooth transition to the new training paradigm. Adjustments must be made to the certification system since it has a direct effect on how maritime educational institutions and the workplace teach and how students learn the material necessary to become qualified seafarers.

Regulatory organisations' duty in ensuring that seafarers show proficiency via the establishment of defined industry standards is essential to the success of CBT training. The students' eligibility for a certificate of competence is confirmed by the proper demonstration and evaluation of their ability to perform on board duties effectively.

Present simulator training

There are a variety of offshore training options for you to choose from nowadays. The training's focus is on the operator's education and competence, with the end goal of ensuring the continuity of safe maritime operations. Multiple locations were available for course attendance. In order to host Kongsberg courses, the facility must first be authorized to do so. For the purpose of ensuring proficiency as a means of guaranteeing quality, Det Norske Veritas (DNV) relies on ISO standard 17024. For example, DP and Anchor Handling training programmed, which are related to the hospitality industry, must adhere to a certain standard. Principles, acceptance criteria, and operational details about the Society's assessment of its objectives,

employees, organisations, and services have been codified in accordance with these standards, which have been established in conjunction with a certification committee. Each need for information should be understood on one of four levels: Acquiring Information, Processing It, Applying It, and Combining, we outline the DNV procedure for earning the DP certification. In addition, there is the Posmoor course, which also pertains to the DP procedure. When it comes to the DP-anchor system's mechanism, the Posmoor course is the default setting. As of right now, DP operators on board accommodation boats are not needed to have taken any kind of specialized accommodation DP training. Floatel and its collaborators have created a curriculum that goes above and beyond minimum requirements.

DP Training

At their 39th Section Meeting in 1996, IMO encouraged its members to inform relevant parties about IMCA recommendation M 117. During their 81st session meeting 10 years later in 2006, the IMO confirmed the changes. The guideline was reprinted as Rev.1 to reflect the most recent information and industry best practice, but no substantial modifications were made.

There was the potential for DP instruction to occur both on land and at sea. The proprietors must make sure that everyone working on the DP is qualified to do so. Everyone who works with the DP system has to know this. Similarly to what is outlined in the aforementioned Section and in Floatel International's DP Manual, the operator should keep a log of their time spent on board the designated vessel.

DP certification process

The operator must have a current STCW deck officer certificate in order to be designated as a DPO. In Table 1 you will see a list of all valid certifications. A DP certificate may be earned via either the Nautical Institute's training programmed or the DNV's training programmed.

Table 1: DP Operator Certificates

STCW	DEFINITION
II/1 Deck	Officers in charge of a navigational watch on ships of 500 GRT or more.
II/2 Deck	Master and chief mate on ships of 3,000 GRT or more.
II/3 Deck	Officers in charge of a navigational watch and of masters on ships of less than 500 GRT.

The Nautical Institute

In 2013, the process to become a DPO certified professional was reviewed and updated. On January 1, 2015, the Nautical Institute's new plan became mandatory. DPOs must have the "...minimum qualification as established under STCW Regulation II/1, II/2 or II/3..." As for operators who began their training assessment before to January 1, 2015, they will be graded using the previous DP scheme criteria.

A five-day DP basic/induction course was required under the previous DP system guidelines (40 hours). Students should be required to participate in a 30-day on-board DP familiarizationprogrammed at the conclusion of the course. A journal was provided to keep track of the days worked after the conclusion of the training programmed. Once the student has completed the in-depth on-board training, they will be eligible to enroll in a five-day, in-depth DP simulator course (40 hours). Further DP watchkeeping on board

is necessary after completing an advanced DP simulator training. The period required to get a DP Limited or Unlimited Certificate might vary depending on the DP-class of the vessel. In addition to the clock, operators need a declaration from the Captain/OIM verifying their proficiency.

Operators who started their training after January 1, 2015, are eligible to use the new training plan. This system allows for three distinct degrees of credential withholding. There are three distinct certifications, namely, Restricted to Unclassed Vessel, Limited, and Unlimited. The DP class of the vessel serves as a dividing line between these types. There are seven steps the operator must complete before being awarded the certificate. A-E The initialAn introductory course with on-board practical examination is followed by an intermediate course, just as it was previously. Theoretical evaluations cap off both the introductory and advanced levels of study. Attending another DP course during phase D might cut the total number of DP days in half. The Captain/OIM must give a letter of appropriateness when the student has completed the training and enough DP sea time has been withheld.

As part of the new training programmed, certification expiration and revalidation policies were modified. The DP certificate remained active until January 1, 2015, provided the operator maintained continuous DP use. The candidate has to have served as a DP watchkeeper for at least six months during the previous five years. The operator may also get certified by instructing at a training center that has been approved by NI. The operator must revalidate their certificate in a new way beginning on January 1, 2015. When it comes to revalidation, the operator may choose from eight distinct options. Due to space constraints, I won't go into detail about the eight options, but they can be found on pages 27-32 of the IMCA training and Experience of Key DP employees standards.

DNV

The Norwegian Maritime Authority (NMA) approved DNV's idea as meeting international requirements and eligible for use as a certificate on June 6, 2012. The DNV standard for certification requires that "...the DPO must be an STCW trained deck officer," and that operators have expertise "equivalent to" the requirement.

There are five distinct stages to this training programmed. The first two levels (Levels 1 and 2) include an orientation course and on-board training, whereas Level 0 is a computer-based course (CBT) and Level 4 includes both theoretical and practical evaluation. There is a greater emphasis on the specifics of the job at Level 3, which includes tasks like as those performed by a Shuttle tanker or a rig. When the learner has finished all levels, they will be required to demonstrate their knowledge by taking a test. Once the evaluation is complete, the operator will be issued a certificate.

If the operator has met the STCW criterion, the DP certificate will be valid for another 5 years. An operator's DP certificate cannot be considered legitimate if they do not possess a current nautical certificate. At the end of every five years of employment, the operator is required to retake a practical test at the training center, after which they will be awarded a fresh certificate if they pass. The revalidation process is used to confirm the operator's competence.

TRAINING NEEDS ANALYSIS

To reduce the likelihood of human mistakes, human factor engineers have been studying the problem and coming up with solutions. The improved efficiency of the operator is a direct result of the contribution's effective redesign of the operator interface. However, in high-stakes circumstances when cutting-edge technology is used, it is crucial that operators have received enough preparation. Employee reductions place a greater emphasis on the remaining operators, who are all too often the last line of defense in antiquated

safety infrastructure. Therefore, training operators is essential. The TNA is one methodically planned approach of dividing up the information void caused by new tools and techniques. Targeted areas for improvement are determined utilizing the TNA technique.

Rarely used, many organisations instead arrange their training on less systematic methods based on conventional traditions, organizational regulations, and other internal and/or external interests rather than the TNA model. As a rule, training programmed inside organisations are improvised and developed on the go. Which implies that some actual incidents from the past are used as models for the training. Moreover, training was traditionally seen as a rudimentary instructional technique, but the idea has recently been evolving towards an organic learning process. A Proactive Approach to Training Needs Analysis, in which he discussed the new training method.

There is a consistent thread in the current body of research that suggests "organisations must begin and continue to encourage transformational learning," and that "the responsibility of the trainer will be increasingly to assist change."

Since TNA analyses ways in which employees might learn new information and improve their existing expertise, it is seen as a preventative method.

Traditional training approaches also suffer from another flaw, outcome orientation, which is the consequence of predetermined behavioral objectives. Such an approach ignores the possibility of emergent learning via means like individual understanding and reflection. It's a must-have when educating workers in skills that may one day be useful for work, they'll do. Training's ultimate purpose is to provide participants with the skills and information necessary to perform their jobs successfully.

As it just considers the immediate job at hand, the conventional approach may not always provide the desired results. Instead, the idea should be comprehensive, with the goal of equipping workers with the skills they'll need to deal with any future problems that may arise. In addition, training was formerly thought of as a little instructional activity, but the shift towards an organic learning process is expanding its scope.

Employees are encouraged to review course materials long after a training session has ended, since "training" is seen as an ongoing process that requires constant updating and revision. Training materials, both in terms of content and presentation, should be adapted to the specific requirements of the people receiving it.

From the point of view of TNA, training shouldn't be seen as a one-time event or process but rather as an ongoing component of any job. The TNA ethos is consistent with the view that education and development are never-ending tasks.

Organizational, next departmental, and ultimately personal requirements are analyzed. To begin, your team will need to determine what it is that it requires in order to function effectively. In order to determine specific employee training and requirements, it is necessary to first research departmental demands, which entails collecting data on the skills and abilities of the staff, and then study individual necessities, which is the most granular level.

Employee training has the potential to be a powerful and effective investment on the part of an employer, but only if it is implemented in a way that is complementary to the needs and goals of the business. Training for TNA organisations may take the form of in-house courses offered by a professional educator, where instruction may be tailored to the needs of the company and delivered with precision. Aside from the obvious monetary benefit, this may also improve efficiency. Employees aren't getting the training they need to achieve the organization's goals because they're taking courses outside the company that they like or are interested in, even if they're already experts in the field. The company's strategic goals are typically

established by upper management and disseminated to all employees. This leads to widespread agreement on the organization's ultimate goals. Employees are given direction in terms of morals and what they need to be focusing on by the company's ultimate goal.

The Training needs analysis article highlights the value of having a designated training coordinator and the involvement of upper management. Without a designated coordinator, training is easy to overlook or poorly arrange. However, although the time and energy of upper management is essential, so is their active participation.

Gathering information about people's employment needs, present competencies, and knowledge needed to meet future encounters is the next phase. It is crucial to plan ahead for changes in organizational and personal needs. In the end, you'll do some analysis of the information you've obtained and identify any knowledge gaps that have been revealed. Potential knowledge or skill gaps are first compared to existing needs, then to future assignments. Recovery from setbacks and identification of skill gaps are both part of TNA, but future performance is emphasized rather than past failures.

When people are central to an organization's mission, the TNA framework really shines. One sector where the idea is put to excellent use and where it is widely accepted is the health and medical sector. The industry is only as good as its personnel. In the healthcare industry, human error and blunders may have serious consequences. The Primary Health Department in Malta is a good example of an institution that conducted a TNA of its health care personnel.

CONCLUSION

The poll asked participants to suggest ways in which the content of a DP course devoted to accommodating guests may be enhanced. One of the seven primary categories, communication, was expected to be present. The interviewees' affirmation of the importance of the survey's highlighted factors. But the priority list has moved, with Human Factors now ahead of Premenstrual Syndrome. It was assumed that once the responders had deliberated and thought about the different factors, a change would occur. the respondents' perception of the connection between the Human Factor and the other factors indicates that there is one. Subsequent responders zeroed down on Human Factors, PRS, and Follow Target as the three most important factors. The instructor operating the simulator understood the value of the PRS component and the significance of human factors. The vast majority of responders advocated for vessel-specific DP training, notwithstanding a few cautions about potential cost overruns.

REFERENCES

1. Qiao, Weiliang& Liu, Yang & Ma, Xiaoxue& Lan, He. (2021). Cognitive Gap and Correlation of Safety-I and Safety-II: A Case of Maritime Shipping Safety Management. Sustainability. 13. 5509. 10.3390/su13105509
2. Hannaford, E.; Hassel, E.V. Risks and Benefits of Crew Reduction and/or Removal with Increased Automation on the Ship Operator: A Licensed Deck Officer’s Perspective. Appl. Sci. 2021, 11, 3569. https:// doi.org/10.3390/app11083569
3. Abercrombie, John. (2021). Seafarer Training in the Age of Autonomy. 10.1007/978-3-030-64088-0_14.
4. Gregorio S. Ochavillo (2020) A Paradigm Shift of Learning in Maritime Education amidst COVID-19 Pandemic International Journal of Higher Education Vol. 9, No. 6; 2020

5. Shan, Desai &Lippel, Katherine. (2019). Occupational Health and Safety Challenges from Employment-Related Geographical Mobility Among Canadian Seafarers on the Great Lakes and St. Lawrence Seaway. NEW SOLUTIONS: A Journal of Environmental and Occupational Health Policy. 29. 104829111987076. 10.1177/1048291119870762.
6. Mohammad Mahmudur Rahman (2018) Social Aspects of Bangladeshi Seafarers: An Assessment, International Journal of Science and Research (IJSR)
7. Gausdal, Anne & Makarova, Julija. (2017). Trust and safety onboard. WMU Journal of Maritime Affairs. 16. 10.1007/s13437-017-0126-z.
8. LEE, B.-K. et al. (2016) "A Study on Advanced Seafarers' Training for Improving Abilities of Officers in Charge of a Navigational Watch who Handle Navigational Equipment: To Focus on the ECDIS," Journal of Fisheries and Marine Sciences Education. The Korean Society for Fisheries and Marine Sciences Education. doi: 10.13000/jfmse.2016.28.2.323
9. Dalaklis D., (2012), "Somali Piracy: Some Good News, but a Lot More Needs to Be Done", Maritime Security Review,
10. Ferreira RR, da Silva Abbad G, Mourão L. Training needs analysis at work. The Wiley Blackwell handbook of the psychology of training, development, and performance improvement. 2015:32-49.
11. Ling L, Qing T, Shen P. Can training promote employee organizational commitment? The effect of employability and expectation value. Nankai Business Review International. 2014;5[2]:162-86.
12. Rasli AM, Norhalim N, Kowang TO, Qureshi MI. Applying managerial competencies to overcome business constraints and create values evidence from small technology-based firms in Malaysia. Journal of Management Info. 2014;3[1]:99-121.
13. Sharmina, M., McGlade, C., Gilbert, P., Larkin, A., 2017. Global energy scenarios and their implications for future shipped trade. Marine Policy, Volume 84, October 2017, Pages 12-21.
14. UNCTAD, Review of Maritime Transport 2018.
15. Waddesdon-UK. O. Uğurlu, E. Köse, U. Yıldırım, E. Yüksekyıldız, Marine accident analysis for collision and grounding in oil tanker using FTA method. Marit. Policy Manage. 42 (2), 163–185. 2013. http://dx.doi.org/10.1080/03088839.2013.856524.