

SKILLS BEYOND THE SEAS PROJECT

(I) Silja Teege, email@sea-teach.com; (I) Christian Esteva Burgos, christian@sea-teach.com; (II) Germán de Melo, germandemelo@gmail.com.

(I) Sea Teach S.L.

(II) Barcelona School of Nautical Studies. Universitat Politècnica Catalunya, Spain.

Abstract:

The Maritime Sector is currently facing a paradox and difficult situation of a current shortage of young seafarers. This paper demonstrates a methodology for designing two tools that will provide seafarers and MET (Maritime Education and Training) students with a detailed list of their hard and soft skills and suggest pathways to onshore occupations where these skills are needed.

This methodology has been developed by the “Skills Beyond the Seas” Erasmus + project, which brings together five partners from four EU (European Union) countries who are closely linked to the seafarers, MET target groups and youth and are experts in qualification and skills analysis. They are jointly: a) analysing and identifying transferable hard and job-specific skills that are held by four seafarer qualifications, using ECVET (European Credit system for Vocational Education and Training) principles of knowledge, skill and competences, b) identifying onshore jobs and careers that utilise these transferable skills, c) developing a SkillsPath Tool that provides the target groups with options of career moves, and, d) developing an Informal Skills Scanner that identifies and assesses soft skills.

Keywords:

skills portfolio, soft and hard skills, transversal skills, onshore employment, career pathways.

1. INTRODUCTION

The Maritime Sector is currently undergoing immense changes and finds itself in a paradox situation. On the one hand experts state that there is a high demand for seafarers:

"The employment demand in the Maritime Sector is set to more than double by 2030 ... but the maritime workforce is aging and young people are no longer attracted to maritime careers" (EU Commission SWD (2017) 130final).

"Whether in traditional or emerging maritime sectors, businesses cannot find the desired workforce, skills and profiles and stakeholders are recommended to increase attractiveness to its rapidly evolving needs" (Executive Agency for Small and Medium-sized Enterprises, Study supporting a possible network of maritime training academies and institutes in the Mediterranean sea basin, 2016).

"... in OECD countries as estimated by ISF/BIMCO (Baltic and International Maritime Council), the shortage of officers shows a gap of 45 000 between supply and demand for officers, and of 145 000 for ratings." (EU Commission, MOVE/C1/2010/148/SI2.588190).

On the other hand they agree:

The unmanned remote or autonomous ship is on the horizon and related policy discussions are high on the agenda of the International Maritime Organisation (IMO), EU institutions such as DG Mare, DG Move and the European Maritime Safety Agency (EMSA) and most European and National Maritime stakeholders and interest groups. The roadmaps indicate that the first remote controlled commercial ship could hit the water by 2020, in only 2 years time (Rolls Royce white paper "Remote and Autonomous Ships", 2016).

EMSA estimates that there are 254.000 seafarers in the EU (EMSA, Seafarers statistics in the EU, 2014) and between 25,000 and 35,000 students in Maritime Education and Training (MET). All of them will be affected by the current technological developments.

1.1 THE PROBLEM

Whilst currently there is still an urgent need for young people to enter into the professions of seafarers and overall numbers are significant, their future employment and career perspectives are very uncertain and unclear. This uncertainty especially affects young seamen and maritime trainees and makes it a difficult decision for youth to enter this sector. It thereby hinders them to enter into highly valuable VET (Vocational Education Training) which offers them learning outcomes that can be used far beyond sea-going professions.

1.2 THE OBJECTIVES

For active seafarers and students in MET across the EU, who all need a perspective for their future, the project Skills Beyond the Seas offers the much-needed information and guidance for mid- to long-term career planning. For disadvantaged youths it provides support to enter into a diverse sector and thereby gain social inclusion.

The tools developed by the project will provide the users with a detailed list of their hard and soft skills, highlight the transferable skills sets and suggest career pathways to other occupations where these skills are needed.

1.3 TARGET GROUPS

- a) Active Seafarers

- b) Students of Maritime Education and Training (MET)

- c) Disadvantaged Youth

- d) MET providers, Maritime qualification Experts, Selected Onshore Qualification Experts, Employment Agencies, Job Centres and Job Recruitment organisations.

1.4. ACTIVITIES

The Skills Beyond the Sea project is undertaking the following activities:

- a) developing a methodology to analyse and identify transferable hard and job-specific skills that are held by seafarers, using the ECVET principles and Learning Outcomes,

- b) identifying onshore jobs and careers that utilise these transferable skills (from the obvious university lecturer or shipping company office job to more obscure positions like land surveyor, manager, etc.), using data and information provided by the European Skills, Competences, Qualifications and Occupations Classification (ESCO) and experts evaluations,

- c) developing a SkillsPath Tool that provides the Target Groups with options of career moves,

- d) developing an Informal Skills Scanner that identifies and assesses soft skills held by seafarers in order to widen their skills portfolio and support their career opportunities, using partly Europass skills frameworks for the assessment.

The project is carried out by a consortium of 5 partners from 4 European Countries:

- 1.) Sea Teach SL (Coordinator) based in Mallorca, Spain
- 2.) Universitat Politècnica de Catalunya, based in Barcelona, Spain
- 3.) University of Rijeka, Faculty of Maritime Studies based in Rijeka, Croatia
- 4.) Turk Loydu based in Istanbul, Turkey
- 5.) Danmar Computers based in Rzeszow, Poland

2. INNOVATIVE OUTPUTS

The Skills Beyond the Seas project is developing two new and innovative tools which will provide employees and learners in the maritime industry with future pathway guidance to onshore occupations, tailored to their individual skills sets.

It is innovative in the sense that it combines hard skills matches with personal soft and non-formal skills matches, thereby providing the user with a new comprehensive and individual Transferable Skills Profile. The two tools to be designed are

1) the SkillsPath Tool, and

2) the Informal Skills Scanner.

2.1 THE SKILLSPATH TOOL

The SkillsPath Tool will offer an innovative approach that interprets a range of onshore occupations and delivers a multi-layered skills matching system for seafarers, boosting their job mobility. The SkillsPath Tool will operate from a comprehensive dataset of onshore professions, careers, jobs and occupations generated by the project, detailed into their skills and competence components.

The listed onshore jobs, totalling at least 50 separate occupations, will range from related marine jobs to wider but fundamentally compatible career opportunities and sectors. The problem of an industry becoming overtaken by automation and the gradual replacement of traditional skills held by a human workforce by Artificial Intelligence (AI) is not exclusive to the shipping sector and therefore the unique SkillsPath Tool has huge potential to be adapted and utilised for use in other industries such as automotive, aeronautical, transportation and manufacturing.

The SkillsPath Tool will deliver comprehensive career pathway guidance and skills matches for seafarers through the identification of their knowledge, skill and competences which are compatible with other onshore professions, in a cross-sector matching system. This process will facilitate job and cross-sectoral mobility of existing seafarers and provide encouragement to young people and graduates considering this career path, that this sector has a high skills transferability potential and isn't a 'limiting' choice.

By harnessing the ECVET framework of knowledge, skill and competence to provide a standardized cross-sector compatibility framework for seafarers, the SkillsPath Tool will determine levels of: relevance, suitability, appropriateness and commonality to other adjacent careers onshore. It will provide the user with an overall 'Transferable Skills Profile' that will incorporate both specific hard skills matches and integrate informally acquired competences. This integration of soft skills will utilise the Informal Skills Scanner to complement the seafarers' transferable skills profile.

The SkillsPath Tool is being developed in the following stages:

Stage 1: Standardized Skills Breakdown Methodology

To ensure that the cross-matching of knowledge, skill and competence between the Seafarer qualification's and onshore professions is compatible, allowing the software systems to deliver appropriate and results, the partners have development of a standardized methodology for this skill breakdown. For this they used the International Maritime Organisation's (IMO) qualifications and curricula for Seafarers as a base and standardized these competence data.

Stage 2: Onshore Job Skills Extraction

To translate the competence requirements for onshore jobs into a format that matches the seafarer's competences and allows for effective matching between the two, onshore job-related experts are being used to identify, rate, verify and agree on competences of the onshore job they are evaluating through a skills, competence, knowledge matrix.

Stage 3: Development of SkillsPath Tool

To house the multi-layered data set the SkillsPath Tool will be made available through an online platform interface. Built to integrate digital native functionality and interactive systems, the software tool will facilitate the comparison and cross-matching of the knowledge, skill and competence datasets identified in the previous stages. Dedicated servers will host the datasets. User interaction will involve the creation of profile accounts which allow specific personal enquiries. These accounts will provide the functionality to interact, save, view and edit the individual user's 'hard skills profile' and find links to additional qualification and skills extensions.

2.2 THE INFORMAL SKILLS SCANNER (ISS)

To further expand the skills portfolio of seafarers and to broaden their career opportunities, the project will develop the Informal Skills Scanner (ISS). This innovative tool adds the personal perspective to the users Hard Skills Profile. This integration of hard and soft skills sets within and outside this sector has not been delivered before in this form.

Whilst many validation tools of soft and non-formal skills exist, as listed in the "European inventory on validation of non-formal and informal learning" [5], these have never been integrated into a comprehensive skills matching tool with the aim of delivering the user with career pathway guidance based on his/ her entire skills set.

The Informal Skills Scanner will test and assess the user for their soft and non-formal skills that have transversal characteristics, using a combination of new

Whilst the IMO standards largely regulate the hard competences and qualifications of different ranks of seafarers, individuals working in this sector also possess a significant variety of valuable soft and non-formal skills. Realising this potential through an assessment and recognition process will unlock valuable additional skills that can be used in related and adjacent careers. The Informal Skills Scanner will work in conjunction with the SkillsPath Tool to give the individual user a comprehensive 'skills profile' that makes their entire skills set visible and in addition offers wide but tailored recommendations for future career pathways.

The ISS distinguishes itself by concentrating on higher soft skills compared to the basic competences such as Reading and Numeracy, since it can be safely assumed that these are present in the Target Group of seafarers. The types of skills that the ISS will target and assess will be soft skills that have transversal characteristics such as: Communication skills, Team working skills, Organisational skills, Interpersonal skills, Sense of initiative and entrepreneurship, Management skills, Problem solving skills, Leadership skills, Decision making skills and Customer service skills.

The Informal Skills Scanner is a software tool that offers assessment criteria in terms of: scenario what if's, effective operation of a team, response to an issue, managing change, additional duties, reaction in stress situations, dealing with personal and cultural differences, etc. These criteria will offer insights into the individuals' level of transversal skill competence and generate results into a 'Soft Transversal Skills Profile'. To effectively test and assess these skills, the tool will be loaded with

- a) a rich database that provides a large variety of questions and scenarios, and
- b) an algorithm that ensures the constant rotation of test questions and scenarios to avoid repetition even when the test is repeated several times.

The project recognises that potential users might also possess skills such as language skills or digital skills that have been acquired in a soft or non-formal way. It will therefore assess these in form of a self-assessment that is using the "Common European Framework of Reference for Languages" (CEFR) for language skills and the "European Digital Competence Framework for Citizens" for digital competences. Both assessment methods are also used in Europass and are therefore compatible and well recognised.

The Informal Skills Scanner will incorporate national and cultural differences and thereby incorporate an EU dimension in its applicability and validity thanks to the data collection process and test scenarios that will use input from multiple EU partner countries.

The Informal Skills Scanner will be developed in the following stages:

Stage 1: Methodology

The project partners developed a questionnaire that asked experts to identify the most common and recognised soft and non-formal skills and skill-sets of the seafarers. From the results, which are published in the following chapter of this paper, a database of soft skills was formulated.

Stage 2: Developing and programming the Informal Skill Scanner

In the next stage, the partners are now developing the question-database of these soft skills and the language and digital competence frameworks into the Informal Skill Scanner and are deciding its configuration for the most effective and user-friendly display. The software will then be programmed accordingly and the database entered.

3. RESEARCH RESULTS SO FAR

3.1 SUMMARY OF RESEARCH RESULTS FOR INFORMAL SKILLS IN SEAFARERS

The project partners of Skills Beyond the Seas agreed in undertaking a survey to find out which soft skills should be used in the 'Informal Skills Scanner'. A sample of 122 experts, from different countries, and representing professionals from different maritime companies, organizations or institutions completed successfully the survey.

Data were collected through the use of a structured questionnaire, a copy of which is provided in the Appendix. The length of each survey was about 15 minutes. The questionnaire consists of several major parts to assess the following: nationality, type of institution/company/organization, size of the institution, and rating some transversal skills.

3.1.1 METHODOLOGY

The partners first collated a list of 17 transversal skills that are common in seafarers. This list was then presented to the partners' maritime experts who rated the skills for importance and this rating led to the reduced list of 10 skills to be surveyed by the questionnaire responders.

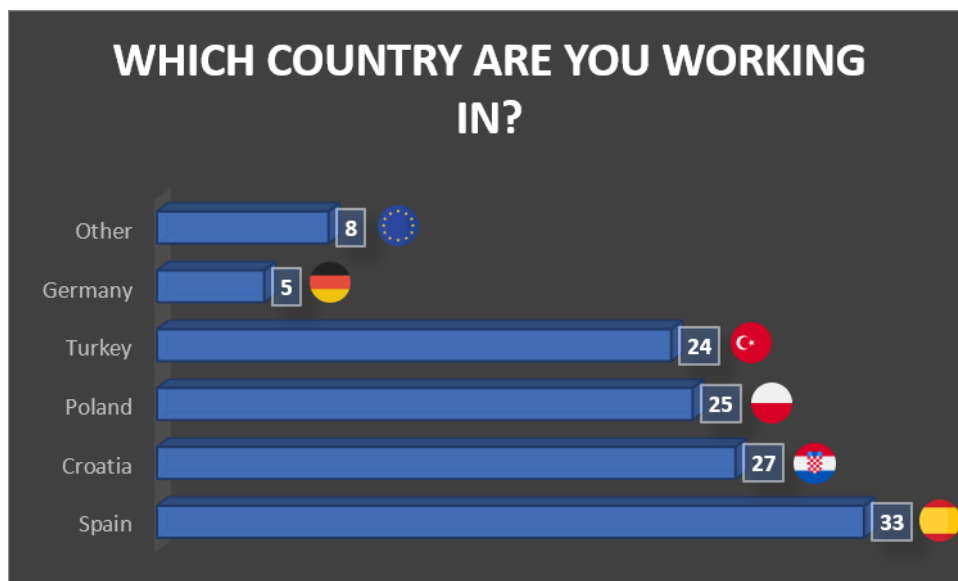
Participants of the questionnaire were asked to specify the organisation they were working for and to rate by priority some transversal skills for different ranks. soft skills are those skills that have been learned often unintentionally and in a daily informal setting (family, leisure, work) and are transferable to a wide range of occupations and sectors.

The results were deep analysed using two software: Excel and SPSS. A statistical toolset was applied (average, standard deviation, Pearson correlation coefficient) in order to see the results from different points of view according to the survey answers (By nationality, by size of the organization, by type of institution or as a whole).

3.1.2 RESULTS BY COUNTRY

Professionals from a total of nine countries took part in the survey. The country with more participants was Spain with a total amount of 33, followed by Croatia (27), Poland (25), Turkey (24), and Germany (5). The number of participants of the other countries was not significant compared to those previously listed, however they were considered in the results as a group called ‘other’.

Figure 1. Number of professionals by country.



a) Officers of the watch

When analysing the results by countries, some similarities between regions can be found. Spain and Germany tend to rate in the same direction, being ‘Adaptability to change’, ‘Cope with pressure’ and ‘Teamworking skills’ the most important. On the other hand, eastern countries (Turkey, Poland and Croatia) have a different view, since ‘Follow procedures’, ‘Cope with pressure’ and ‘Team working skills’ were the top 3 skills.

For Spanish and Croatians, ‘work under pressure’ is the most important skill, while for Germans is the ‘adaptability to change’. Turkish rate as top1 ‘team working skills’ while Polish professionals prefer the ability of ‘Problem solving’. This indicator is useful to understand the job requirements in each country.

Another useful indicator is to analyse the average of each country. If the result is bigger than 4, soft skills should be considered as ‘Very important’ when applying for a job in that country. The results are as follows: Germany (4,22), Spain (4,17), Poland (3,98), Croatia (3,94) and Turkey (3,91).

b) Master and chief engineers

When interpreting the results table, higher education and a higher position requires more transversal skills. In most of the cases, ratings are above 4 and some skills have an average of >4.5. Turkey got the highest average (4,45), followed by Germany (4,38), Spain (4,34), Croatia (4,31) and Poland (4,12).

‘Leadership skills’ was rated as top 1 for all the countries except for Poland where ‘Problem solving skills’ was the most important. ‘Problem solving skills’ was also high rated in all countries, obtaining an average of 4,62, as well as ‘Cope with pressure’ (4,57).

3.1.3 RESULTS BY TYPE OF INSTITUTION

Figure 2. Number of professionals by type of institution.



a) Officers of the watch

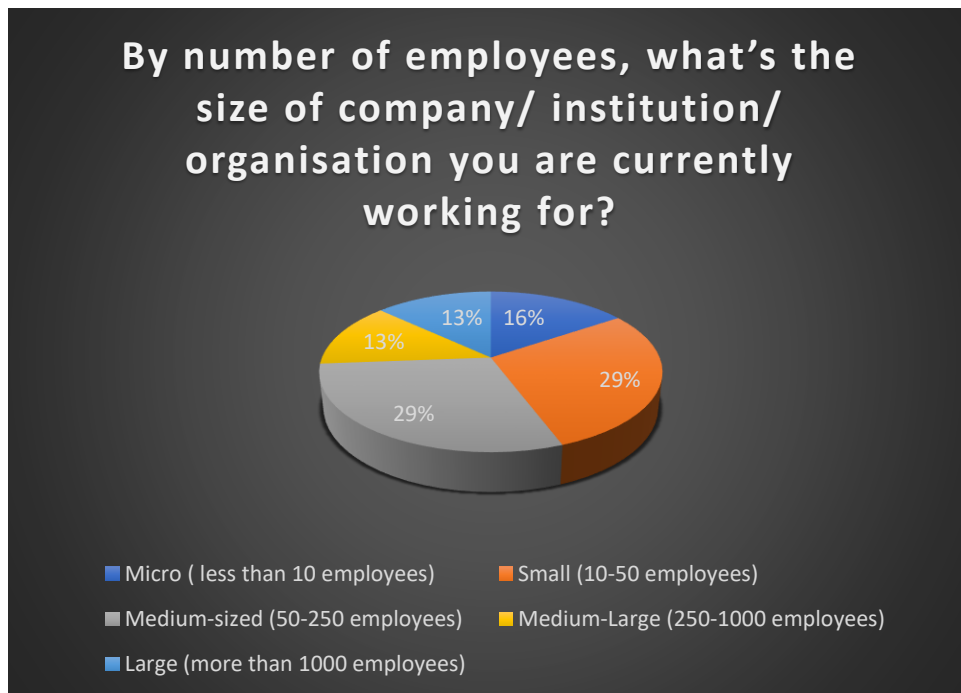
In the analysis of the results by the type of institution, Research institutions, Maritime Schools and Maritime Universities follow the same pattern, being ‘Cope with pressure’ and ‘follow procedures’ the most important skills. It is interesting to analyse the results of the professionals working for a Maritime association: they ranked ‘Willingness to learn’ in the first place, however a total of three skills remained in the second place; ‘teamworking skills’, ‘cope with pressure’, and ‘adaptability to change. Last, but not least, Shipping companies found ‘Teamworking skills’ the most important followed by ‘Cope with pressure’.

b) Masters and chief engineers

In reviewing the results of the opinion on master engineers by type of the company/organization, 'Leadership skills' seem to be the most important skill for professionals (above 4,6) in all cases except for Research Institutions that ranked it as the least important. 'Work under pressure' and 'problem solving skills' were ranked as #2 and #3 in all cases. For maritime institutions and shipping companies soft skills are almost essential (with an average above 4,4), while for the rest, they are considered as really important (averages from 4.01 to 4.3).

3.1.4 RESULTS BY SIZE OF THE COMPANY/ORGANIZATION (NUMBER OF EMPLOYEES)

Figure 3. Distribution of professionals by size of the company.



a) Officers of the watch

'Teamworking skills' is the most important soft skill for Micro and Small companies followed by 'Work under pressure' and 'apply quality standards'. Medium sized and large companies ranked 'Cope with pressure' as #1 skill followed by 'Apply quality standards' and 'Teamworking skills'. Finally, Medium-large companies found that 'cope under pressure', 'teamworking skills' and 'willingness to learn' were the most important abilities.

b) Masters and chief engineers

Whilst the average range of ‘Officers of the watch’ scored between 3,9 and 4,1 (considering soft skills as important), the average of Master and chief engineers was 0,3 points higher in all cases (4,2 the lowest and 4,5 the highest). Small, medium-sized and medium large companies considered ‘Leadership skills’ as the most important, followed by ‘cope with pressure’ and ‘problem solving skills’. On the other hand, micro companies ranked ‘Teamworking skills’ as top one, followed not so far by ‘leadership skills’ and ‘problem solving skills’. Large companies top 3 was as follows: ‘Cope with pressure’, ‘apply quality standards’ and ‘leadership skills’.

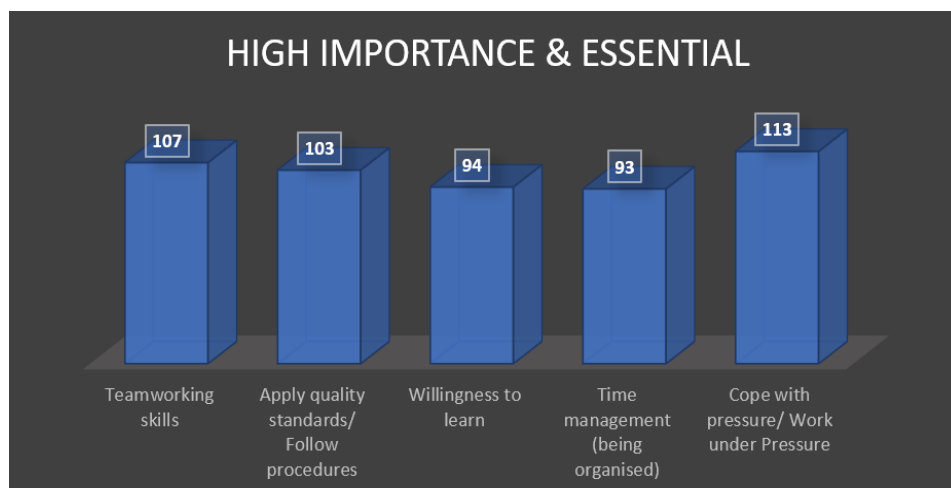
4. GENERAL RESULTS ANALYSIS

When analysing the general results, we decided to rank each skill according to what professionals considered as High Importance and Essential (HI&E). In addition, an average of all ratings was calculated to give us a general view of users opinion. The results were as follow:

a) Officers of the watch

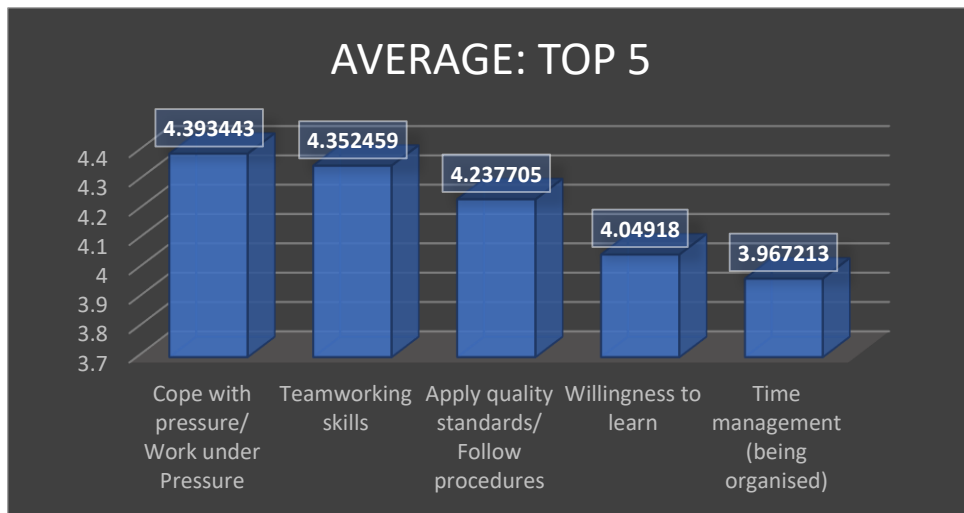
‘Coping with pressure’ was rated as ‘HI&E’ 113 times, followed not so far by ‘Teamworking Skills’ (107) and ‘Apply quality Standards’ (103). ‘Willingness to learn’ (94) and ‘Time management’ (93) completed the top 5.

Figure 4. Skills considered as 'HI&E' for Officers of the watch.



When analysing the averages, same results were found, but ratings were a bit different. 'Coping with pressure' occupied the first position again with an average of almost 4,4 followed by 'teamworking skills' (4,35) and 'Apply quality standards' (4,23). The results of the other two skills could be considered as important but not essential since they were in the limit of 4 or even below.

Figure 5. TOP 5 Skills for Officers of the watch (Average).



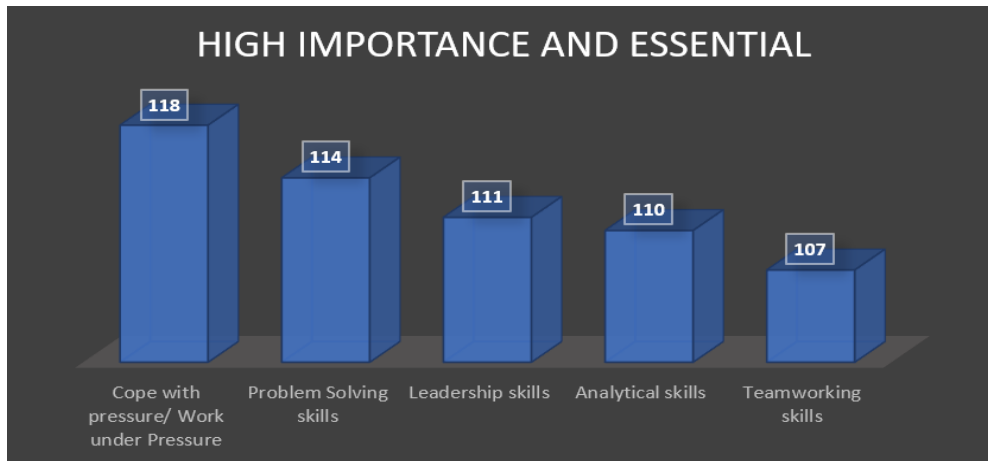
When evaluating the rest of the skills, it is clear that 'Leadership skills' and 'analytical skills' are not relevant. Other skills, like 'Adaptability to change', 'interpersonal skills' and 'time management' could be considered as Medium/high important since their ratings are below 4.

On the other hand, standard deviation results reaffirm what has just been mentioned. Results near 1 are the least important ('Leadership skills'; 0,93 and 'adaptability to change'; 0,88) while lower results are considered as essential ('Cope with pressure'; 0,71 and 'Teamworking skills': 0,75).

b) Master and Chief Engineers.

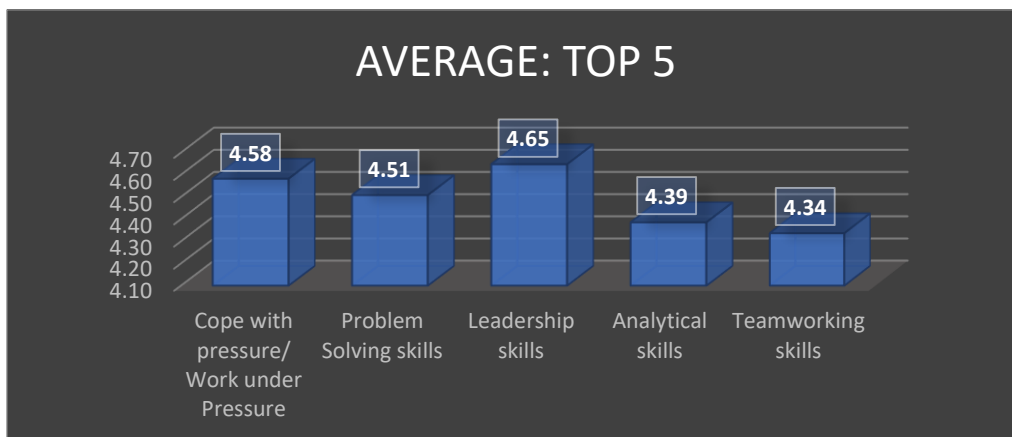
In the analysis of the results of Master and Chief Engineers 'Cope with Pressure' (118) is once again the winner in HI&E results, followed by 'Problem Solving' (114) and 'Leadership (111)'. Analytical skills (110) and Teamwork (107) completed the top5.

Figure 6. Skills considered as 'HI&E' for M&C Engineers.



The average values show some different results. In this case, 'Leadership skills' is valued as the most important with an average of 4,65 out of 5, making the skill 'Essential' for Engineers. 'Cope with pressure' and 'problem solving skills' completed the podium with averages of ~4,5. 'Analytical skills' and 'teamworking skills' were also considered as very important since they got an average of ~4,3.

Figure 7. TOP 5 Skills for M&C Engineers (Average).

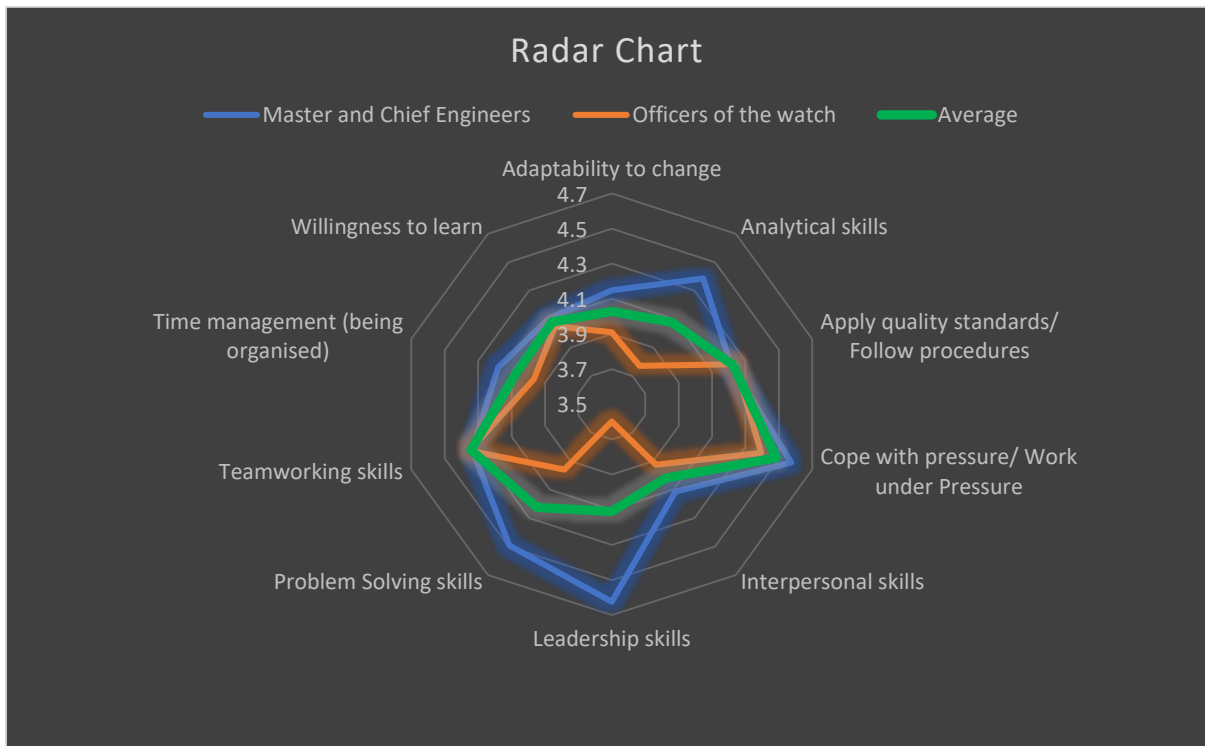


As in Officers of the watch results, Standard Deviation values reaffirm average results. Results near 1 are the least important while lower results are considered as essential.

4.1 RADAR CHART: RESULTS COMPARISON OF BOTH PROFESSIONS

The following figure displays the average results of 'Officers of the Watch' (orange), the average of Master and Chief Engineers (blue) and the average of both (average). The chart provided us a great help to decide which skills would be selected.

Figure 8. Radar chart.



5. CONCLUSIONS

- Transversal skills are higher valued for Master and chief Engineers than for officers of the sea. As displayed on *figure 7*, there is no skill that was better rated for officers of the watch.
- It is clear that 'Cope with Pressure', 'Teamworking skills' and 'Apply quality standards' must be assessed in the 'Informal skills scanner'. They are both highly valued in the two professions.
- 'Problem Solving skills' is considered as very important for Engineers but not for Officers of the watch, nevertheless it should also be assessed since it occupies #4 in the average and standard deviation ranking.
- 'Analytical Skills', 'Time Management' and 'Willingness to learn' got exactly the same average result; 4,07. Hence, they should also be considered in the 'Informal skills scanner'.
- 'Leadership skills' was top rated for Master and chief engineers, and even though it was considered as the least important for Officers of the watch, it should be added to the list in order to not lose the most important transversal skill of Engineers.
- Finally, it was agreed by all partners that Language Skills and ITC skills would be added to the skill scanner, since nowadays, both skills are the most demanded by companies.

6. DISCUSSION

Developing a methodology to analyse and identify transferable hard and job-specific skills that are held by seafarers and later identifying onshore jobs and careers that utilise these transferable skills, is an effective solution to provide guidance for mid- to long-term career planning for MET students and seafarers.

The obtained results up to this point from the research phase show significant analogies between the offshore and onshore professions. The combination of IMO, ECVET and ESCO list of knowledge, skills, and competences plus the expertise of projects partners will provide a verified, solid, and useful tool that will deliver a solution that other studies haven't been able to solve yet.

On the other hand, the results of the survey conducted to identify the most relevant soft skills for Seafarers, proves the importance of these personal abilities to perform their day to day activities. 122 maritime experts throughout Europe evaluated the majority of these skills as "Highly Important" for the workplace, with an average above 4 out 5 in all cases. For this reason, identifying and assessing soft skills, will provide seafarers an added value to their skills portfolios and support their career opportunities.

The next steps of the Skills Beyond the Seas Project will involve the participation of 50 onshore experts who will evaluate the offshore skills and select those in accordance with their professions. This together with the expertise of maritime project partners and the input of EU and IMO resource will continue adding value to projects results. Furthermore, the 300 assessment tests of the Informal Skills Scanner will be evaluated by experienced psychologists and Human Resource Managers to ensure an effective testing of the 10 selected soft skills.

7. APPENDIX:

Survey description

The challenge
There is still an urgent need for young people to enter into the professions of seafarers and although overall numbers are significant, their future employment and career perspectives are very uncertain and unclear. This uncertainty especially affects young seamen and maritime trainees and makes it a difficult decision for youth to enter this sector. It thereby hinders them to enter into highly valuable VET training which offers them learning outcomes that can be used far beyond sea-going professions.
The objective
For active seafarers and students in Maritime Education and Training (MET) across the EU, who all need a perspective for their future, the project Skills Beyond the Seas offers the much-needed information and guidance for mid- to long-term career planning. The tools that will be developed by the project will provide seafarers with a detailed list of their formal and

informal skills, highlight their transferable skills sets and suggest career pathways to other occupations where these skills are needed.	
Your contribution	
The aim of this questionnaire is to verify through your professional experience, which transversal skills are required and commonly present in different seafarer ranks so that we can later assess them for the correct skill sets. For that reason, in the following questionnaire we will ask you to specify the organisation you are working for and to rate by priority some transversal skills for different ranks. Informal transversal skills are those skills that have been learned often unintentionally and in a daily informal setting (family, leisure, work) and are transferable to a wide range of occupations and sectors. If you are unsure about the meaning of any of the listed skills, then please check the definitions at the end of the survey.	
1. Could you specify in which country are you working?	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy ,Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom, Other (please specify).
2. What type of company/ institution/ organisation are you currently working for? (If you are from a human resources consultancy company, select the sector for which you are working the most)	Maritime University, Maritime Highschool/ VET, Shipping company, Seafarer Recruitment agency, Seafarer Union, Research institution, Maritime association, Nautical qualification body, EU Maritime agency, International Maritime agency
3. Any other company/ institution/ organisation	Your answer
4. By number of employees, what's the size of company/ institution/ organisation you are currently working for?	Micro (less than 10 employees), Small (10-50 employees), Medium-sized (50-250 employees), Medium-Large (250-1000 employees), Large (more than 1000 employees)
5. Which transversal skills do think are most required and commonly present in Officers of the Watch? Please rate these by priority. Not a priority Low priority Medium priority High priority Essential	Adaptability to change Analytical skills Apply quality standards/ Follow procedures Cope with pressure/ Work under Pressure Interpersonal skills Leadership skills Problem Solving skills Teamworking skills

	<p>Time management (being organised)</p> <p>Willingness to learn</p>
<p>6. Any other informal transversal skills? (please suggest)</p>	<p>Your answer</p>
<p>7. Which transversal skills do think are most required and commonly present in Masters and Chief Engineers? Please rate these by priority.</p> <p>Not a priority Low priority Medium priority High priority Essential</p>	<p>Adaptability to change</p> <p>Analytical skills</p> <p>Apply quality standards/ Follow procedures</p> <p>Cope with pressure/ Work under Pressure</p> <p>Interpersonal skills</p> <p>Leadership skills</p> <p>Problem Solving skills</p> <p>Teamworking skills</p> <p>Time management (being organised)</p> <p>Willingness to learn</p>
<p>8. Any other informal transversal skills? (please suggest)</p>	<p>Your Answer</p>
<p>TRANSVERSAL SKILLS DEFINITIONS</p>	
<p>Adaptability to change</p>	<p>Adaptability as a skill refers to the ability of a person to change his actions, course or approach to doing things in order to suit a new situation. Ability to prioritize, effectively adapt to the changing professional environment but also to the emotional states generated through the daily interactions with professionals possessing different levels of authority. Supporting change implemented via new approaches, initiatives, methods, and technologies. Being able to manage priorities and changes, and to adapt his/her own plans, behaviours, strategies or approaches to the situational changes.</p>
<p>Work under Pressure</p>	<p>- The ability to work under pressure relates to how the employees respond when put under pressure. In a work context, pressure can be defined as the stress and urgency of matters requiring attention, the burden of physical or mental distress and the constraint of circumstances. Employees who are able to work under pressure will be able to deal with constraints which are often outside of their</p>

	control (resources, time, knowledge or unforeseen changes or problems).
Team working skills -	The ability to interact and co-operate with a group of people to achieve a goal. It involves hands-on working together, as well as processes of organisational planning, decision-making and development. Effective team working requires team members to co-operate, listen to each other, communicate clearly, share knowledge and information, show commitment to the team and task and be supportive of other members.
Leadership skills	The ability to influence and motivate others to achieve a common purpose or goal. An effective leader is a person who does the following: creates an inspiring vision of the future, motivates and inspires people to engage with that vision, manages delivery of the vision and coaches and builds a team, so that it is more effective at achieving the vision.
Interpersonal skills	The ability to relate to and get along with others, build trust, empathise and see things from different perspectives.
Willingness to learn	Employees who are willing to learn have desire and passion for improving their professional skills through formal, non-formal and informal situations. This skill includes awareness of one's learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully.
Analytical skills	The ability to examine information or a situation in detail in order to identify key or important elements, their strengths and weaknesses and use these to compile a persuasive argument, make recommendations or solve a problem.
Problem solving skill	Problem solving is an individual's capacity to understand and resolve problem situations where a method of solution is not immediately obvious. It includes the willingness to engage with such situations to break them down into their key components; consider various ways of approaching and resolving them and to decide which is the most appropriate.

Time Management	Time management is the process of organizing and planning how much time you spend on specific activities.
Apply quality standards/ Follow procedures	Applying quality standards or following procedures refers to the skill of being able to stick with a fixed standard or procedure effectively, either individually or when working in a group. The person who has this skill can follow a procedure which has been prepared either by himself or externally.

References:

[1] European Union. Commission Staff Working Document, Framework for Action, accompanying the Document: Communication from the Commission to the European Parliament and the Council, the committee of the regions and the European Economic and Social Committee, Initiative for the sustainable development of the blue economy in the western Mediterranean. In: *Official Journal of the European Union* [online]. Brussel, 19 April 2017, SWD(2017) 130 final, 46 p. [Date of access: 24 July 20120] Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017SC0130>

[2] European Commission, Directorate General Maritime Affairs and Fisheries ; Executive Agency for Small and Medium-sized Enterprises. *Study supporting a possible network of maritime training academies and institutes in the Mediterranean Sea basin: final report* [online]. May 2016, 203 p. ISBN: 978-92-9202-205-1. [Date of access: 24 July 20120] Available at: https://webgate.ec.europa.eu/maritimeforum/system/files/Maritime%20Academies%20-%20Final%20Report%20and%20annexes_template%20EC_0.PDF

[3] European Commission, Directorate General for mobility and transport; Directorate C, Maritime transport. *Study on EU seafarers employment: final report* [online]. 20 May 2011, 108 p., MOVE/C1/2010/148/SI2.588190 [Date of access: 24 July 20120]. Available at: <https://ec.europa.eu/transport/sites/transport/files/modes/maritime/studies/doc/2011-05-20-seafarers-employment.pdf>

[4] Advanced Autonomous Waterborne Applications Initiative (AAWA). *Remote and Autonomous Ships* [online] : *the next steps*. London : Rolls Royce, 2016, Position Paper. [Date of access: 24 July 20120]. Available at: <https://www.rolls-royce.com/~media/Files/R/Rolls-Royce/documents/customers/marine/ship-intel/aawa-whitepaper-210616.pdf>

[5] European Commission; European Training Foundation. *European inventory on validation of non-formal and informal learning* [online] : *2018 update*. Available at: [Date of access: 24 July 20120]. Available at: <https://www.cedefop.europa.eu/en/events-and-projects/projects/validation-non-formal-and-informal-learning/european-inventory>

[6] International Maritime Organization. *Master and chief mate*. London : IMO, 2014. Model course ; 7.01. ISBN: 9789280115819.

[7] International Maritime Organization. Chief engineer officer and second engineer officer. London : IMO, 2014. Model course 7.02. ISBN: 9789280115826.

[8] International Maritime Organization. *Officer in charge of a navigational watch*. London : IMO, 2014. Model course 7.03 ISBN: 9789280115888.

[9] International Maritime Organization. *Officer in charge of an engineering watch*. London : IMO, 2014. Model course 7.04. ISBN: 9789280115833.