

The Perspectives of Maritime Professionals on Mentoring Programs: A Pilot Study

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In accordance with STCW standards governing the training, certification and watchkeeping of seafarers, mentoring remains a crucial aspect of ensuring the effective and seamless integration of seafarers on board ships. However, there have been few empirical academic studies on seafarers' perceptions of the value and practice of mentoring programs. Therefore, this study aimed to analyze seafarers' opinions on mentoring practices and their impact on applied training programs at sea. The study included a sample of 173 seafarers who were heterogeneously selected in terms of nationality, work position and professional experience. Subjects submitted their responses to the KAP (Knowledge, Attitudes, and Practices) online survey, which was redesigned to capture various aspects of shipboard mentoring programs and practices. Although the results of the study are limited by the non-probabilistic nature of the sampling, the main contribution of this study lies in the link between theoretical knowledge and practical experience. According to the study results, mentoring plays a central role in shaping successful maritime careers and promoting soft skills such as communication, teamwork and crisis management. In summary, mentoring is a cornerstone for the career development of seafarers and ensures a competent and harmonious workforce in the maritime industry.

KEY WORDS

- ~ Maritime transports
- ~ Mentorship
- ~ Maritime training
- ~ Maritime human resources
- ~ IMO/STCW convention

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1. INTRODUCTION

1.1. Theoretical approaches to maritime mentoring. Review of the literature

In the general framework, mentorship is a relationship between two people in which the individual with more experience, knowledge, and connections (the mentor) passes on his wisdom to a less experienced individual (the mentee), according to the Cambridge dictionary. This guidance can be particularly beneficial in any company where mentors are actively involved in giving advice, providing support, and helping the mentor to adjust and navigate the professional challenges (Maxwell, 2008; Oliviero, 2014; Owen, 2011). In essence, mentorship is about the transfer of knowledge, experience, and insights from one person to another, fostering growth and learning within an organizational culture. From this perspective, appealing to these theoretical basics, mentorship may be defined as 'the process of exchanging experiential knowledge' (Cojocaru et al, 2023; Popa et al, 2023).

In the literature, mentoring has been defined more often as an alliance of people that creates a space for dialogue that results in reflection, action, and learning for both with focus application in the professional field (Farr, 2021, Clutterbuck, 2017) or as a process by which an expert person facilitates learning in the mentor through arrangements of specific learning experiences (Owen, 2011; Palos, 2008; Garvey, 2021). Other authors have suggested that mentoring is less a relationship for apprentice monitoring, but is seen within a team, as a context for engaging in reflective dialogue oriented toward building confidence, empowerment, and a professional prerequisite for success (Popa et al, 2023; Starr, 2022). Mentors provide mentors with career counselling and group insertion support (Avram et al, 2019; Bell, 2019). In this way of thinking, the career perspective includes providing mentees with challenging work support, oriented toward coaching, with high professional exposure, adjustment support, and protection [Chopra, 2019; Cojocaru et al, 2023; Gross, 2023].

In particular, seafaring mentorship is a form of mentorship that takes place onboard ships, where a mentor, who is someone with significant experience in the maritime industry, is facilitating, formally or informally, the transfer of experiential knowledge to the mentors, providing guidance and support in navigating the unique challenges of maritime professions (Kitada, 2015). Traditional direct mentoring, in addition to other domains, can be challenging in the maritime industry due to roughness of the sea, to the professional particularities in daily routine and to the isolation status of being at sea, always in small crews, with a blurred societal characteristic presence, embedded in internationality and intercultural characteristics, within the dynamic profile of a heterogenous group profile (Panderaja et al, 2024). Then, when mentoring does occur in small crews and in narrow spaces, even during formal programs, it often happens between professionals and young officers with a short run premises, where rapid crew structural changes are regular, hampering the interpersonal approaches and social settlements, enforcing as adapting path in the majority of the time spent onboard, of formal role playing, routine anchoring and formal communication (Zheliaskov et al, 2024).

Therefore, mentorship is affected by the particularities of the seafaring job, being moulded by the team role-playing model, closer to coaching techniques, providing an effective smoother onboard adjustment, recognized as a facilitating way of exchanging experiential knowledge (Popa et al, 2023), as depicted and reflected in the results of the Sea Mentors project (www.seamentors.eu). Regarding formal mentoring programs, there is a strong need for corporate involvement to create a proper interaction environment between the mentor and the mentee. Alternatively, onboard formal programs are different from informal mentoring where the responsibility goes to the mentor and mentee, ending more as a relationship, with less official organizational support, appealing to more social skills and abilities or psychological compatibility and emotional empathy. In both perspectives, for formal and informal mentorship programs, maritime companies should play a more important role in facilitating mentoring relationships between young cadets and seafaring professionals, although in a short term, providing clear guidelines, policies, and assistance on board to begin, maintain, and end mentor-mentee relationships (IMO, 2019; Kitada, 2015). Then, the structured onboard mentorship programs

could be recognized as a corporate value, contributing to the development of leadership capacity, producing higher awareness of the complexity of the seafaring profession, in its risks, satisfaction, limits, and extensions. Successful seafaring mentors are recognized for their knowledge and expertise, but also for their ability to exchange accumulated professional and life experiences, as a role model playing with formal or informal mentors, cadets, or young officers onboard ships (Starr, 2023; Sea Mentors Project Report, 2023).

To conclude the literature review in the maritime area, an overview of the legal framework for mentoring programs onboard the ships is required. Then, STCW A-I/14 'Responsibilities of companies' states that newly employed cadets and officers should 'receive essential information in a language that the seafarer understands', being widely recognized that it is imperative to remain a global profession, in seafaring, to act within the framework of a common international maritime culture (Mentoring Seafarers Project Report, 2019). The requirement of 'adequate knowledge' of the English language is only a prerequisite but very relevant for the effectiveness and clarity of team work during navigational / engine room watch keeping, as stipulated in A-II / 1, A-III / 1, A-IV / 2, and A-II/4 of the STCW Code (IMO, 2019; Mentoring Seafarers Project Report, 2019). In any case, admitting that more than 85% of seafaring crew are intercultural nationalities, issues with language and effective communication can occur, which underline a prior need for more support and guidance in this domain (Mentoring Seafarers Project Report, 2019). In this regard, the Human Element Leadership Management Operational Level (HELM 'O') and the Human Element Leadership Management Level (HELM 'M') are mandatory training requirements for seafarers and can be run in conjunction with Bridge Resource Management (BRM), Engine Room Resource Management (ERM), and Crew Resource Management (CRM) courses. In this legal context, employers are reported to be encouraging their employees to complete the course regardless of legislation, although there is no mandatory requirement for staff leading teams to achieve new skills or refresh old ones in the matter of crew management. The exemptions have been mentioned, and there appears to be no globally consistent process to assess industry standards in relation to leadership (IMO, 2019, Mentoring Seafarers Project Report, 2019). In conclusion, even in the maritime legal framework, the mentoring is seen as a mechanism to offer support for by helping them to navigate within a dynamic industry, with issues and certain deficiencies in training, health and well-being, communication, leadership, and management, that can be overcome with a proper guidance in mentorship programs.

1.2. Research aim

This study was motivated by the need to identify the problems on board and to reveal the professional challenges encountered in the mentoring programs and during the relationship management on board the ships. Following the conclusions of the literature review and in particular the conclusion drawn in the "Mentoring Seafarers Project" conducted by Solent University and published in 2019 (Mentoring Seafarers Project Report, 2019), maritime mentoring should be considered a very important asset for the corporate culture of shipping, at least for several reasons that also provide a good motivation for the present study.

- maritime practices and traditions are essential for building a maritime culture and must be conveyed from one generation of seafarers to the next (Panderaja et al, 2024; Nicolae et al, 2023);
- the maritime industry needs to attract young, intelligent and skilled seafarers (Kitada, 2015; Autsadee & Phanphichit, 2024);
- mentoring can increase awareness and knowledge of the industry through the availability of career mentors and role models (Mentoring Seafarers Project Report, 2019);
- experiential knowledge can improve the integration of young professionals/cadets on board ships and contribute to a quick adaptation to interactions with the crew (Kudryavtseva et al, 2024);

- the mentoring process can improve the team spirit and well-being of crew members, which has a positive impact on job performance and retention (Nicolae, 2023; Cojocaru et al, 2023).

Therefore, the aim of this study was to determine the actual perceptions of maritime professionals regarding the role and impact of mentorship programs on board ships.

2. METHOD

This study is based on the implementation of a KAP survey aimed at collecting knowledge, attitudes and practices related to mentoring programs on board ships from maritime professionals and practitioners in order to identify and analyze the challenges of seafaring in mentoring programs. The study was developed by the authors as part of the Sea Mentors project "Seafarers' Experiential Knowledge Based Mentors" (www.seamentors.eu), which has been implemented within the framework of the strategic partnerships Erasmus + KA220 Vocational Education and Training, contract no. 2021-1-RO01-KA220-VET-000029622, in coordination with the Romanian Naval Academy, with the participation of three universities (Polish Naval Academy, Poland, 'Nikola Vaptsarov' Naval Academy, Bulgaria and Lithuanian Maritime Academy, Lithuania) and two professional organizations and companies (Maritime Innovators, Turkey and Spinaker Co., Slovenia).

2.1. Sample

In terms of the target group, the survey selected professionals from the maritime industry working in various positions on board ships, with a reasonable level of experience and a keen interest and ability to mentor. A prerequisite for participation in the survey was a minimum of eight years' experience on board ships, with participants having worked as an officer or in a managerial position in a shipping company for at least 24 months. In order to cover both professional fields at sea, the officers' responses to the questions were collected from the Navy and merchant fleet sectors.

During the application period, 200 questionnaires were distributed and 173 valid responses were collected with a response rate of 86%. The data in Table 1 shows the profile of respondents. Of the total 173 respondents, 90.75% were officers and 9.25% were professionals in management positions in shipping companies. Of the 157 responding officers, 21% were Navy officers and 79% were merchant fleet officers.

Variables	Categories	Frequency
Work position	Master	31
	Chief Officer	52
	Chief Engineer	10
	1st Engineer	4
	2nd Officer	18
	2nd Engineer	7
	Electro -Technical	
	Officer (ETO)	2
	Manager	16
	Navy Officer	33
Education	College	42
	University Graduate	62
	Post-graduate (Master)	50
	Post-graduate (PhD)	19
<i>Total respondents</i>		<i>173</i>

Table 1. Professional profile of respondents

In Table 2 below, the nationality pools for the survey participants are synthesized, revealing the origin of the respondents. With a representation of 16 different nationalities, most of the applicants were Turkish, Polish, and Romanian nationalities.

Nationality	Categories	Frequency
Romania	Master	12
	Chief Officer	2
	Chief Engineer	6
	1st Engineer	2
	2nd Officer	2
	2nd Engineer	2
	ETO	1
	Manager	3
	Navy Officer	2
Poland	Master	5
	Chief Officer	5
	1st Engineer	1
	2nd Officer	7
	2nd Engineer	3
	Manager	1
	Navy Officer	26
Bulgaria	Master	3
	Chief Officer	2
	Chief Engineer	2
	Navy Officer	5
Türkiye	Master	9
	Chief Officer	38
	Chief Engineer	1
	1st Engineer	1
	2nd Officer	5
	2nd Engineer	1
	Manager	4
Lithuania	Master	1
	Chief Officer	1
	Manager	5
Latvia	ETO	1
	Manager	1
Netherland	Master	1
	Manager	1
Norway	2nd Officer	1
Greece	Manager	1
USA	2nd Officer	1
India	2nd Officer	1
Brasil	Chief Officer	1
Germany	2nd Officer	1
Ireland	Chief Officer	1
Kuwait	Chief Officer	1
Russia	Chief Officer	1
	Chief Engineer	1

Table 2. The origin of the respondents

In detail, out of the 173 respondents, 34% were Turkish, 28% Polish, 18% Romanians, 7% Bulgarian, and 4% Lithuanian, the pool of respondents being focused on the origin countries of the partners involved in the implementation of the Sea Mentors project.

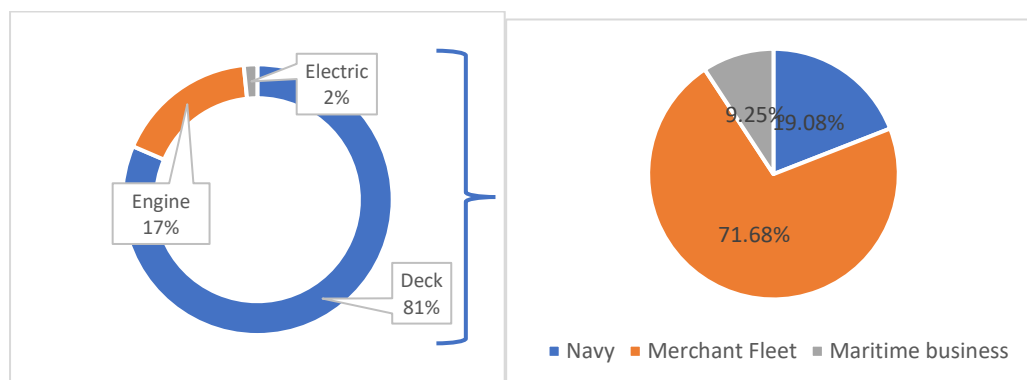


Figure 1. The respondents' distribution regarding the professional sector

(Source: Sea Mentors Project Report, 2023; collected, designed, and interpreted by the authors)

To reflect the professional sectors, the respondents were grouped in Navy, Merchant Fleet, and Marine Business Representatives, as described in Figure 1. The data from Figure 1, shows that 71.68% of the respondents represent the merchant fleet, 19.08% were from the Navy and 9.25% were respondents from the maritime business. The distribution of officers in departments/specialty is dominated by the deck professionals (81%), but the engine (17%) and electric (2%) departments are represented, too.

2.2. Instruments

The KAP survey aimed to collect both quantitative and qualitative information from maritime professional from various maritime companies, assigned on different roles and positions on board the ships. It focuses on three main dimensions: knowledge (what maritime professionals know about a particular topic of mentoring), attitudes (the maritime professionals' beliefs, opinions, and perceptions regarding mentoring on board the ships) and practices (identifying the actual behaviours and actions practiced in mentoring programs on board the ships).

In this methodological frame, the KAP survey consists of 16 quantitative items, its structure being cantered on 4 groups of items, as follows:

1. sociodemographic and work characteristics of the respondents (first 4 items; 1-4; data about level of education and experience, work position in the company and specialty, geographical area, and country of origin);
2. mentoring policies in the company – study on mentorship policies implemented in the operational framework in the employers (4 items, 5-8), designated to reveal the status of mentorship programs implementation and its evolutions, onboard the ships within the studied shipping companies;
3. identification of mentorship experiences of the interviewed professionals (6 items, 9-14), dedicated to the analysis of seafaring practices in the implementation of mentorship programs, formally or informally onboard the ships (i.e. factors affecting the stimulation of the mentorship, the relations with the mentees, the obstacles in the communication, the future of mentoring, the impact of mentoring against the cadet's insertion);
4. mentorship programs impact and the way to go of the sea mentoring services (2 items, 15-16) group of questions has designed to reveal, on perceptive level, the mentorship impact in professional carrier and the

way to go. In particular, the 16th item is an open qualitative question, for collecting the suggestions or comments about the implementation and effectiveness of the mentorship program.

2.3. Procedure

The survey has been distributed through the Sea Mentors project partners in various social media applications including the website (<https://www.seamentors.eu/questionnaires.html>, <https://marplat.eu/mod/url/view.php?id=559> and <https://forms.gle/piewSmMhk9kiYsy59>), LinkedIn, Facebook, ADL platform (<https://marplat.eu/course/view.php?id=50>) and direct email notices. The survey had been submitted by applicants for a period of 6 months, between March 2023 and October 2023.

3. RESULTS AND DISCUSSION

3.1. Mentoring policies and mentoring practices in maritime companies

Item 5: 'Does your company provide mentoring program for cadets'?

The question has been directed to reflect the shipping companies sensitivity in relation with the mentoring programs implementation onboard their ships (Figure 2). About 59% (103 persons) of the respondents confirmed that their employers are providing a formal mentoring program, as part of the corporate strategy for human resources, and 41% admitted there is no such program yet implemented (70 persons), split on category of personnel (i.e. merchant fleet, Navy and maritime businesses in Figure 2). The corporate representatives confirmed during the oral interview that a mentoring program in the company is enabling crew performance and the adjustment of young officers on the crew, helping seafarers overcome all the barriers and difficulties for social and professional accommodation onboard (Sea Mentors Project Report, 2023). The mentoring guidance provides an incentive for the onboard professional insertion, and the employees would accommodate faster to their duty routine, but also to the group profile. The distribution of participant responses showed that the mentoring program (formal or/and informal) is used in most cases, in the merchant fleet and generally in the maritime business. Only 20% of Navy respondents are aware of a mentoring program for cadets or young officers. For offshore maritime businesses, all respondents, except one, mentioned that their new employees are involved in the mentoring program. For the merchant fleet, more than 66% of respondents are aware of the implementation of a formal mentorship program within navigation companies, a corporate policy that is in accordance with STCW Chapter II, Section B-II / 1, where it states that personnel in this training stage should be '*closely supervised and monitored by qualified officers*' (IMO, 2019).

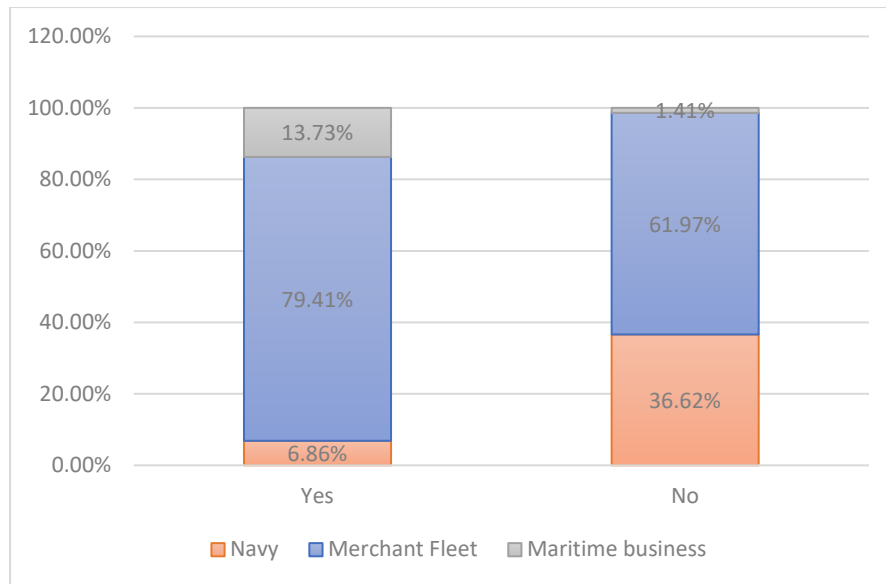


Figure 2. The distribution of mentoring program implementation in different sectors
(Source: Sea Mentors Project Report, 2023; collected, designed, and interpreted by the authors)

Item 6: 'What do you consider the most relevant mentoring motivation for cadets during the mentorship program in your company'?

This question aims to collect information regarding the objectives of the mentorship onboard the ships, directly from the dedicated mentors, to reflect the subjective opinions of experienced officers in relation with the corporate policy and the cadets' perception. Officers and managers were asked what KAPs (Knowledge, Attitudes, and Practices) are preferable to be provided to the cadets under mentorship program, following their experience or their opinion and suggestions. They had to choose from eight available answer options, suggested by the literature review [Bell, 2019; Chopra, 2019; Clutterbuck, 2017; Garvey, 2021; Gross, 2023). As a result, the top 3 of their choices is presented in Figure no. 3.

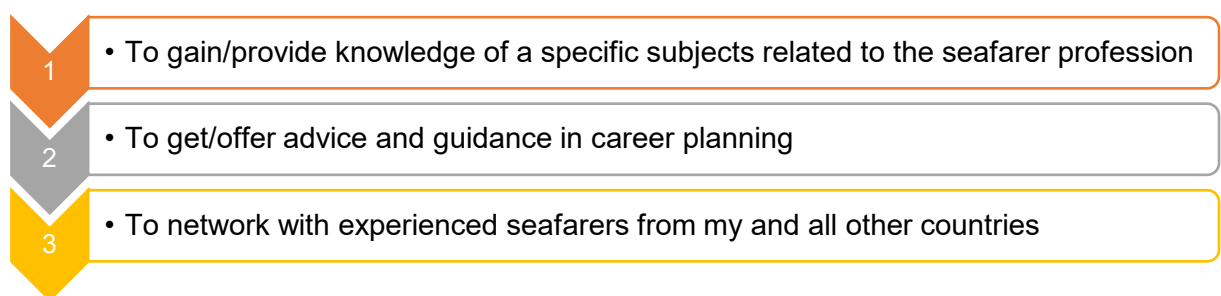


Figure 3. The 3 KAP Answers considered worthy to be provided during the mentoring
(Source: Sea Mentors Project Report, 2023; collected, designed, and interpreted by the authors)

On the first place of their responses with a share of 31.79% of the expressed options, the most relevant questions to be addressed during the mentoring programs were to 'gain/provide knowledge of specific topics related to the maritime profession', followed by 'Get / offer advice and guidance in career planning' with 17.34%, on the third place, 16.76% of the professional selecting to 'network with experienced maritime professionals'. A detailed distribution of the options of the respondents on professional fields is depicted in Figure no. 4.

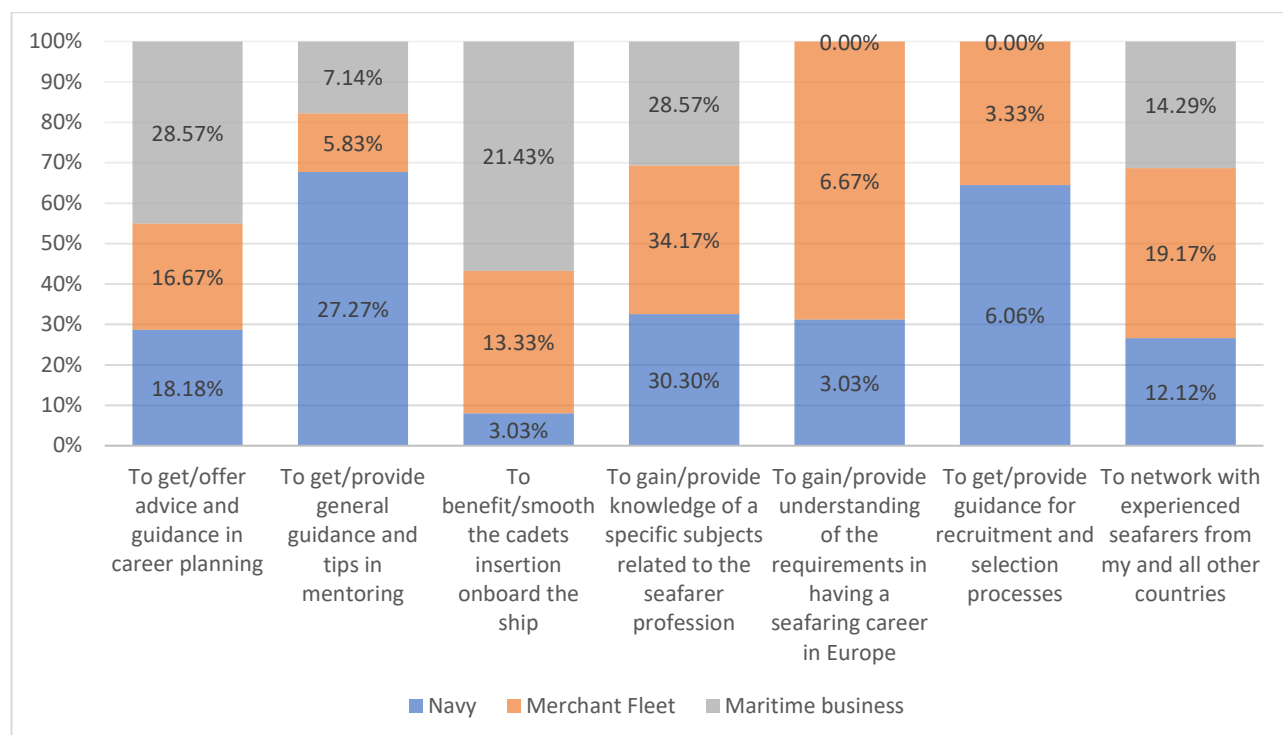


Figure 4. Distribution of mentoring motivation responses, by categories

(Source: Sea Mentors Project Report, 2023; collected, designed, and interpreted by the authors)

Figure 4 shows that providing knowledge of specific topics related to the maritime profession and offering advice and guidance during career planning are the most important aspects that can be delivered by a mentoring program from a maritime business point of view, to enable the mentors and mentees motivation. Motivation to carry out the career in the seafaring, provides a fair understanding of the requirements in developing a seafaring career in Europe or providing guidance for recruitment and selection processes are less important in accomplishing a mentoring program onshore. Distinctively, the respondents from Navy and merchant fleet choose motivation to carry out the career in the company to be the last choice in a mentoring program on board ships.

Item 7: 'What topics are likely to be approached by the company or in particular by you as a mentor during a potential mentorship program in which you would be part of?'

Other questions addressed to the survey participants were about the preferred topics that would be likely to be approached by the company or by themselves as mentors during a potential mentorship program implementation onboard the ships. The question is to disclose the preferable focus of mentors on the objectives of mentorship programs, the options offered by the literature review as the most probable vectors of preferences (Palos, 2008; Gross, 2023). The top 3 of the received responses can be found in Figure no. 5.

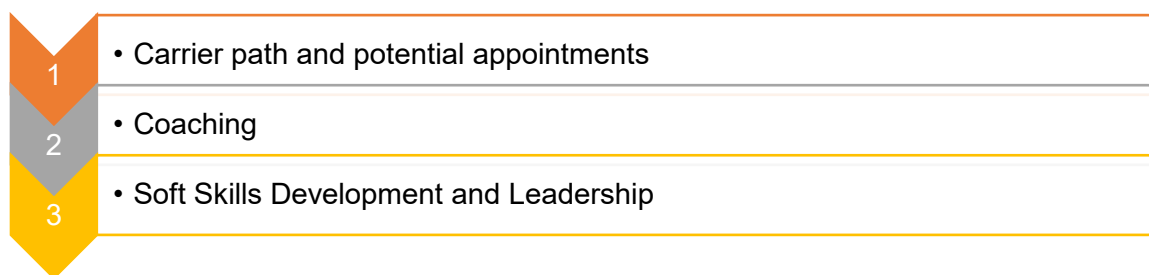


Figure 5. Top 3 topics likely to be approached in a mentoring program

(Source: Sea Mentors Project Report, 2023; collected, designed, and interpreted by the authors)

From all responses, analysis has resulted that the 'carrier path' and the potential appointments are the first choices in the topics that would be approached in a mentoring program. Officers and managers considered topics such as 'soft skills development and leadership' or 'coaching' important to be approached in a mentoring program, too. The survey results showed that mentoring in the areas of training and support, personal growth and development, and career development was important, as shown in Table 3.

Topics	Frequency		
	Navy Officers	Maritime Officers	Maritime Business
Carrier path and potential appointments guidance	3	32	3
Career Counselling	2	6	1
Coaching	6	29	3
Soft Skills Development and Leadership	9	23	4
Cadetship orientation	2	20	5
Advancing the professional network opportunities	4	8	-
Cultural Aspects	-	1	-
Interview in job market	1	2	-
Publications and presentations	6	1	-

Table 3. Topics likely to be approached in a mentoring program, by category

Respondents from Navy professionals mentioned that topics such as soft skills development and leadership, publications, presentations, or coaching are the most suitable for a mentoring program. For merchant fleet, the seafarers considered that a mentorship program should include topics like carrier path and potential appointments guidance, coaching, or soft skills development and leadership, while cultural aspects or publications and presentations are topics of low interest. The professionals from maritime business appointed on managerial positions, have considered that cadetship orientation is the most valuable topic in a mentoring program in opposition with Navy's opinion.

Item 8: ‘From which positions does your company use to select professionals for mentorship positions’?

This item is inserted to reflect on the most reliable level of positions, recommended to be appointed during the mentorship programs, from both mentor and mentee perspectives. The range of rank positions used by the maritime companies for conducting mentoring program is shown in Figure no. 6.

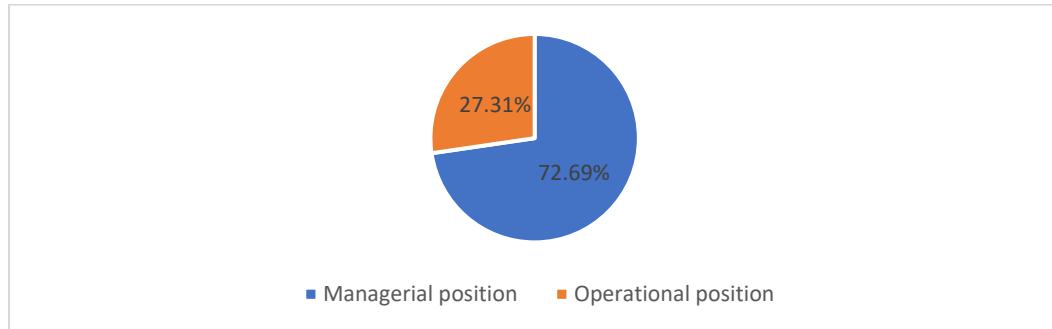


Figure 6. Mentors' positions in the shipping companies

(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

Unlike past practices, more than 72% of mentors came from a managerial position, which is quite normal considering the experience and the knowledge acquired by a person in that position. Although, it is interesting to observe the higher percentage of the mentors selected from operational position, which is up to 27%, or even more for some companies. This significant value underlines the idea that in some situations the mentees need someone younger and closer to them, for a better understanding of the theoretical concepts applied in practice, the assertion fully supported by the collected interviews [Popa et al, 2023; Sea Mentors Project Report, 2023).

As can be observed in Table 4, regarding the desired position envisaged by the respondents, the masters and chief officers/engineers are the most required positions for mentoring and learning on board ship. It is very important for mentees to take information and have an easy access to different experiences and study cases drawn by professionals with practical experience.

Topics	Frequency		
	Navy Officers	Maritime Officers	Maritime Business
Master	3	40	6
Chief Officer	11	37	5
Chief Engineer	6	12	1
2nd Officer	2	5	-
2nd Engineer	-	4	-
3rd Engineer	1	1	-
3rd Officer	2	3	2
Maritime business professionals	8	15	-

Table 4. Range of rank positions of mentors in a mentoring program

3.2. Mentorship experiences and seafaring practices regarding the mentorship programs implementation

Item 9: ‘Have you experienced any difficulties or challenges as mentors in relation to cadets during their stages at sea during the mentorship program’?

Becoming a mentor should always be done voluntarily to get an effective and sustainable sense. Companies should identify those professionals in their organization who would be willing to be mentors and who have the right aptitude for this work (Owen, 2011; Clutterbuck, 2017). This element plays the role of reflecting the mentor’s willingness as a prerequisite, but also the role of validating the question no. 12, as catalyst for collecting mentors’ opinions about the difficulties they had faced during cadetship programs, the authors sought to build a database with the actual hindering factors of mentorship programs. In fact, every work relation may face difficulties or challenges; therefore, it seems normal to record often tensions in the mentor - mentees relation as well, as depicted in the graph from Figure 7.

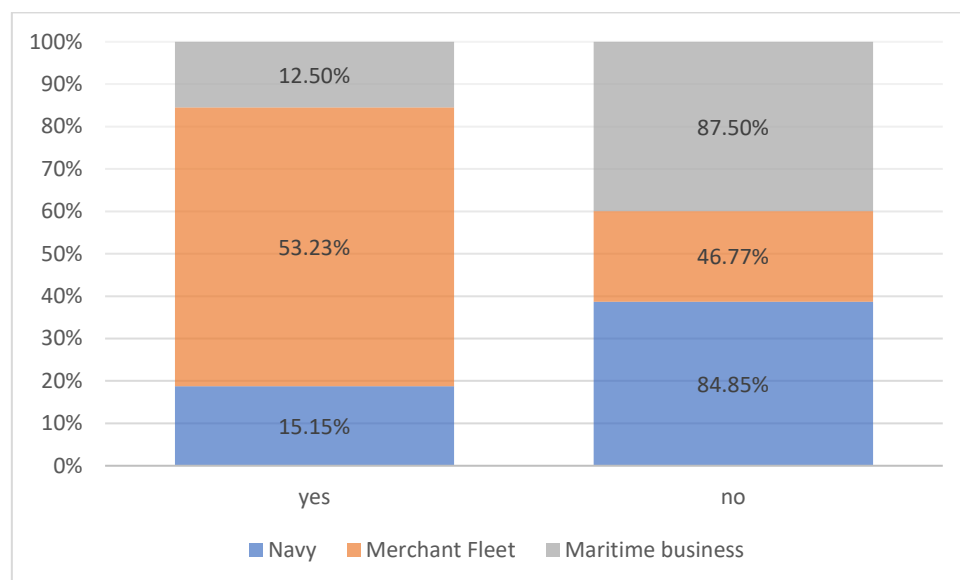


Figure 7. Have you experienced any difficulty being a mentor in your company?

(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

Approximately 42% of the respondents declared that they had faced challenges in their relationship with embarked cadets or young officers onboard the ships, during the mentorship program. Most of the mentors (53%) who declared that they had encountered problems in dealing with the onboard cadets were from the merchant fleet. Alternatively, the good perspective shows that 58% of the mentors had not encountered any issues with the mentees. This percentage is optimistic taking into consideration the similar range of 59% of responses suggesting that their company has implemented a formal mentoring program onboard the ships.

Item 10: ‘Which factors would effectively stimulate the understanding of mentorship or the implementation of the mentoring program’?

Respondents were asked to list the factors that would effectively stimulate the understanding of the implementation of a mentoring program, as identified in the research of the professional literature (Mentoring Seafarers Project Report, 2019). In Figure 8 the authors have illustrated the top 3 of the expressed choices.

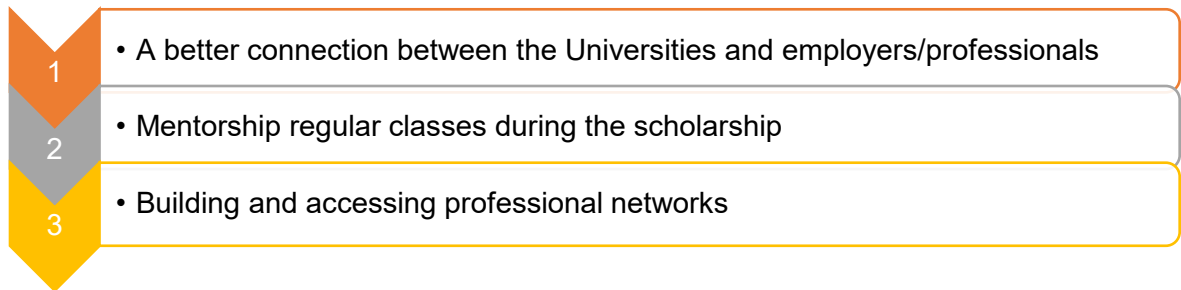


Figure 8. Top 3 factors that are likely to enhance the implementation of the on-board mentoring program
(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

Almost 29% of the companies surveyed had considered, through their interviewed representatives, that a better connection between universities and employers / professionals would be a valuable vector that would provide a superior effect and a stronger process impact during the implementation of the mentoring program. Other factors like regular mentorship activities during the studies or training scholarship or building and accessing professional networks are listed in the top 3 factors likely to enable an effective implementation of the mentoring program.

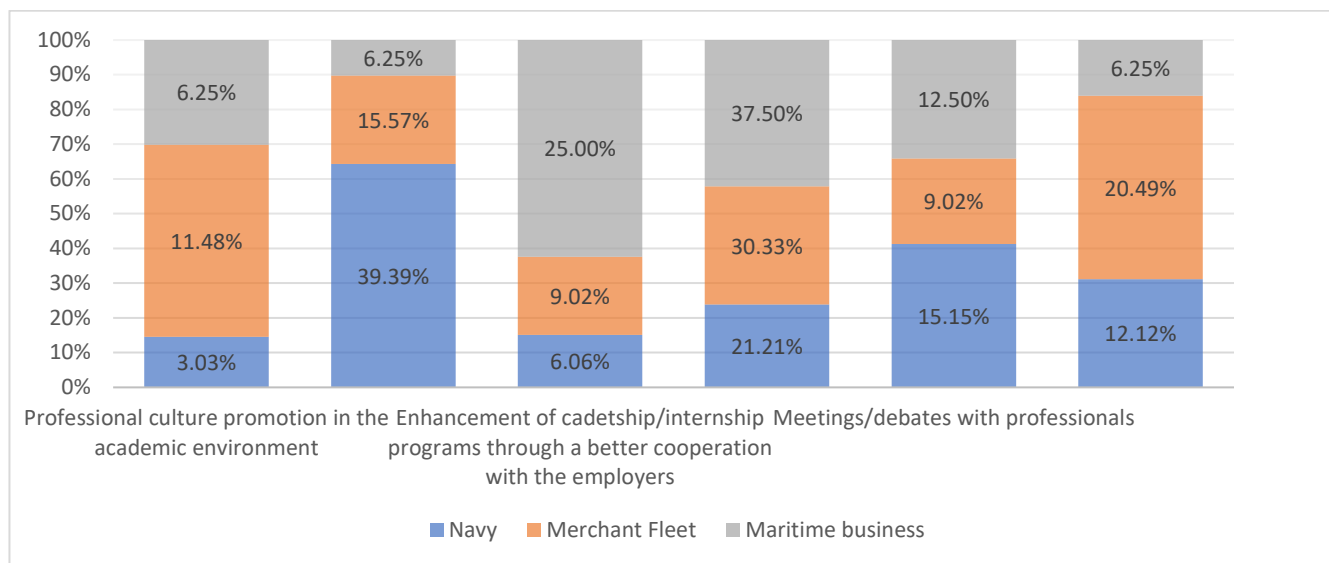


Figure 9. The Distribution of Stimulating Factors for Mentoring Programs Implementation
(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

As a conclusion, more than 65% of the respondent professionals had chosen the first three options, as shown in the Figure 8, which should be interpreted only in the correlation with the distribution of the other 35%, by category like is described in the Figure 9. Then, the respondents to the Navy considered that factors such as 'organized meetings or debates with professionals' or 'the implementation and promotion of professional culture in the academic environment', would have a significant influence, while the respondents to the maritime business identified other factors such as invited professionals to academic activities or enhancement of cadetship/internship programs through better cooperation with employers. The opinion of the marine officers is that factors related to the connection between the company and the academic environment before or during the cadetship period or organizing job fairs would consistently provide support for understanding the mentorship.

Item 11: ‘Which are the most positive outcomes that you would experience valuing a positive relationship between the mentor and the mentees’?

This item aims to identify the results considered by the professional as the most relevant result of the implementation of the mentorship program, valuing a positive relationship between the mentors and the mentees, as extracted from the literature review (Popa et al, 2023; Garvey, 2021). Therefore, professionals were asked to select from a predefined list the most positive outcomes of a mentoring program. The top 3 identified outcomes, which represents more than 72% of all responses, include the ‘improvement of soft skills’ (such as communication, leadership, team work, stress management), ‘continuous professional model guidance’ or ‘effective performance by harmonizing theory with practice’, as presented in Figure 10.

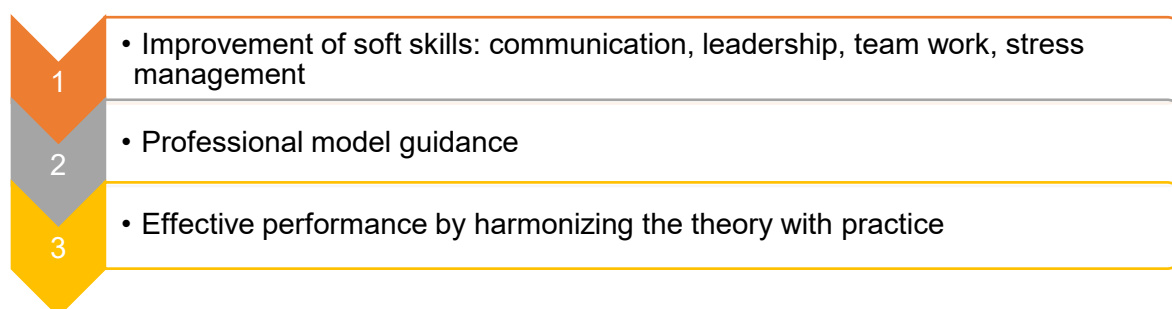


Figure 10. Top 3 most positive outcomes provided by a mentoring program

(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

The distribution of all professional responses is shown in Table 5, where from, it can be observed that the positive results selected by category is not so different, compared to those data presented in Figure 10. Outcome like confidence is in top 3 choices for professionals coming from the merchant fleet and maritime business.

Topics	Frequency		
	Navy	Merchant Fleet	Maritime Business
Professional model guidance	6	27	1
Improvement of soft skills: communication, leadership, team work, stress management, etc.	12	42	7
Effective performance by harmonizing the theory with practice	9	16	5
Enhancement of confidence	2	24	-
More effective insertion in the first job	4	9	2
Physically and mentality adaption to the life at sea	-	1	-
Stimulation of job resilience	-	3	1

Table 5. Positive outcomes of a mentoring program, by category

At the corporate level, it is agreed that the outcomes of the mentoring program, such as ‘efficient insertion in the first job’ or ‘stimulation of job resilience’, could lead to loyalty, satisfaction, and engagement of young employees. In this perspective, it is obvious that professional interest is focused on soft skills that

emphasize the importance of teamwork effectiveness, doubled by the strong interest assigned to professional guidance by personal model, the situation being certified by other previous studies (Mentoring Seafarers Project Report, 2019). What is interesting on this topic for research purposes is the higher importance granted to the educational and training system, the professional considering the connection to the academic system and the MET institutions as being essential for a smoother insertion of young officers onboard the ships, the same opinion being shared by the interviewed officers as well (Sea Mentors Project Report, 2023).

Item 12: 'What factors do you consider that actively hamper mentorship successful implementation during cadetship/internship programs onboard'?

This question is directed directly at the role of mentors during the cadetship program, correlated with STCW requirements, where it is clearly stated that cadets and young officers need guidance during the cadetship stages (IMO, 2019). The respondents had to select the most suitable option considering their experience in the sea, from a list of obstacles identified in practice or from a literature review [Gross, 2023; Oliviero, 2014; Sea Mentors Project Report, 2023). Then, the interviewed officers had been asked to opt out for the most significant factors that could disrupt or affect the mentoring program, their responses being concluded in the top 3 factors, as described in Figure 11 and grouped in Figure 12.

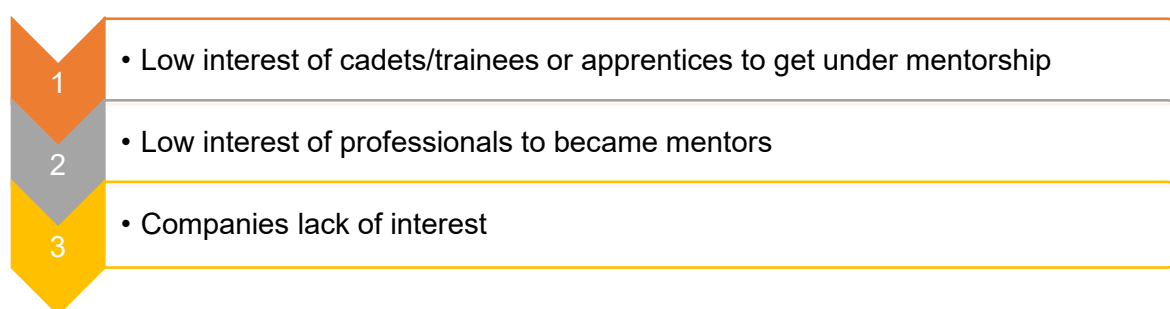


Figure 11. Top 3 factors that could actively hamper the successful implementation of the mentorship
(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

The professionals interviewed have mentioned with priority factors such as the "low interest of cadets/trainees or apprentices to follow the mentor's advice and guidance", or the "low interest of professionals to become mentors and take on the mentor's tasks", or, along the same lines, the lack of interest of the shipping companies in implementing such programs on board the vessels, with all three factors accounting for more than 70% of the collected responses, clearly reflecting the actual lack of participation on a personal or corporate level in the development of mentoring programs on board the vessels. The fact that the last factor regarding the lack of interest of shipping companies is in the top 3, in addition to the lack of compliance with the STCW framework (IMO, 2019), could also have an impact on the maritime business environment, in terms of long-term recruitment or retention of seafaring employees, confirming one of the actual hypotheses of the study (Mentoring Seafarers Project Report, 2019). Considering this opinion survey in combination with direct interview confirmations (Sea Mentors Project Report, 2023), there is much room for improvement in the human resources policies of shipping companies to ensure that shipboard personnel and cadets are adequately and effectively mentored in accordance with STCW requirements (IMO, 2019).

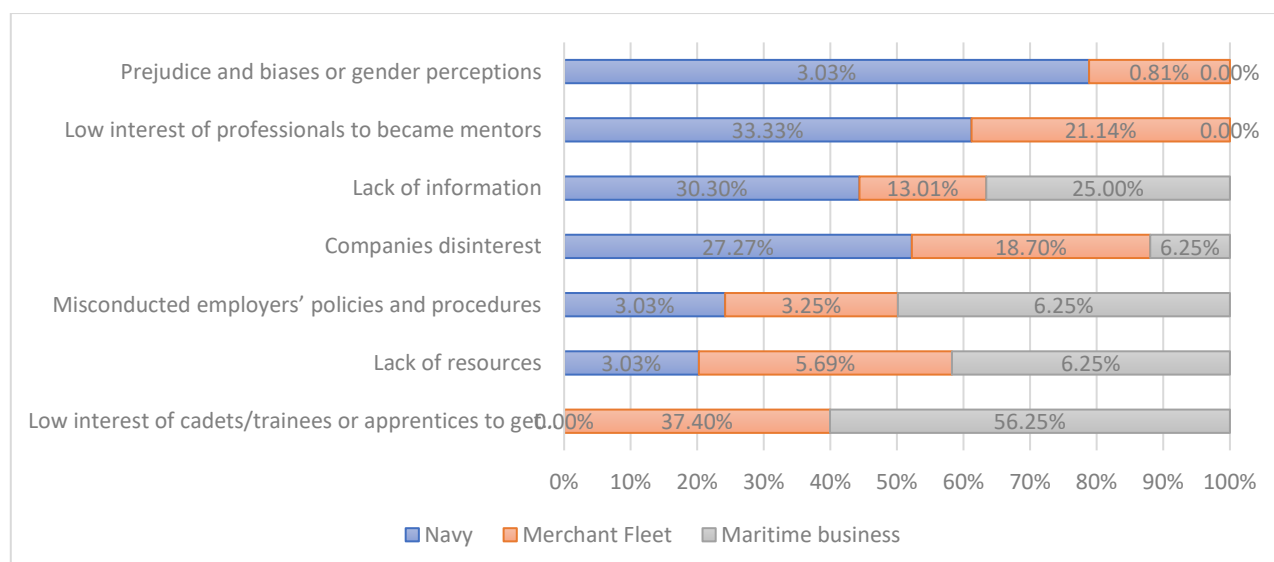


Figure 12. Factors that hamper the successful implementation of the mentorship, grouped by category
(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

An interesting aspect of the item 12 study is the distribution of responses between professionals from Navy and merchant fleet, as presented in Figure 14, where the impact factor most cited for merchant fleet professionals was the 'low interest of cadets/trainees in the knowledge achievements of mentorship' (31.79%), while no similar opinion had been recorded coming from the Navy professionals. Therefore, the interest of young officers appears to be very closely aligned with the mentoring policies, showing a vivid interest in guidance and more inclined to the personal follow-up of the model, particularly for the military leadership onboard ships (Popa et al, 2023).

Another important factor identified by the responses analysis and further confirmed by the face-to-face interviews conducted with maritime officers (Sea Mentors Project Report, 2023), is the low interest of professionals to become mentors during sailing trips, a situation validated both for the Navy and for merchant fleet officers. Apart from the personal skills and individual willingness, most of the interviewed persons considered that the scarcity of time resources during the work performance onboard the ships is the most reasonable reason invoked by the participants.

In addition, 'lack of information about mentorship' has been identified as a significant hiccup factor against mentorship programs, representing a share of 17% of collected responses. This situation suggests that this obstacle should be actively addressed by improving internal and external communication, using the right channels and the right smart and actual technologies, more effectively targeted towards the beneficiaries and to the involved professionals. In this regard, the Sea Mentors project had aimed since the beginning to overcome this issue, offering to all interested cadets and professionals, few effective tools to deal with mentorship and mentors, on a specialized platform, developed by the partners, during the Sea Mentors project implementation (Sea Mentors Project Report, 2023).

Item 13: 'Which professional dimensions could better be served by the mentorship as contribution to the professional development of the next generation'?

This question has been designated to examine professionals' perceptions of the future, to provide a forecasting tool for professionals and shipping companies, and to outline the professional dimensions that mentoring on board ships could better support in the context of new technological realities. Respondents had to choose from a list of defined items identified from the interview conducted or from the literature review (Kitada,

2015; Mentoring Seafarers Project Report, 2019). The results are presented in Figure 13 and form an empirical opinion in support of companies' efforts to adapt their training programs. In the responses collected from professionals, improving technical skills was cited as one of the most important assets, followed by the company's "teamwork culture". A brief review by category shows that 'leadership culture', 'quality culture' or 'appetite for excellence' are among the most important professional dimensions to be achieved by cadets during mentoring programs.

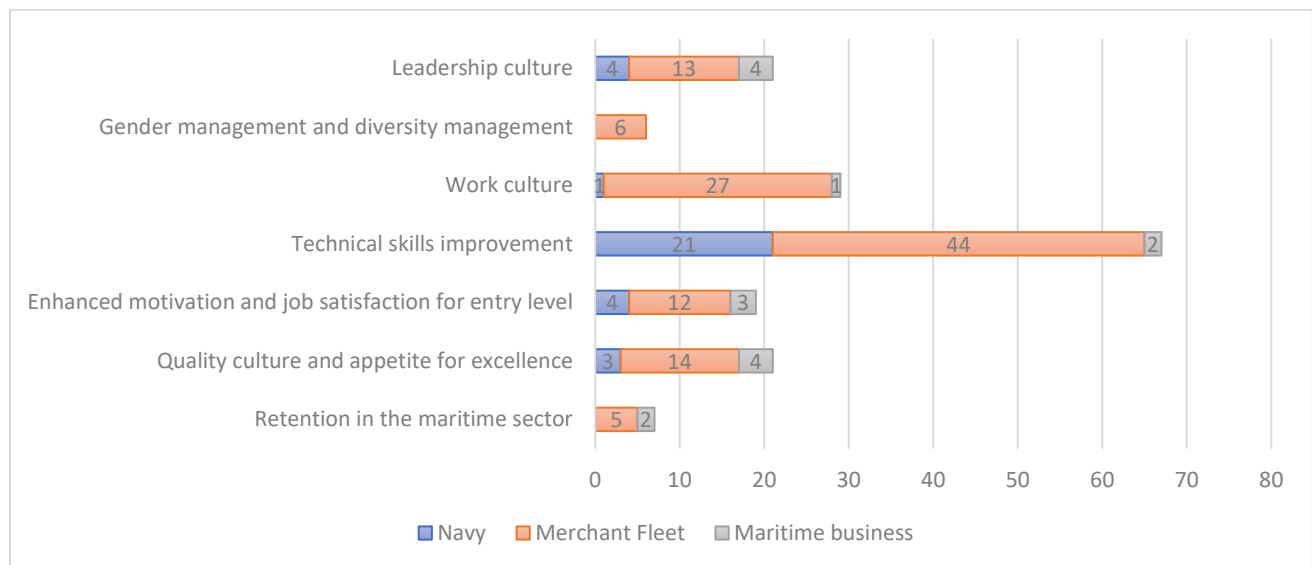


Figure 13. Distribution of the professional dimensions impacted, by category

(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

The 'technical skills improvement' has been the most important item identified by maritime professionals, both in the Navy and in commercial vessels, while the 'enhancement of managerial dimensions', such as soft leadership or quality management skills, prevailed among maritime business managers.

Item 14: 'Would you consider maintaining contact with the mentored cadets apart from the time spent at sea'?

In addition to other empirical studies conducted to date (Mentoring Seafarers Project Report, 2019), the authors wanted to highlight particular aspects of the sustainability of mentoring programs and thus address an issue relevant to the topic. Therefore, the professionals expressed their option to maintain contact with the mentees after the end of the mentoring program, with the feedback received reflected in the bars in Figure 14. The colored bars show that almost a third of respondents would not maintain contact with their mentors, as they are likely to view it as a formal training process rather than a personal relationship.

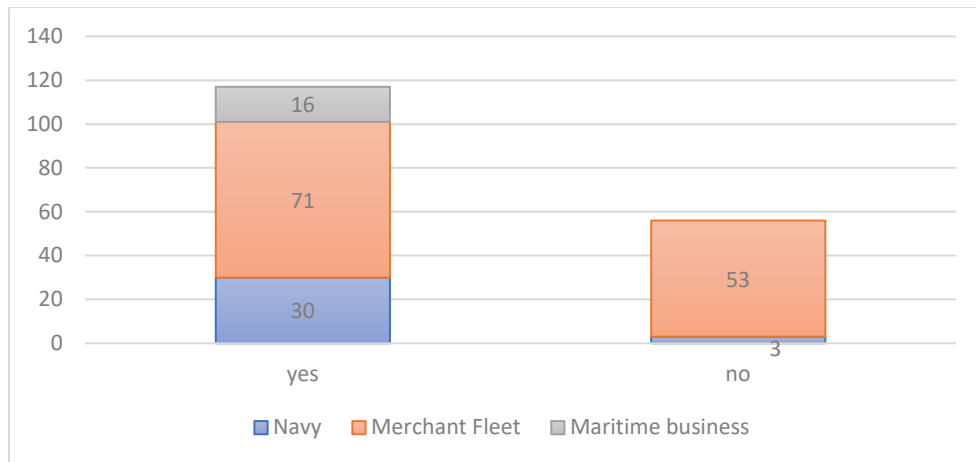


Figure 14. The option to maintain contact with the mentors after the mentorship program ends, by category
(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

At the time the mentoring program ended, a small proportion of mentors in the Navy (9%) and a larger proportion of officers in the merchant fleet (42%) would therefore not consider maintaining contact with the mentored cadets, as they primarily prefer the formal aspects of career guidance. One of the main reasons for such a reluctant attitude is, firstly, the lack of time available to build such personal relationships, considering the busy schedule and intense workload of the leadership positions on board the ships, as confirmed in the interviews conducted during the implementation of the Sea Mentors project (Sea Mentors Project Report, 2023). Alternatively, more than 58% of respondents consider maintaining contact with their mentees as they believe that mentoring can be sustainably rewarding for both sides, which creates promising conditions for informal mentoring programs on board the ships.

3.3. Mentorship programs impact and the perspectives of the sea mentoring services

Item 15: 'What services and facilities are most suitable to be offered in a specialized portal for mentorship on the SEAMENTORS online model'?

One of the main objectives of the Sea Mentors project since the beginning has been to develop an online training platform (www.seamentors.eu), where the contact between the mentors and mentees to be facilitated and where the cadets and young officers to be able to find an effective informative environment with carrier guidance tools and professional resources that should smooth their insertion and retention onboard the ships in early years of their carrier at sea. In Figure no. 15 has been listed as the top 5 services and options identified by the interviewed professionals, considered the most suitable resources to be offered for cadets and young officers during the SeaMentors project implementation or after the project closure, via the www.seamentors.eu platform.

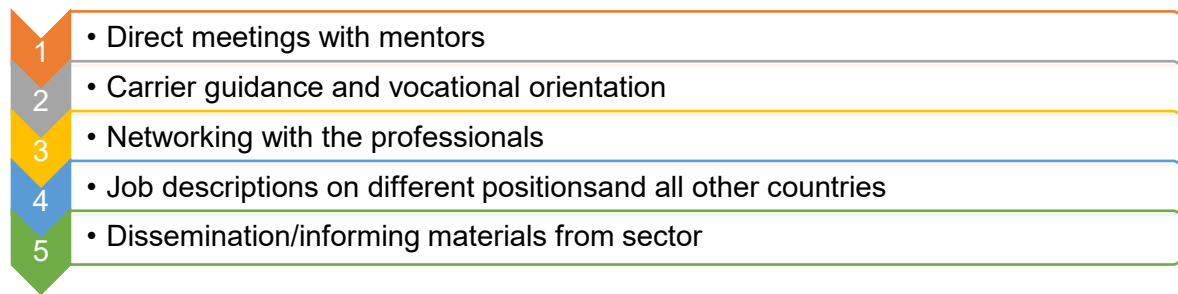


Figure 15. Top 5 of suitable services identified by professionals as the most suitable to be delivered for a mentoring platform development

(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

Almost a third of the responses collected had indicated that direct meetings with mentors were the most impactful mentoring tool, this option covered by physical meetings organized by project partners, residentially or online through the Sea Mentors platform, and posted as results on the library of the mentoring platform to support the guidance of the cadets (Sea Mentors Project Report, 2023). Also, a collection of video interviews has been posted to offer an informal image of the professional realities onboard the ships, where both professional and young officers described their experiential knowledge onboard the ships.

Another third of the responses collected indicated that carrier guidance and vocational orientation resources are the most appropriate tools, together with the development of a professional network, both being built as distinct facilities on the Sea Mentors platform. Furthermore, for carrier guidance and vocational orientation tools, the project team designed an automatic evaluation system for professional profile, leadership skills, time management, team spirit, and stress resilience (<https://marplat.eu/seamentors.php>). Additionally, there was a slight difference between the services chosen by the categories of professionals, respondents from maritime businesses onshore considering that dissemination / information materials from the sector, interview or video testimonials should be facilitated through the mentoring platform, while professionals from the navy and the merchant fleet considered that a forum for open discussions and a library with testimonials could be a more helpful decision.

Item 16: 'Do you have additional comments or supporting suggestions regarding the improvement of the mentorship program'?

The last question of the survey is a qualitative item designed to collect suggestions or comments about the implementation and effectiveness of the mentorship program. The received comments and suggestions have been depicted in Figure 16.

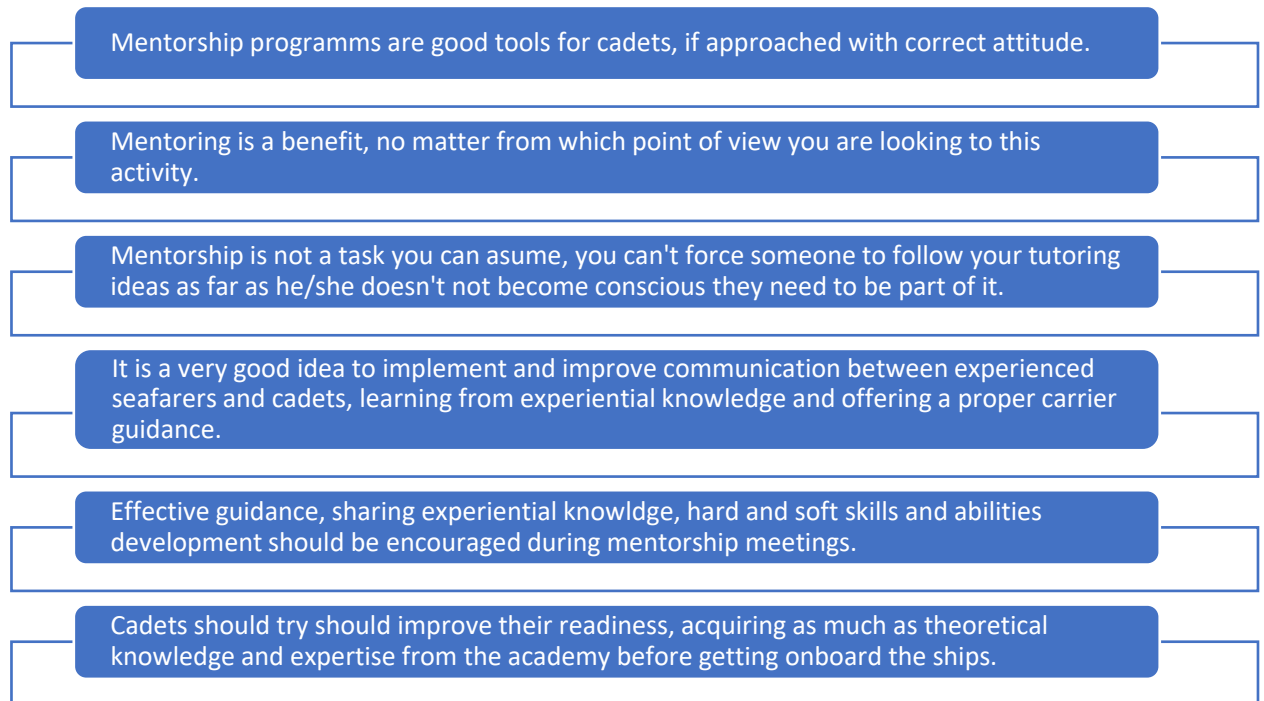


Figure 16. Suggestions for mentoring program's improvement

(Source: Sea Mentors Project Report, 2023; collected, processed, and interpreted by the authors)

As seen in the list of collected suggestions or comments, the respondents have inclined to underline that the mentorship is a vocational job that asks special skill, abilities and knowledge, as also personal assets, in order to offer a viable model to the cadets and young officers. Most of the desired qualities of the mentors were heading the professional knowledge and experience, the leadership skills, the communication abilities, the personal values, while some respondents kept reminding the active role that the academic/training system can play in connection with the job market and with the maritime field, facilitating a smooth transition to the professional life of the graduates.

3.4. Discussions and interpretations

The present empirical research has shown that there are already an encouraging number of formal mentoring initiatives at sea and on board ships, and there is evidence that shipping companies have started to invest significant resources in mentoring, although the current state is still far from the actual needs that would contribute to effective onboarding and retention of seafaring graduates on board ships in line with STCW requirements (Popa et al, 2023; Mentoring Seafarers Project Report, 2019). Interviewees confirmed the existence of mentoring initiatives at sea, but also in shore-based companies, organized and implemented under different names such as 'Cadet Training Program', "Employee Development", "Junior Officer Mentoring Scheme" or "Cadet Mentoring and Coaching Program" (Sea Mentors Project Report, 2023). In order to overcome the reluctance to introduce mentoring programs in the maritime workforce, the promotion of mentoring by shipping companies, sponsors, crewing agencies, academic systems, training institutions or other stakeholders in the maritime industry should be encouraged and promoted to more effectively support the development of the new generation of professionals.

Successful mentoring initiatives have continually sought to improve career fit, increase resilience and deliver valuable outcomes for businesses in terms of knowledge transfer and onboard skills development by building valuable professional models in the maritime sector. They work best in conjunction with good training

and a long-term perspective for the personal development of embarked personnel, especially in the early stages of the carrier (Popa et al, 2023; Mentoring Seafarers Project Report, 2019). As shown based on the KAP empirical tools, it appears that the onboard culture is shaped by the established relations and by the onboard hierarchical configuration, the ongoing leadership style and orientation coming from the onboard managerial positions frame of acting. If the onboard culture does not aim to develop an effective environment where mentoring can be valued based on experiential exchanges, this will limit the effect that mentoring may have in a positive perspective of helping young cadets and officers adapt themselves to the onboard environment.

Although limited to the medium size of the sample of respondents, as well as the non-probabilistic type of sampling, the survey has highlighted that mentors can be required to perform very varied guidance roles depending on the training background and social skills of the mentees. Otherwise, some officers are not inclined to accept a mentorship position, due to the lack of time, as being one of the most important individual resources at sea in relation to the workload. Lack of time can act as a barrier to learning and, moreover, for the establishment of mentoring relationships onboard the ship, the allocation of dedicated time for this purpose by formalizing mentorship tasks becomes essential.

4. CONCLUSIONS

Mentoring can have a positive impact on recruiting new candidates to the industry and retaining young officers in the maritime industry. Those who have experienced the benefits of mentoring are more likely to become mentors as the seafaring profession becomes more predictable given a tangible career model. For this reason, the development of a mentoring culture is not only an organizational issue, but also a mandatory requirement for a sustainable development strategy for maritime professions. In line with the literature review and based on the responses received, the authors concluded that maritime mentoring offers consistent benefits for both the individuals involved and the maritime industry as a whole:

- knowledge sharing: mentoring is a powerful form of knowledge sharing, allowing experienced professionals to pass on their knowledge and insights helping less experienced individuals to overcome the unique challenges of the maritime professions based on experience sharing;

- skills development: Maritime mentoring would greatly contribute to the development of hard and soft skills in the maritime industry, as mentees can learn from the practical experience of their mentors, which can be particularly beneficial in a hands-on field such as the maritime industry;

- career management: mentoring can help individuals to persist and progress in their careers, as mentors provide valuable career development guidance by helping mentees to identify the opportunities and overcome the obstacles;

- recruitment and retention: Mentoring helps with recruitment and induction and helps to retain seafarers in the industry by providing ongoing support and guidance;

- preserving traditions and promoting a seafaring culture: mentoring is one of the most effective ways of passing on knowledge and understanding of seafaring between generations of seafarers;

- attracting new talent: The shipping industry needs to attract new, talented young seafarers in the new technological context by promoting awareness and knowledge of the industry through the availability of career mentors and role models;

- improve seafarer wellbeing and job satisfaction: mentoring initiatives and the development of workplace networks should be encouraged due to their positive impact on seafarer wellbeing and safety culture

in order to develop a culture of continuous learning and development, which is crucial for the growth and sustainability of the maritime industry.

At the conclusion of the tracked study, the following imperatives for future seafaring policy were identified in relation to the profiles of new seafaring graduates:

- readiness: cadets should be ready to adapt to a rapidly changing environment by preparing themselves thoroughly during their studies and initial training, with mentors playing an important role, involved early in academic and professional training;

- resilience: the young officers should be trained for effective stress management and reduced self-sensitivity, where mentors and coaches can be a good support;

- understanding of authority: first-line seafarers should have an appropriate leadership and followership culture and understanding, where role modeling in mentorship is essential;

- self-discipline: cadets should be guided by mentors to establish and maintain a healthy work routine, with appropriate rest and sleep management and with balanced multimedia and social media interactions to maintain awareness status and risk perception;

- adaptable self-development based style: cadets should be advised to develop a self-study perspective, with a great autonomy in learning and with an attitude of continuous development from the early stages of their training, where the mentoring model could play an important role;

- multicultural skills: Cadets should be trained before recruitment and receive ongoing support during practice at sea, embedded with continuous guidance from mentors in terms of crew adaptation to a multicultural and international team;

- diversity management: cadets should be familiarized with gender and diversity management during their training, which will have an impact on their leadership style as future maritime leaders and professionals.

As an added value to the existing databases and considering the responses and suggestions collected in the survey on the services and options deemed most suitable for implementing a viable mentoring program, the present study has attempted to provide a valid motivation for initiating and developing mentoring programs, using the professionals' responses and suggestions as a qualitative hypothesis. Furthermore, the authors have attempted to identify the services and options that are most appropriate for a mentoring program and have outlined the alternatives for developing a useful landscape for companies and professionals to support the transition of young graduates into careers in the maritime sector.

5. AUTHORS' CONTRIBUTION

The authors have been actively involved in all research matters of this article. The authors' contribution is reflected in data collection, systematization and KAP interpretations, seeking to underline and justify the importance of mentorship programs onboard the ships.

6. DATA COLLECTION AND GPDR RULES COMPLIANCE

The authors are hereby confirming the fully respect of personal data and individual rights protection and information security during the database collection in survey procedure, in accordance with the REGULATION (EU) 2016/679 of the European Parliament and of the Council of April 27, 2016 (hereinafter

referred to as GDPR) and with the national legislation regarding protection and security of personal data, in force.

CONFLICT OF INTEREST: The authors are committed to provide a disclosure statement in relation to this article that will acknowledge any financial, professional, personal interest, or benefit they have arising from the direct applications of their research.

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