

An Assessment on Maritime Students' Awareness, Perceptions and Needs in Career Planning in Tertiary Education

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Although seafaring is seen as an attractive profession for prospective students in terms of having the opportunity to see different parts of the world while working and earning more money in less time compared to other professions, the harsh conditions of duties onboard sometimes overshadow this attractiveness, which may lead students to question their choices and seek different career alternatives. This study aims at assessing maritime students' knowledge, perceptions, and needs regarding career awareness and career planning at the tertiary level. The study also seeks to understand students' awareness of career-related activities and the role and responsibilities of the career centre. The research component of the study involves administering a questionnaire to 381 first-year students at a maritime-focused university. The questionnaire comprises twenty questions based on a five-point Likert scale and has been electronically distributed. The data collected has been analysed using parametric methods based on four variables: career anchor, career awareness, career centre awareness, and career planning awareness. The study has revealed that most of the students are aware of their own characteristics and the sacrifices required by their future profession, but they had not yet decided which career path to follow after graduation. The study has also revealed that students are interested in developing their skills through extracurricular activities and consider entrepreneurship as a future career option. The results suggest that career offices in maritime universities should create more opportunities to provide students with adequate information about their future careers and to enable them to make correct and realistic decisions about their career paths. The next study on this topic can focus on how to raise awareness of the functions of career officers and how to develop maritime-oriented career planning courses so that the students can make more realistic and satisfying career choices.

KEY WORDS

- ~ Maritime
- ~ Career planning
- ~ Career guidance
- ~ Tertiary education

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1. INTRODUCTION

It is important for people to do the job they love to be successful and to reach job satisfaction. Everyone's choice of profession differs according to their characteristics, their expectations from life, their past experiences, and the characteristics of the place and era they live in. On the other hand, some professions may be more popular because of their high income or because they are considered prestigious in society. Some others require sacrifice and can be characterised as difficult. Although it may not be possible all the time, these professions should only be practised by people who love them and want to pursue them. Seafaring is one of these professions. Therefore, young people who want to become seafarers should know the positive and negative aspects of seafaring, its difficulties, the sacrifices it requires and should consciously choose their future profession. However, in some countries, students cannot go to the faculties they want to because of various reasons, such as grade barriers in the university exams or they do not know what their future job has to offer (Chen, et. al. (2021), Zalaznick (2022). Seremet (2016), in a study involving 154 senior students, found that maritime students' perceptions of the profession and their career choices differed after completing an internship. In one of the interviews conducted by Baum-Talmor (2021), a participant stated that some of the students left their studies unfinished, citing low career prospects in the sector and difficulties in finding a job. No matter what the reason may be, research reveals that the dropout rate among maritime students is higher than that of students attending other schools. It has been revealed that 31% of students who start maritime universities leave before graduating (Luck, 2019; Bhuiyan et. al. 2020; MPHEC.ca, 2018). The number of seafarers who graduate and work on ships for a while and then prefer to work on land or leave the profession is not small. Some of the reasons for this tendency are given below (Barnett et.al., 2006; Singh, 2019; Baum-Talmor, 2021):

- Overwork, persistent physical and mental exhaustion.
- Challenging reasons, such as cultural differences, constant stress, heavy workload, and shortage of staff.
- Pressure from the family to work on land for various reasons.
- Pressure from work, including an increase in audits, vetting, port state regulations, etc.
- The amount of risk taken.
- Boredom, a lack of communication, and isolation.
- Absence of assistance from ship owners, maritime authorities, or the shipping sector in general.
- Pirates that are becoming a nuisance.

The fact that the suicide rate among seafarers is four times higher than that of land-based workers is an indication of the difficult conditions under which seafarers work (Luck, 2019).

Some measures can be taken by the companies that they work for to make seafarers' lives easier, to ease the difficulties of their work, and to prevent them from quitting. Apart from these, some measures can also be taken at an earlier level, in maritime faculties when seafarers are still students. In this way, seafarer candidates can start to work more prepared for the difficulties of the profession. There are several measures that can be taken by faculty members, maritime industry stakeholders, senior seafarers, etc. to better introduce and endear the future profession to maritime students and to prevent them from leaving school or work. Career centers in schools or career planning courses that students take in their first year also play an important role in introducing and endearing the profession to prospective seafarers. This study aims to determine the level of recognition and appreciation of career centers and career planning courses by prospective seafarers. In addition, the study also intends to investigate whether the seafarers of the future have made a conscious choice of their profession regarding their characteristics and whether they think of becoming entrepreneurs in case they give up a seafaring profession in the future.

2. LITERATURE REVIEW

Within the scope of the literature review, the words maritime, career, career guidance, and career planning were typed into the Google academic search engine, and it has been concluded that there is not much

research on this subject. The research that has been conducted is mostly focused on the reasons for students to take maritime education and the degree of knowledge of the difficulties specific to this education. Nevertheless, it is seen that the relationship between seafarer students and careers has been addressed from different perspectives. For example, Skrzyszewska (2017) found that while the number of European seafarers in the global maritime world was decreasing, the number of Polish young people who want to study maritime was increasing. She investigated the reasons behind this with an emphasis on whether young people who want to study maritime education are aware of the challenges of the maritime career. The results showed that young people were aware of the difficulties of seafaring but still wanted to become seafarers. According to the findings, the biggest reason for this situation is that sailors do not have difficulty finding a job and their salaries are high. Another reason was found to be the opportunity to travel around the world. Another study on this topic was conducted by Heirs and Manuel (2021), who emphasised that it is important to start instilling the idea of a maritime career in students during their high school years in order to raise their awareness and consciousness of the maritime profession. Although maritime students often state that they decided to study this subject without external influences, research shows that among the students' relatives or friends, there is someone who is interested in the maritime sector (Skrzyszewska, 2017). A similar conclusion was reached by Lau and Ng (2015), who found that mostly students' parents encouraged them to pursue a career in the maritime field. Another study on the motivational factors for students to have a career in the maritime business was conducted by Lau et al. (2021), who found that its accreditation by international organisations and the practical orientation factor were the most influential factors for students to choose this education.

Yorulmaz and Alkan (2017) underlined that the maritime profession, which is attractive in terms of income and seeing the world, actually required many sacrifices and that students should make a realistic and conscious choice by knowing these beforehand. They should know in advance whether they have the right personality for this profession and make their career planning by taking the challenge of dealing with the difficulties they may encounter.

On the other hand, some studies have focused on career planning. Of these, the one conducted by Melovic et. al. (2022) stated that there are many studies on career planning in general, but there are not many studies on career planning in the maritime sector and the studies that have been conducted do not address students' attitudes towards career planning. In their study, they concluded that the effective management of public policies related to education would encourage the students to be proactive in their career planning and thus their competitiveness in the market would be strengthened. They also stated that their findings would reveal the importance of career planning activities in maritime schools.

Another research on the career planning of maritime students was carried out by Kalvaitienė and Sencila (2013). They emphasised the importance of professional career planning skills for maritime students and made recommendations for them to gain these skills. Among their recommendations are the integration of professional career planning skills into educational subjects, utilising the experience of higher education students and graduates, as well as that of the lecturers, employers, and stakeholders sharing their experiences, using active teaching/learning methods, raising the students' awareness through international exchange programmes, informative publications for students, etc.

In another study, the importance of career support programmes was underlined and it was stated that they should be given in schools to enable maritime students to make the right career decisions. For this purpose, it is necessary to include good practice experiences in the curriculum and to specify realistically what is expected of students in the maritime sector (Gobelna and Skrzyszewska, 2016). The same view was highlighted in another study by Onsesveren (2023). He emphasised in his study that maritime education is a long, costly, and practice-oriented occupational field, and for this reason students should have the personality traits required by the profession and be qualified in terms of competence and capacity. He found that 44% of the students graduating from maritime high schools continue their education in a different field, which means a loss of labour,

cost, and trained manpower for the sector. This research also shows that career guidance is important, not only at university level, but also at high school level.

Introducing career opportunities in the maritime sector to young people has been a common goal of many countries. Promoting the maritime sector and attracting young people to it was seen as a great need in Europe. For this purpose, a project was realised with the participation of ten European countries. Within the scope of the project, which was named Youth4job, high school students were introduced to job opportunities in the maritime sector so that they could consider being seafarers. They were also given vocational guidance. In this context, a case study on "Job opportunities and vocational orientation and guidance in the maritime sector" was implemented by Latvia Maritime Academy, and career opportunities in the maritime sector were introduced through a series of activities, such as interviews, group discussions, conferences and seminars (Berzins and Barbare, 2013).

3. HYPOTHESIS DEVELOPMENT

A career can be defined as a development of a person's activities, responsibilities, attitudes, and behaviours in work life. Career development aims at developing employees and ensuring harmony between their knowledge, skills, experience, and abilities, and the development opportunities offered by the organisation (Sümer, 2006). Those who start working in any job should be informed about the career paths that await them so that they can take smarter steps in terms of personal development. The problems experienced by students during their university entrance period and the fact that students often do not have enough information about the career path that awaits them after graduation have pushed the authorities to take some measures in career planning. Thus, some courses related to "Career Planning" have been introduced in some countries to raise the students' awareness about their careers so that they can get to know the profession they are studying, acquire the information about its pros and cons, and learn how to take advantage of the opportunities that await them and cope with the difficulties. In short, some measures were taken to raise students' awareness about careers. Demir et al., (2023) say that the aim of giving career planning courses to associate and undergraduate students is to provide them with information on how to plan and shape their careers. Today's rapidly changing business world offers different opportunities and development possibilities to employees, and employees who want to take advantage of them can change their jobs, fields of work, and even their professions.

Career planning education is not a new concept: it dates back to the last century. Modern types of vocational counselling emerged in the late 19th and early 20th centuries as a complement to vocational education. Since then, many changes have taken place in workplaces and career-related counselling (Herr, 2013). To provide an effective career planning course today, the needs of the students should be fully determined, the courses should be reviewed at the end of each term, and necessary corrections should be made in line with the feedback received from the students at the end of the term.

It is important for people to know themselves well and apply for jobs that are suitable for their characteristics to be successful in their work lives. This point is also taken into consideration during the recruitment process, and candidates are examined to see whether they have the personality traits and character profile required for the job in question (Günay and Çarıkçı, 2019). Accurate self-perceptions about how one typically thinks, feels, and behaves are called self-knowledge (Vazire and Carlson, 2010). It is also defined as the internal states, preferences, resources, and intuitions of a person (Casado and Casau, 2019).

Self-knowledge is important regarding career tendencies that begin to emerge when individuals perceive their abilities, individual values, and motives. When these tendencies become clear, career values are formed. The career value that an individual attaches importance to is influenced by personality traits (Kaplan, 2020). Self-perception of the people, consisting of one's abilities, values, and motives that develop in relation to one's career, is called career anchor (Suutari and Taka, 2004). Students need to have a clear understanding of

self-knowledge and career anchors to build well-founded career development in their profession. Although many environmental factors are effective in career choice, the individual's characteristics should also be considered. To ensure this, educational and vocational guidance activities are carried out in the career centres of high schools. One of the tasks of career centres is to help students get to know themselves, make them aware of their characteristics, and propel them towards making conscious choices in terms of the department they will study at university (Rodica and Raluca, 2017). As also stated by Yeşilyaprak (2024) and Senemoğlu (2007), within the scope of educational guidance, career centres in high schools help students become aware of their interests and abilities, support them orient themselves to the appropriate fields, and make choices related to these fields. This issue becomes more important, especially in fields such as seafaring that require more sacrifice than other professions. Given this information, the first hypothesis can be formulated as follows:

H1a. Maritime university students are conscious of their strengths and weaknesses and are aware that their characteristics are suitable for a demanding job like seafaring.

Even if students have good qualifications and features to perform their future profession well, they need to practise the theoretical knowledge they get from the universities to acquire the practical experience that employers seek (McGunagle and Zizka, 2020). Typically, internship programmes create "win-win" relationships among employers, universities, and students. Internships are a great way for students to improve their abilities, especially their professionalism (Urquía-Grande and Estebanez, 2020). It is not easy for students to find workplaces for internships for several reasons. One of them is the difficulty of obtaining information about the workplaces or internship positions that are suitable for their skills and training (Ramadhan and Fitriana, 2022). The other is that they may not be sufficiently prepared to apply for a job or an internship. A study conducted by AlSlamlan et al. (2020) reveals that only 99 students out of 523 who took part in the study had prepared their CVs. Nearly half of the students did not participate in any research projects while taking part in projects or having some experience in work life which helps students to find a good job in the future. Such activities also help students to clarify their future goals, even if they have chosen the field they will study in. This is where the importance of career offices and counsellors comes into the picture. They can help students identify their interests and highlight potential career paths that are closely linked to specific study programmes (Quinlan and Renniger, 2022). They can also help them write effective CVs and have a smooth application process. Based on these studies, the second part of the first hypothesis has been determined as follows:

H1b. Students may need assistance in writing CVs, applying for internships, or participating in various activities that can be provided or guided by career centres to increase their chances of finding a job.

Students can follow developments in their field closely and capture opportunities to make their career plans and patterns through their efforts. However, they need the guidance of career experts to make more informed career decisions. This highlights the importance and necessity of career planning courses, as emphasised by some studies. In these studies, although the concept is called by different names, such as career counselling, career education, career development, work-related learning, or career guidance, they all refer to a wide-range training, counselling, and guidance process aimed at supporting individuals' careers (Goodman and Hansen, 2005; Haugh et al., 2020).

In one of these studies, Crişan et al. (2015) tried to find out if the students needed career guidance or not. To this end, they conducted a needs analysis on students' demand for career planning courses in Romania. According to the results of the survey given to 130 students at a Romanian university, students do not have sufficient information about job opportunities. Their research also revealed the students' prospects not to be in line with their skills and capabilities: they do not have a well-defined plan to realise their career goals, even if they have some, and they face major obstacles in the career decision-making process. It was also revealed that career orientation programmes were necessary to increase the student's awareness of the importance of career planning. Another study that aimed to find out if there was a need for career counselling services was conducted

by Keshf and Khanum (2021). They did interviews with students in tertiary education and found that the students needed job search skills information and guidance, along with decision-making skills, direction, and self-awareness. They pointed out that they were aware of the existence of some activities like face-to-face counselling, job fairs, and seminars to meet these needs. It was confusing for them to learn that students did not attend such activities, although they knew they needed them.

Another study that revealed the necessity of career guidance for tertiary education students was conducted in Taiwan. In the study, Yang and You (2010) interviewed 56 Taiwanese students and found that, although they attended the same department, their skills, abilities, and goals were different from each other, and they urgently needed career guidance. They stated that the high school graduates in Taiwan had to decide which department at the university they would go to very quickly due to the university entrance system, so they usually did not have much information about the job they would have in the future. These are the results of the survey given to 360 students, 42% of whom stated that they had no idea what they would study before they started university. Most of the students who took part in the study accepted that they had strong demands for career guidance. Depending on these studies, the second hypothesis can be formulated as:

H2. Maritime university students do not have enough information about how their career development can be in their future professions and why they need to take a career planning course in their first year at the university.

Career awareness is about knowing oneself, recognising one's needs, learning job and career fields, and developing career exploration skills. In an international study, conducted by Gunkel et al. (2010), the career awareness of university students in the USA, China, and Germany was studied. It was found that students in all three countries needed career guidance, and they should be supported for stronger career adaptability and knowledge. Goodman and Hansen (2005) pointed out the importance of career development for students and all people. In the summary of the International Perspectives on Career Development Symposium prepared by them, the career development activities, and problems, not only for students but also for the whole public, were covered. It was indicated in this summary that although a lot is being done for career development in all participating countries, most people do not have the opportunity to access training and guidance activities. On the other hand, some studies show that students are aware of what their jobs can offer. Although the percentage may vary in different circumstances, the study by Lau et al. (2021) revealed that only 9.5% of the students who enrolled at a maritime university were there because of low admission requirements, which indicates that they had a conscious selection among departments and knew what they would encounter at the department. Their study showed that the students' ultimate preference was to be employed in the maritime industry. They also found that to meet the demands of the sector and the supply of human capital, short-term and long-term career planning, and development for students could be provided, despite their conscious selection.

In some cases, students seem to be aware of the career path that awaits them but are concerned about it for different reasons (Pignault and Houssemand, 2022). This is called career anxiety, as defined by Pisarik et al. (2017). They define career anxiety as "anxiety embedded in individuals' career concerns as they engage in the career development process." Lack of career guidance is one of the causes of career anxiety. Such problems can be solved through interviews with the experts working at career centres, or career counselling services, as they are called in some countries. These centres have a positive influence on the employability of the students. Data collected from 600 students has revealed that these centres increase the self-awareness and opportunity awareness of the students, which, in turn, increases their employment chances (Pitan and Atiku, 2017). It was also concluded that universities should develop quality career guidance activities and encourage students to actively engage in the activities (Pitan and Atiku, 2017). Career centres help students get to know their future jobs from all aspects, including what opportunities the job can provide them with and how to go up the career ladder in a certain sector. Within this frame, they help them adopt realistic goals, although it takes time for them to adjust to the realities of both the internal (self, skills, etc.) and external (economy, changing

careers, etc.) settings (Pignault and Houssemand, 2022). Since studies show that university students are aware of the existence and functions of career centres, we can formulate our third hypothesis as follows:

H3. Career centres at universities are places where students can find answers to their career-related questions and receive advice and guidance when necessary. Students are aware of the existence and functions of these centres and benefit from them if they need to.

As the number of students graduating from higher education has increased, the efforts of universities to find jobs for their graduates have also increased. Career centres have begun to guide job applicants in writing letters of application, preparing CVs, getting ready for interviews, and sometimes bringing students together with guests invited from the business world so that students can get first-hand answers to their questions (Hao et al., 2015). The students are supposed to have the 21st-century skills. However, what 21st-century skills mean to students and employers is not the same. While students identify experience, leadership, and knowledge as the most important skills, employers believe that commitment to work and making sacrifices to get things done are more important to them (Lisá et al., 2019). Universities change their curricula to meet the changing needs of the world and develop the students' 21st-century skills to get them ready for work. Teng et al. (2023) wrote that Malaysian universities develop students' soft skills to prepare them for employment, which is required by companies. In most countries, there is collaboration between universities and industry to make the graduates ready for employment, which is for the benefit of both the company and the graduates (Jalinus et al., 2023). The students also have a responsibility to get themselves ready for the demanding job market. Although it is the real job of higher education institutions to educate students to be capable of self-development, self-education, and innovation, the students should not be content with the education given by the university and should try to improve themselves. One way to realise this may be by doing independent work (Ismatova and Anvarova, 2023). Based on this, the fourth hypothesis can be set up as follows:

H4a. Students know what skills companies need and what employers demand from them, so they strive to acquire these skills to get better job opportunities.

It is agreed in the literature that entrepreneurship is a career (Asante and Osei, 2019; Sarah and Akbari, 2022). It is an attractive career since it provides young people with more autonomy, creative expression, and financial independence (Thoti, 2023). Another thing that makes it attractive is the possibility that it can provide a lot of people with jobs, which is particularly important today when a lot of jobs are disappearing because of technical developments and economic problems. All these make entrepreneurship a good career choice among the young. The good thing about entrepreneurship is that research reveals that it can be taught, but not like other business courses (Cascavilla, 2022; Joensuu-Salo, 2023). That means teaching entrepreneurship in the classroom is not possible since it requires practice. The fact that entrepreneurship can be taught has further increased its appeal and made it a topic that students often consider, which has given way to the demand for entrepreneurship education.

To respond to this need, the number of entrepreneurship-related activities in universities has increased, entrepreneurship clubs have been established, and entrepreneurship courses have started to be offered. In this way, they tried to meet the demands of students interested in the subject. One of the places where students who are interested in entrepreneurship will apply to learn about the entrepreneurship opportunities provided by the university and the environment is the career centre. Besides informing students about different job alternatives, career centres should indicate that entrepreneurship is also a career alternative, encourage students to receive entrepreneurship training, and encourage them to participate in activities that will develop an entrepreneurial mindset. In today's world, where unemployment is increasing day by day and employees are being replaced by robots, the idea of being an entrepreneur, starting their own business, and being their own boss is extremely attractive to students. Considering these explanations, the second part of the fourth hypothesis can be formulated as follows:

H4b. Today, students prefer to be job creators rather than job seekers; in other words, to be their own bosses, and they need guidance to achieve this.

4. METHOD

A self-administered survey has served as the source of the information for this study. The survey, consisting of two demographic questions in addition to twenty career-related ones, has been designed to examine the participants' knowledge, views, perceptions, and thoughts on career and career planning in four variables. They are Career Anchor (self-knowledge), Career Awareness, Career Centre Awareness, and Awareness for Career Opportunities, which all together lead to a strong career path, as shown in Figure 1. These variables have been made up of a variety of statements as scored on a Likert scale, with 1 strongly disagreeing and 5 strongly agreeing with. The Likert scale is used to determine the extent to which the respondent approves or disapproves of the judgments related to research (Karagöz and Ekici, 2004). The distribution of the statements among the variables in the survey is shown in Figure 2.

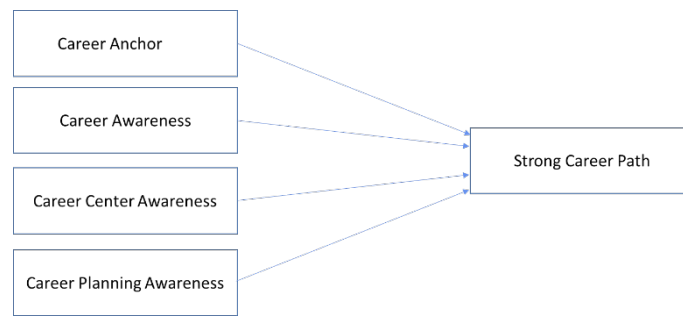


Figure 1. Model of the Research

The survey has been conducted electronically by sharing the link with first-year students in the Maritime Faculty and Maritime Vocational Higher School before they took the Career Planning Course, which is a compulsory course for all university first-year students in Turkey.

This study focuses on first-year maritime students at the tertiary level, as it aims to understand the extent to which they are familiar with their future profession and to see how aware they are of its challenges and advantages when they start studying for this profession. The study also aims to understand whether prospective seafarers have made an informed choice for their future profession and if they need guidance on career development. Therefore the questions focus on their expectations and not on their experiences.

The limitation of this study is that it was conducted in only one university and one country. It is considered that similar results may be obtained in different schools of the same country, but different results may be obtained in different countries.

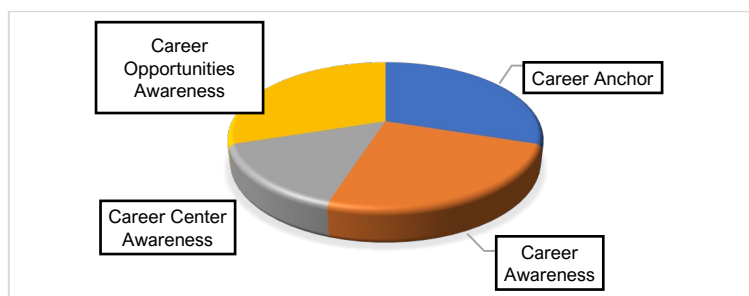


Figure 2. Distribution of Survey Statements

5. RESULTS AND DISCUSSION

381 students studying in various maritime-related departments at the university have participated in the survey. There are two groups of students: those attending Maritime Faculty (MF) and those attending Maritime Vocational Higher School (MVHS). The distribution of students is given in Table 1.

Programme	Number of Students
Maritime Faculty	89
Maritime Vocational Higher School Programs	292
TOTAL	381

Table 1. Distribution of the participants as per programme

In the evaluation of the survey, the parametric statistical analysis method is used. Parametric statistical analysis is based on estimates of the distribution of the underlying population (i.e., the proportion of the normal distribution) and estimates of the form or parameters of the assumed distribution (i.e., means and standard deviations) (Hoskin, 2024). The mean, standard deviation, and Cronbach's alpha are found for each group, assessed both between themselves and in relation to other groups. The results are given in Table 2 below. Cronbach's alpha is a metric of internal consistency, i.e. it indicates how close sets of items are interrelated as a group (UCLA, Statistical Methods and Data Analysis, 2024). As may be seen, Cronbach's alpha is high for the Career Anchor/Self Knowledge and Career Awareness variables, which signals their effectiveness as an evaluation method. Statistical values for the statements in the survey are given in tables following each hypothesis in their respective subsections below.

Variables	Scales					\bar{x}	sd	α
	1	2	3	4	5			
Career Anchor/Self Knowledge	9.2%	14.5%	27.6%	24.4%	24.2%	3.40	1.25	0.799
Career Awareness	2.9%	10.4%	29.2%	30.9%	26.6%	3.68	1.06	0.852
Career Centre Awareness	7.9%	13.3%	31.1%	25.5%	22.2%	3.41	1.19	0.633
Career Opportunities Awareness	6.9%	11.2%	20.3%	27.8%	33.8%	3.70	1.23	0.599

Table 2. Mean, Standard Deviation, and Cronbach's Alpha for Each Group

The hypotheses have been tested against the survey data to measure their accuracy and reliability. The replies from students in different faculties have also been tested against each other, using the student's t-test to find out if their means differed. The t-test is a parametric technique used to test the statistical significance of the difference between two means (Tavşancıl, 2024). As the sample size was large enough, we have assumed a normal distribution among replies. The following results have been obtained:

5.1. Career Anchor

The following statements in the survey are used to measure the career anchor level of the students to test H1a and H1b:

1. I know what skills I need to develop myself and become a sought-after employee.

2. I believe that I can improve myself in areas such as leadership, teamwork, and communication.
3. I know my personality traits and think that they are suitable for the job I have been trained for.
4. I know how to prepare a resume/CV.
5. I know how to apply for an internship or a job.
6. I know where to consult when I have questions about my profession during or after my student life.

Figure 3 shows the comparative responses of MF and MVHS students to the statements forming the hypotheses H1a and H1b.



Figure 3. Comparison Between the Responses of MF and MVHS Students for H1 Statements

Considering that the statements are evaluated using a 5-point Likert-type scale, it is evident that students are quite knowledgeable about the first three statements which are the ones that make up H1a. As a result, it is seen that students do not have as much knowledge about the statements that make up H1b as those that make up H1a.

Apart from comparing responses, the statements' average values and p-values have also been taken to see if the hypotheses are supported or rejected.

Statement	\bar{x}	MF average	MVHS average	p-value
H1a	1	3.99	4.03	0.0732
	2	4.28	4.28	0.8055
	3	4.23	4.2	0.2662
H1b	1	3.24	3.38	0.0001*
	2	3.07	3.29	3.38E-09*
	3	3.42	3.53	0.0031*

Table 3. Values for the Statements Related to H1. (*: $p < 0.05$)

The student's t-test has been conducted to investigate if the average answer between the two groups differ significantly. In statements used to test H1a, no significant difference has been found between the two groups. For the last 3 questions, used to test H1b, the difference between the means of the answers was found to be significant even at the ($p \leq 0.05$) level; therefore, we can say that there exists a statistically significant difference between the average answers of the two groups for statements relating to H1b at the 95% confidence level.

Building on these results, it can be concluded that the students at both MF and MHVS know their own strengths and weaknesses well. They can improve themselves, even if they have some weak points. It can be

concluded that they consciously choose the department they will study in and know the characteristics required by the department.

However, it was revealed that most of the students did not know where they could consult when they encountered a problem related to their career after starting their university education. It was seen that they did not have enough knowledge about preparing their CVs, which all students, not only those studying in the last year, should have. They do not know the procedures to apply for a job, either. When the two groups were compared, MVHS students seemed to be better than MF students on these topics.

As a result, it is revealed that the students are aware of their personality traits, and if they are suitable for jobs in the maritime sector, so H1a is accepted. However, they do not know what to do to advance their careers. H1b states that students have weaknesses in this regard. Therefore, this hypothesis is also accepted.

5.2. Career Awareness

Information about the maritime students' career development has been measured in the "Career Awareness" question subset. The statements in this subset are given below:

- 1) I have planned my career development, and I know clearly what I will do when I finish school.
- 2) I am aware of the opportunities that await me when I graduate.
- 3) I know how I can improve myself as a student.
- 4) I know what activities will contribute to my career.
- 5) I know how to carry out career-developing activities.

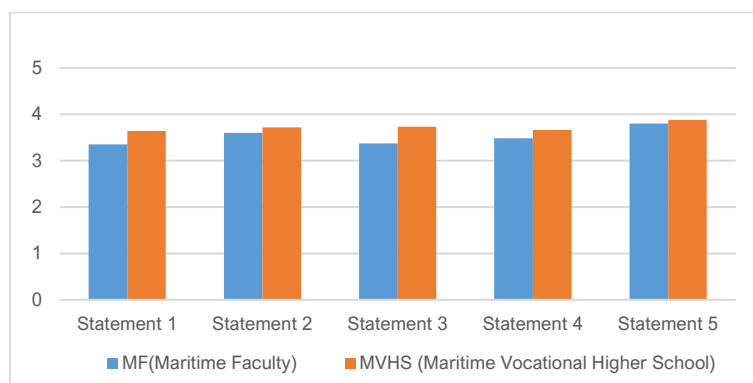


Figure 4. Comparison Between the Responses of MF and MVHS Students for H2 Statements

There is no significant difference between the answers of MF students and MVHS students, as Figure 4 clearly shows. Overall, MVHS students have answered the statements slightly positively, which may signal that their career awareness level is a bit higher than that of MF students.

This subset has a Cronbach's alpha of 0.852, indicating an important level of internal consistency and reliability of the measure.

On the evaluation of this subset of questions, it was revealed that the students both from MF and MVHS were aware of the importance of planning their careers and knew which career path they wanted to take upon graduation. They also knew which opportunities there might be in the sector for them and what kind of activities they should take part in to contribute positively to their career development.

However, a difference has been observed in the answers of MF vs. MVHS students regarding questions 2 and 4. Answers from these two groups were tested with a student's t-test, and for each of these questions, the difference between the means of their answers was found to be significant, even at the ($p \leq 0.05$) level.

Statement	\bar{x} (mean)	MF \bar{x}	MVHS \bar{x}	p-value
1	3.58	3.35	3.64	0.0448*
2	3.69	3.60	3.72	0.3590
3	3.64	3.37	3.73	0.0041*
4	3.62	3.48	3.66	0.1490
5	3.86	3.80	3.88	0.5187

Table 4. Values for the Statements Related to H2. (*: $p < 0.05$)

Therefore, although it may be seen that the students are aware of the opportunities waiting for them and activities that can contribute to their career development, they do not know how they can carry out these activities. They have not planned their career yet and are undecided about what they will do after graduation. These results show they need career planning courses and career counselling services during their education. Based on these results, H2 is accepted.

5.3. Career Centre Awareness

Students' career center awareness has been assessed in the "Career Center Awareness" statement subset. The statements used in this subset are given below:

1. I know exactly why I took the career planning course.
2. I fully understand the function of offices, such as career centers and talent gates.
3. I intend to visit the career centre.

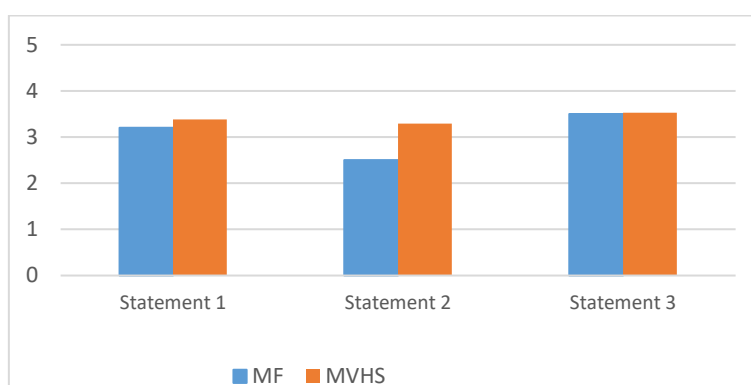


Figure 5. Comparison Between the Responses of MF and MVHS Students for H3 Statements

From the responses of both groups of students to these statements, it can be concluded that most students know why they are taking career planning courses and would like to visit the career office to learn more about career planning or to get answers to their questions. However, interestingly, MVHS students seem to be much more knowledgeable about the functions of career-related centres, as Figure 5 shows. This result is in parallel with the conclusion that MHVS students are more knowledgeable about careers, which we reached after evaluating the statements used to verify the previous hypothesis.

The subset has a Cronbach's alpha of 0.633, which is questionable. However, Cronbach's alpha value of the survey overall is 0.884, while the alpha of the survey with the career centre awareness subsection removed is 0.871. This decrease indicates that the career centre awareness subsection provides valuable insights in the overall recognition of career centers and their functions.

Of the 3 statements in this subsection, only one, "I fully understand the function of offices, such as the career centre and talent gate," indicates a significant difference between the MF and MVHS students' average

answers at the $p < 0.05$ level. That indicates that most MVHS students know what these career centres are for and what their functions are. This may be because they are studying for an associate degree, which means they will start looking for a job sooner than MF students. This may have prompted them to search for services, organisations, and people who can help them find a job.

Statement	\bar{x} (mean)	MF \bar{x}	MVHS \bar{x}	p-value
1	3.66	3.47	3.72	0.0873
2	3.33	2.98	3.44	0.0021*
3	3.24	3.19	3.25	0.6877

Table 5. Values for the Statements Related to H3. (*: $p < 0.05$)

Only one of the three statements related to H3 indicates a significant difference between the average answers of the MHVS and MF students at a 95% confidence level. This is Statement 2, which measures the information level of students regarding the functions of career centres and talent gates. Based on this information and the average of the answers to the statements, H3 is accepted.

5.4. Career Opportunities Awareness

The survey includes six statements to assess the students' awareness of career opportunities and entrepreneurial intentions. They are given below:

1. I know different working fields related to my major, and I am trying to acquire the necessary skills to work in these areas.
2. I do not think that offices, such as career centres or talent gates, will play a role in helping me find a job, even if I have the required skills.
3. I know the activities of civil society organisations and the contributions I can make to these activities using my skills.
4. I have a dream to become an entrepreneur.
5. I have a dream to be an entrepreneur, but I don't know how to realise it.
6. I would like to take part in projects managed by my department or school.

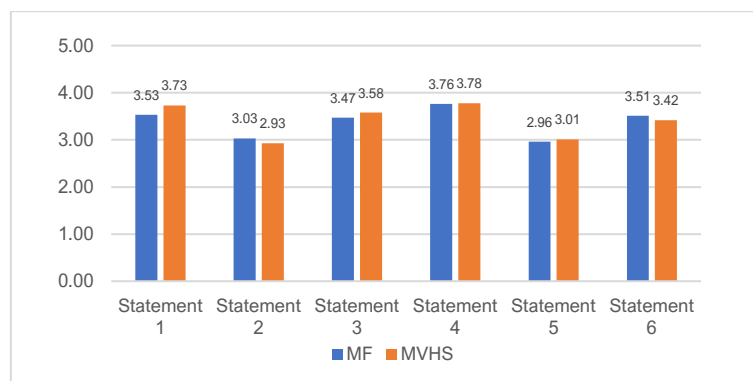


Figure 6. Comparison Between the Responses of MF and MVHS Students for H4a and H4b Statements

Based on the data shown in Figure 6, it can be concluded that students know the sector, the job opportunities in the sector, and the areas where they can work. They also try to develop themselves to be good employees, but they are not very hopeful that offices, such as career centres or talent gates, will help them find a job. It has been observed that the students did not make definite negative evaluations on this issue; however, they are largely undecided. In other words, the students mostly think that they have done their part in familiarising themselves with the work environment, knowing what is expected of them in this environment,

educating themselves, and preparing themselves for working life by doing some voluntary work. They should also do something to find a job since it is not likely that they can find a job through an external office, such as a career centre or employment agency, most probably because of a supply-demand imbalance.

A big alternative to finding a job is creating a job, which is entrepreneurship. The answers to this topic give us an important insight into the students' mindset and general views on entrepreneurship. Firstly, it should be stated that there is not much difference between MF and MVHS students as far as entrepreneurship is concerned. Regardless of their major, most students are interested in entrepreneurship. They see entrepreneurship as a career alternative and have a business idea to start their own venture. However, again, most of the students stated that they did not know which steps should be taken in starting an enterprise. The projects that students participate in during their academic lives are also activities that provide them with experience in working life and give them an idea about career planning. In the study, it has been concluded that students want to take part in such activities, but they do not know how to do this. Also, in his case, one of the tasks of the career centre may be to inform students, not only of career opportunities after graduation and outside the school, but also about activities within the school.

Based on the average values, the general state of the students on this topic has been outlined.

To test differences between the average answers of MF and MVHS students, a student's t-test has been employed, but as all p-values are insignificant at relevant confidence levels, we can assume there is no difference among students in this area.

	Statement	\bar{x} (mean)	MF \bar{x}	MVHS \bar{x}	p-value
H4a	1	3.68	3.53	3.73	0.1321
	2	2.95	3.03	2.93	0.4901
	3	3.56	3.47	3.58	0.3797
H4b	4	3.77	3.76	3.78	0.9020
	5	2.99	2.96	3.01	0.7644
	6	3.44	3.51	3.42	0.5451

Table 6. Values for the Statements Related to H4. (*: $p < 0.05$)

Based on these results H4a is rejected. This means that students do not know exactly what skills their future jobs require and how they can acquire them, and they need help with this.

The results show that students want to be entrepreneurs, thus hypothesis 4b is accepted. It is also seen that students do not have clear information about how they can become entrepreneurs and need guidance in this regard.

6. CONCLUSIONS AND SUGGESTIONS

This study aims to investigate the career awareness of maritime students at the university. The findings obtained at the end of the study can be summarised as follows:

- Maritime students are aware of their strengths and weaknesses and take them into account when choosing the field in which they will study.
- They are not sufficiently informed about basic career-related activities, such as CV writing, applying for a job, etc., and they need assistance from career centres regarding these issues and similar ones.
- Although maritime students are aware of the importance of planning their careers, they do not know which career path they want to take upon graduation.
- They know what kind of activities they should participate in for their career development as

students; however, this may not be valid in the long run.

- Maritime students cannot foresee the changes that may occur in the long term and the opportunities that may arise in the maritime sector.
- MVHS students are better informed about career centres and their functions compared to MF students.
- Maritime students have enough information about various fields that they can work in, and they try to develop themselves to be qualified enough to work in these fields.
- Maritime students should take career planning courses in their first year at the university to gain a more fundamental knowledge of career development in their field.
- Maritime students are interested in entrepreneurship and want to be entrepreneurs. However, they do not know which steps should be taken to realise their entrepreneurial dream.
- To make maritime students more conscious about choosing the right profession for themselves, career planning-related activities, focusing on the maritime sector, should start at an earlier age and level, such as in high school.

This study has been conducted at a university focused on maritime studies, so these conclusions may be valid for other schools that train personnel for the maritime sector. As the maritime sector requires a lot of sacrifice, it expects more dedication from staff to be successful than other sectors. It is known by all concerned that seafarers must live for days or even months away from their loved ones, homes, and land in an environment where their capabilities for social activity are limited. Therefore, it is natural to assume that students who choose to study at maritime schools are aware of these realities and make a more conscious choice. On the other hand, to ensure that students can work in the maritime profession, which is a challenging one, for a longer period and work onboard ships longer, career centres in universities providing education in the maritime field should work more effectively, so that they can provide students with a realistic understanding of the environment they will go to after graduation and get themselves ready for this demanding job.

Undoubtedly, career centres in maritime schools organise activities to introduce the difficult aspects of the profession to the students. However, how these activities can be made more effective and what other activities career centres can engage in could be the subject of future research.

CONFLICT OF INTEREST

The author(s) declared no potential conflicts of interest concerning the research, authorship, and publication of this article.

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