ADDITIONAL ACQUISITIONS FOR TURKISH WATCHKEEPING
OFFICERS TO BE EMPLOYED ONBOARD CRUISE SHIPS

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by

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ABSTRACT

ADDITIONAL ACQUISITIONS FOR TURKISH WATCHKEEPING OFFICERS TO BE EMPLOYED ON CRUISE SHIPS

Cruise industry experienced a remarkable growth in tourism industry over the past decades. Especially in recent years, interest of consumers in tourism sector shifted to cruising around the world which offers different activities and mobility. Number of cruise passengers which is around 18 million in 2009, reached 28 million in 2018 with an increase of 55 percent in 9 years. To meet this increasing demand, cruise ship fleet has also been growing and will continue to grow in the future according to number of new ship orders. However, Turkey cannot get enough share from cruise industry. Similar to share in industry, Turkey is not successful by means of number of watchkeeping officers working on cruise ships.

Training and education of seafarers is standardized by IMO with STCW Convention. Hence, countries ratified the STCW Convention must follow the regulations of STCW and maritime education and training programs must be in compliance with STCW. Also certification standards are defined in STCW for each rank of seafarer. Besides the standard training regardless the ship type a seafarer work on, IMO set a new set of standards for personnel working on passenger ships because of their different operations than cargo ships. Number of people on cruise ships other than officers are significantly greater when compared to cargo ships and this requires more knowledge and skills for those officers especially on crowd management and crisis management main titles. It is seen that maritime education and training system in Turkey is in compliance with STCW standards and Turkey is a considerable country by means of number of officers provided. Furthermore, number of active officers in Turkey is continuing to increase each year. However, in contrary with increasing number, it is apparent that Turkish watchkeeping officers have difficulty in working on cruise ships according to literature and statistics.

In this thesis, after reviewing the literature, both international and national regulations and legislations are examined to investigate the compliance and differences of maritime training and education system in Turkey with global standards. A questionnaire was conducted for cruise lines to gather information about the requirements of the industry. In this study, the reasons why Turkish watchkeeping officers cannot work on cruise ships were investigated and the additional acquisitions that Turkish officers should have in order to increase this number were investigated.

Keywords: cruise ships, cruise industry, Turkish watchkeeping officers, maritime education and training

ÖZET

TÜRK VARDİYA ZABİTLERİNİN KRUVAZİYER GEMİLERDE ÇALIŞABİLMESİ İÇİN GEREKLİ İLAVE KAZANIMLAR

Kruvaziyer endüstrisi son 20 yılda dikkat çekici bir büyüme göstermiştir. Özellikle son yıllarda, sağladığı farklı aktiviteler ve hareketlilik sayesinde, turizm sektöründeki tüketicilerin ilgileri kruvaziyer turizmine kaymaktadır. 2009 yılında dünya çapında kruvaziyer yolcu sayısı 18 milyon iken , son 9 yılda yüzde 55 büyüme göstererek 2018 yılında 28 milyona ulaşmıştır. Bu talebi karşılamak için kruvaziyer gemi filosu da son yıllarda büyüme göstermektedir ve yeni gemi siparişlerine bakıldığında gelecekte de büyümeye devam edeceği söylenebilir. Ancak, Türkiye kruvaziyer sektöründen yeterli payı alamamaktadır. Sektöre benzer olarak, kruvaziyer gemilerde çalışan vardiya zabitleri bakımından da Türkiye'nin yeterince başarılı olmadığı görülmektedir.

Gemiadamlarının eğitimleri IMO tarafından STCW sözleşmesi ile standart hale getirilmiştir. Dolayısıyla STCW sözleşmesine tarafa olan ülkeler sözleşmenin gerekliliklerini yerine getirmeli ve denizcilik eğitimi müfredatlarını sözleşmeye uyumlu olarak hazırlamalıdırlar. Ayrıca tüm yeterlilik seviyesindeki gemiadamlarının sertifikasyon standartları da sözleşmede tanımlanmıştır. Gemiadamının hangi tip gemide çalışacağından bağımsız olan standart denizcilik eğitiminin yanısıra, kargo gemilerine göre farklı operasyonlara sahip olmasından dolayı, IMO tarafından yolcu gemilerinde çalışacak personel için yeni eğitim standartları belirlendi. Kargo gemileriyle karşılaştırıldığında zabitler dışındaki insan sayısı çok fazladır ve bu durum özellikle topluluk yönetimi ve kriz yönetimi ana başlıklarında zabitlerin daha fazla bilgi ve deneyim sahibi olmasını gerekmektedir. Hatta Türkiye'deki aktif zabitlerin sayısı her geçen yıl artmaktadır. Ancak, zabit sayısının artmasına karşılık, literatür ve istatistikler incelendiğinde kruvaziyer gemilerde çalışmakta zorluk yaşadığı açıktır.

Bu tezde, ilgili literatürün incelenmesinden sonar uluslararası ve ulusal düzenlemeler ile mevzuat incelenmiş, Türkiye'deki denizcilik eğitim sistemi ile uluslararası standartların farkları ve uyumlulukları araştırılmıştır. Sonrasında kruvaziyer gemi işleten şirketler için bir anket hazırlanmış ve sektörün gereklilikleri konusunda bilgi edinmek amacıyla anket uygulanmıştır. Bu çalışmada, Türk vardiya zabitlerinin kruvaziyer gemilerde çalışamama sebepleri incelenmiş ve bu sayıyı arttırabilmek için Türk vardiya zabitlerinde bulunması gereken ilave kazanımlar araştırılmıştır.

Anahtar kelimeler: kruvaziyer gemiler, kruvaziyer sektörü, Türk vardiya zabitleri, denizcilik eğitimi

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LIST OF ABBREVIATIONS

BIMCO	Baltic and International Maritime Council
CAGR	Compound annual growth rate
CLIA	Cruise Lines International Association
EMSA	European Maritime Safety Agency
EU	European Union
FCCA	The Florida-Caribbean Cruise Association
GMDSS	Global Maritime Distress and Safety System
IMO	International Maritime Organization
ITF	International Transport Workers Federation
MARPOL	International Convention for the Prevention of Pollution from Ships
MCA	UK Maritime and Costguard Agency
MLC	Maritime Labour Convention
MTI	Turkish Republic Ministry of Transportation and Infrastructure
SOLAS	International Convention on Safety of Life at Sea
STCW	International Convention on Standarts of Training, Watchkeeping and Certification of Seafarers
UNCTAD	United Nations Conference on Trade and Development

1. INTRODUCTION

Cruise shipping is an increasing trend among vacation types. Because of the increasing demand for cruise tourism, cruise industry has been growing in last 20 years. Increasing numbers of passengers travelled and ships in cruise fleet demonstrate the growth. Taking into account the projections and new cruise ship orders, it can be expected to experience a continuing growth in the industry in the future.

In the scope of International Maritime Organization (IMO), there is no specified category for cruise ships and they are classified in passenger ships. IMO defines passenger ships as a ship carrying more than 12 passengers. However both passenger and cruise ships actually carry passengers, there is a significant difference between purposes of these passengers. A passenger ship can be defined as a ship carrying people who only want the transportation service from a point to another. On the other hand, Dilek (2015) defines that a cruises are ships with accommodation and certain standards of sizes and comfort conditions which are used for purpose of holiday. According to Bülbül (2002), purpose of cruising not to move passengers between two points but to visit various ports within a specified time frame within a certain period of time and to carry out activities in these ports. Kizielewicz (2013) defines cruise ship as a ship voyaging at least 60 hours for mainly the purpose of pleasure.

Because of the nature of cruise ships, they have a greater number personnel and passengers onboard compared to cargo ships. Accordingly there are differences in operations of cruise ships especially in emergency situations. Therefore IMO which is the main regulating body of maritime industry including education and training of seafarers, established additional training content for personnel working on cruise ships.

Turkey supplies a considerable number of seafarers to maritime industry. Especially in recent years, the number of active officers has increased remarkably (Ministry of Transportation and Infrastructure, 2015-2018). Considering that the number of maritime education and training institutions has increased considerably in the last 10 years, it can be foreseen that the number of active officers will continue to increase. However it is known that there are difficulties in employment of Turkish officers on ships except Turkish owned ships (Ellis and Sampson, 2008). In addition to that, as it can be seen in past studies in Turkey, there is almost no Turkish officer working on cruise ships.

1.1. Aim of the Study

In this thesis, suggesting additional acquisitions for Turkish watchkeeping officers to be employed on board cruise ships will principally be aimed. Also it is intended revealing a beneficial study for Turkish Watchkeeping officers to help them to be employed at better standards in maritime industry. Main research questions of this thesis are as follows:

    i.   Is it possible for Turkish watchkeeping officers to be employed on cruise ships?

    ii.   Is the maritime education and training in Turkey adequate for Turkish officers to be employed on cruise ships?

    iii.   What are the additional acquisitions and competencies for Turkish watchkeeping officers to be employed on cruise ships?

1.2. Importance of the Study

First of all, maritime industry is advancing day by day thanks to developing technology and changing needs. In parallel, the training of seafarers should also progress and remain up-to-date. It is thought that Turkish watchkeeping officers, whose numbers have been increasing recently, have the potential to work on cruise ships, which are a different branch of maritime transport. However, it is seen that Turkish watchkeeping officers do not work on cruise ships. Although Turkish watchkeeping officers work on many type of ships, it is

considered important the reason they cannot work on cruise ships. In this respect, the study is expected to be important.

Secondly, although the number of Turkish watchkeeping officers and maritime training institutions increased in recent years, it was observed that Turkish owned ships did not increase at the same rate. Considering the high dependence of Turkish watchkeeping officers on Turkish owned vessels, it is thought that they may have difficulties in to be employed in the near and medium future. The study can also be said to be important in creating new opportunities for them.

Furthermore, during literature review process, it was found that there is no study in the national or international literature dealing with this subject particularly. In this respect, the study is expected to contribute to the literature.

1.3. Methodology

It is intended to begin this thesis by reviewing the literature. For that purpose, academic studies on directly and indirectly related subjects were examined. Research subjects were determined as cruise industry, cruise ships, seafarers, employment of seafarers and maritime education and training. Literature review was started by examining M.Sc. and Ph.D. thesis in Turkish national database. It is followed by a research on academic papers published in Turkey. Finally, academic studies in international databases were researched.

Reviewing of literature was followed by examination on international organizations, associations and both national and international legislations on seafarers and maritime education and training. Examination on International Maritime Organization (IMO) which is the highest body of maritime industry globally and on The International Convention on Standards of Training, Certification and Watchkeeping of Seafarers (STCW) which regulates minimum standards of maritime training were conducted first. Then, related

regulations and directives of Turkish Ministry of Transportation and Infrastructure which is the highest national authority on maritime industry in Turkey were investigated. At the same time, curriculums of maritime training institutions in Turkey were examined.

To achieve a reasonable and beneficial conclusions, a questionnaire was prepared for cruise lines to obtain effective data on the subject. Survey was conducted between December 2018 and April 2019 as online format. By conducting a survey, it is aimed to obtain data about employment processes, requirements for officers and internal training programs of cruise lines. Also an online research was made on official websites, career and internal training pages of cruise lines to obtain assistive information.
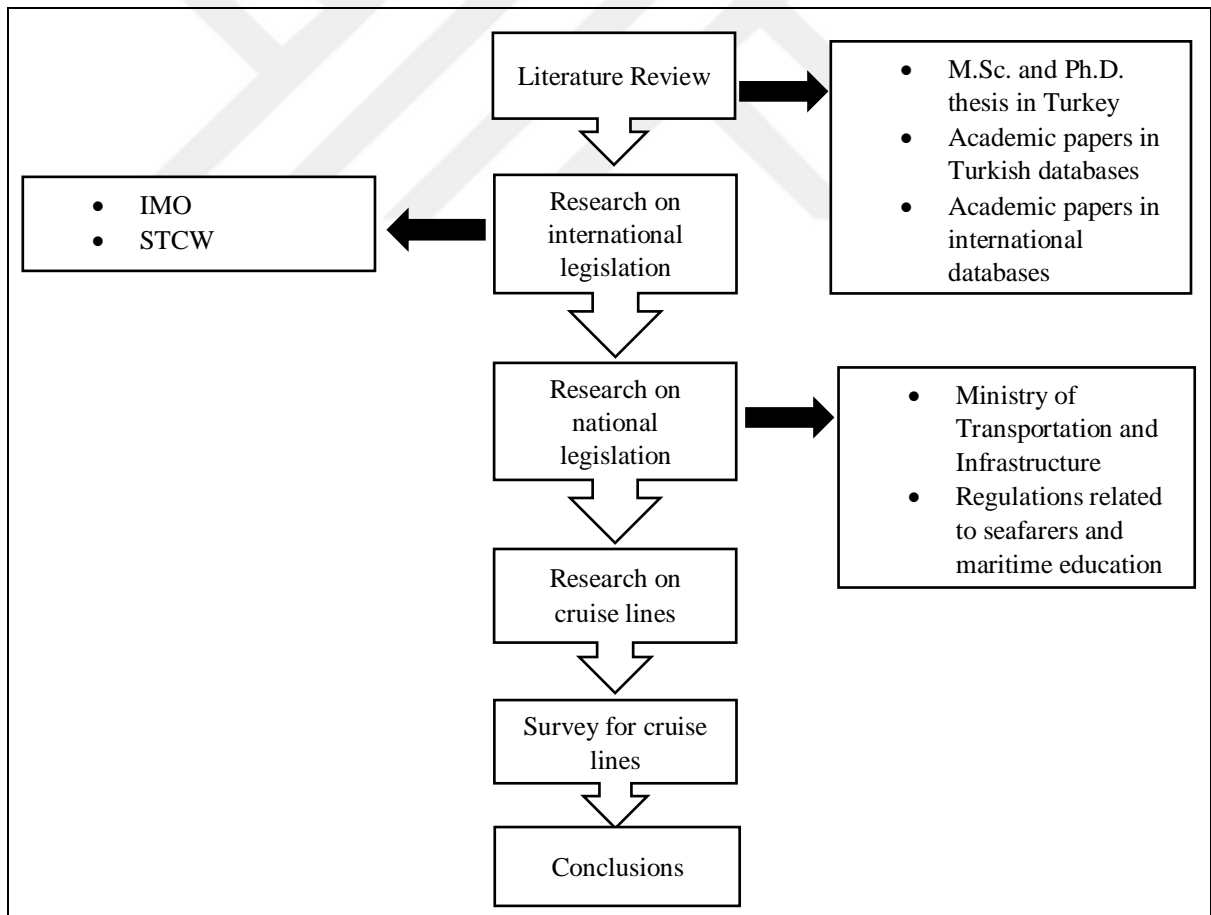
Figure 1.1. Flowchart of study

1.4. Summary of Literature Review

In the scope of this study; articles, MSc thesis and PhD thesis made both in Turkey and in the world are examined. Besides, national legislation in Turkey and international legislations related to maritime industry issued by internationally binding organizations are studied to create a background for this study and to support the results and suggestions. Main research fields are determined as cruise industry, maritime training, and employment in maritime industry and seafarers. Also relevant studies in marine tourism and maritime economics fields are tried to be benefitted.

When MSc. and Ph.D thesis made in Turkey are examined, although there are not many of them, it can be seen that there is an increasing number of studies related to cruise industry especially in last 10 years. These studies are mainly studied in maritime, tourism, transportation, public administration and economics fields. Port efficiency, cruise destination preferences, behaviors of cruise passengers, demand for cruise tourism and economic impact of cruise industry to port cities and local businesses are focused particularly in the studies.

Bircan (2014) studied on cruise ports and investigated which ports in Turkey are more active and can create cruise tourism attraction. As a result the study, he emphasized that cruise tourism has gained importance in recent years and suggested establishing new cruise ports at specified cities. Bayazıt (2015) has a study on cruise market and cruise destinations focusing on Turkish passengers and cruise ports in Turkey. Çiğdemli (2016) made a comparative analysis of cruise ports in Mediterranean region and investigated the status of Turkey from tourism perspective. Çetinkaya (2016) concentrated on cruise passengers and investigated their experiences on cruise ships or ports, their satisfaction and behavioral intentions. She also suggested ways to achieve a development in cruise tourism in Turkey. Abolafya (2019) studied on cruise ports and investigated İzmir cruise port specifically in the context of potential to be a home-port. Çelebi (2017) investigated the impact of cruise tourism on local residents and their perceptions. Gedik (2011) studied on

marketing operations of cruise lines and as a result of investigations he determined the potential of cruise tourism in Turkey in the context of marketing.

When M.Sc and Ph.D thesis on maritime related fields are examined; marine technologies, maritime management, maritime economics and finance, maritime history, marine insurance and maritime education are fields generally studied on. While it is apparent that number of maritime related studies have been increasing in recent years, there are several studies on maritime education and employment.

Fidan (2019) investigated the decision-making difficulties on career selection process of students in maritime high schools in İzmir. Çetin (2019) investigated the attitudes of maritime high school students on e-learning. Gölbol (2018) also studied on maritime high schools and suggested a curriculum for education of deck department students. Eryaşa (2017) examined the recruitment methods in human resources management in the context of seafarers. Çelik (2014) also studied on human resources planning in maritime industry and made a research on Turkish seafarers. Deniz (2012) investigated the problems of maritime education in Turkey and suggested solutions. Özdöner (2011) compared the maritime education of maritime high schools with STCW Convention. Köseoğlu (2011) analyzed the career planning criterias of oceangoing watchkeeping officers of Dokuz Eylül University graduates between 1999 and 2008.

When academic papers in Turkey are examined; it is apparent that destinations, ports and passengers are focused. These subjects are generally studied in the context of tourism, economics and politics. Öztürk and Tanrıverdi (2017) investigated the characteristics of international cruise passengers and stated that there is a correlation between passengers' demography and experiences on cruise voyages. Sezer (2014) studied on Kuşadası cruise port particularly. Dilek et al. (2015) investigated the İzmir cruise port and its potential to become a home port for cruise lines. Aslanoğlu and Balakan (2014) analyzed the cruise tourism on Turkish economy while conducting a comparative study on İstanbul and Barcelona cruise ports. Dikeç et al. (2014) researched the purchasing behaviors of cruise

passengers at port facilities. Büyükipekçi (2016) studied on the port taxation procedures of Turkey and Greece which are rivals in cruise tourism in Mediterranean region. Akgül (2017) studied on the cruise port in Turkey researching market structure and competitiveness.

When national databases for academic papers are researched for the subjects related maritime education and Turkish seafarers, it can be seen that several studies has been made in recent years. Asyalı and Zorba (2010) investigated the effects of global economic crisis on human resources of maritime industry. Aşkın et al. (2013) studied on maritime education and investigated the compliance of maritime education activities with international conventions and organizations. Demirel and Bayer (2015) studied particularly on the maritime safety education of seafarers and improvements. Çaylan et al. (2016) researched the connection between internship programs and employment process. Koca (2016) studied on maritime education and training in Turkey reviewing maritime training institutions and problems arising from their programs. Şeremet and Çetin (2016) studied on the learning styles of students in Maritime Transportation and Management Engineering programs. Yılmaz (2017) studied on maritime education of Turkish seafarers and their satisfaction about working at sea. With a detailed survey, he made a detailed statistical analysis on Turkish seafarers. Nas et al. (2017) also studied on the profile of Turkish watchkeeping officers' manpower. With the data obtained from Turkish shipping companies, a detailed statistical review of Turkish watchkeeping officers was made. Study can be considered as a reference for this kind of researches because of its large sample. Özdemir et al. (2017) studied on the future of maritime training and education in Turkey and made a research aimed at lecturers in maritime training institutions under the supervision of Council of Higher Education. Muslu (2018) aimed to investigate the problem of not being able to employ Turkish seafarers in global maritime labor markets and provide solutions.

For the purpose of this study, international databases of academic papers and books are investigated on the fields of cruise industry, maritime training and education, cruise ships crew and seafarers. Studies on cruise industry are mostly performed in economics, tourism, management and marketing fields. Chang and Lee (2017) examined the market structure and financial statements of cruise lines resulting an efficiency analysis of major cruise lines.

Hwang and Han (2017) investigated the importance of brand prestige of cruise industry. Clancy (2017) studied on global cruise market and focused on power and profits in the market. Brida and Aguirre (2009) studied on economic impacts of cruise tourism for destinations. Marksel et al. (2016) studied on expenditures of cruise passengers at destination ports. Ruzic et al. (2015) studied particularly on river cruise industry and studied on marketing.

Although there are several papers discussing personnel working on cruise ships, they do not focus on officers significantly. Wu (2005) made a statistical study on the global labor market for cruise industry and investigated the profile of labor market. Wiscombe (2011) made a projection on the study for the future of staffing the cruise industry. Zhao (2002) studied on the emotional labor in the labor market of seafarers working on cruise ships. Mileski et al. (2014) studied on the cruise ship disasters, discussed the effects of human factor and safety regulations on cruise ships. Vukonic (2016) studied on hierarchical structure, organizational factors, management of emergency situations, training of crew members and crowd management on cruise ships. Veronneau (2012) studied on the marine operations on cruise ships, policies of cruise companies for marine operations and discussed the differences of operations between cruise ships and cargo ships. Terry (2011) studied on human resources for the labor market of cruise industry. Chin (2008) discussed the multinationality of personnel working on cruise ships.

It is seen that there are many studies on maritime education and these studies deal with the subject from different aspects. However, studies on officers working on cruise ships or any other specific type of ship were not found during review. Lau and Ng (2015) studied on graduates of maritime education and investigated the motivations and expectations that lead them to maritime industry. Kalnina and Priednieks (2017) studied on the proficiency improvement of training and education of seafarers. Horck (2010) examined the increasing number of women in maritime education and reaction of shipping industry to gender equality. Castells et al. (2014) studied on simulator-based maritime education and suggested a model course for revalidating competencies of deck officers. Yabuki (2017) discussed the changes of maritime education and training arise from the 2010 Manila amendments to

STCW convention. Ziarati et al. (2016) discussed the innovations in maritime education and training.

As a result of reviewing the literature for this thesis on the fields of cruise ships, cruise industry, seafarers, watchkeeping officers and maritime education and training; it is seen that there are several studies both in Turkey and international. However, a study particularly focused on watchkeeping officers working on cruise ships was not found.

2. CRUISE INDUSTRY

Cruise industry was examined under two subheadings to reveal the current situation of industry and estimations for the future.

2.1. Cruise Industry in the World

Cruise industry has continued to be one of the brightest segments of the maritime sector with strong expansion, high investments and the increase in demand in recent years. The increase in the number of passengers traveling by cruise ships is an important indicator of the growth in the sector. According to Cruise Lines International Association (CLIA), which was established in 1975 and aims to provide support to industry for safe, secure and healthy environment; in recent years, the number of passengers preferring cruise tourism has showed a stable and remarkable growth reaching 28,2 million in 2018 while it was 17,8 million in 2009 (CLIA, 2019). As shown in Table 2.1, since 2009 approximately 200 million passengers have travelled by cruise ships and the sector experienced 4,8% Compound Annual Growth Rate (CAGR). Also according to projections, number of passengers is estimated to increase and reach over 27 million in 2018.

Table 2.1. Number of Cruise Passengers by Years (CLIA, 2019)

Years	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of Passengers (millions)	17,8	19,1	20,5	20,9	21,3	22,3	23,1	24,7	25,8	28,2

When the origins of cruise passengers are examined, it is seen that North America is the region that has most demand for cruise tourism. North America, which provides more than half of the cruise passengers, is followed by Europe with a share of more than 25 % as shown in Table 2.2.

Table 2.2. Origins of Cruise Passengers in 2016 (FCCA, 2018)

Origin	Percentage
North America	54,5%
Europe	26,0%
Asia	9,2%
South America	3,5%
Oceania	5,2%
Middle East/Africa	1,6%

As the number of passengers travelled by cruise ships shows the growth in industry, current cruise ship fleet and new ship orders for next years also indicates increasing trend. There are more than 50 cruise lines under the membership of CLIA and these companies form more than 95% of whole industry (CLIA, 2017). According to data gathered from CLIA, and compiled from official websites of cruise lines, more than 500 ocean and river cruise vessels are currently operating as shown in Table 2.3. In addition, number of finalized ship orders shows that cruise companies are attempting to meet the increasing demand for cruise tourism. As shown in Table 2.4, cruise lines have an effort to enlarge their fleet or decrease the average age of their ships and as a result, in the next 3 years more than 60 cruise ships will begin their voyages. A total of 109 cruise ships are expected to be active until 2027 (Cruise Industry News, 2018). When cruise operators are examined, it is seen that major companies leads the industry by merger or acquisition activities. Three major companies; Carnival Cruises, Royal Caribbean and Norwegian Cruise Lines; operate multiple cruise brands under their management. In addition, MSC Cruise Lines, which is privately held and also the second biggest container shipping line in the world, follows these major companies as fourth brand by means of number of cruise ships owned. Approximately 90% of the total ocean cruise ship fleet is operated by these four major companies. Due to these companies hold the market power, it can be said that global cruise industry is close to an oligopolistic structure.

Table 2.3. Number of Cruise Ships (Drawn by author due to various sources)

Ocean Cruise Ships	256
River Cruise Ships	251
Total	507

Table 2.4. New Cruise Ship Orders for Next Years (Cruise Industry News, 2018)

Years	Fixed Cruise Ship Orders
2019	25
2020	20
2021	20
2022	17
2023	9
2024	6
2025	5
2026	5
2027	2

When the demand of passengers who prefer cruise tourism is examined, it is seen that there is no change by years in the regions that have the largest share. As shown in Table 2.5, the percentage of the Caribbean region in terms of the number of passengers visited has declined from 40,4% in 2004 to 35,4% in 2017 experiencing 5% decline. However Caribbean is the region that host most cruise passengers among whole cruise destinations. Mediterranean region, in which Turkey is also located, has consistently become the second region by means of number of cruise passengers hosted. But the region experienced 4 percent decline from 2014 to 2017 while percentage of passengers decreased from 19.8% to 15%. Another remarkable point in Table 5 is that Asian and Australian regions are quite popular in recent years. While the total share of these two regions was 3.4% in 2008, it reached 10.3% in 2014 and 16% in 2017. Decreasing passenger rates in the Caribbean and Mediterranean regions and increasing the number of passengers visiting Asia and Australia indicate that destination demands of cruise passengers has showed a notable shift.

Table 2.5. Percentage of Cruise Destinations by means of Passengers Hosted (Aslanoğlu and Balakan, 2016; The Florida-Caribbean Cruise Association, 2018)

	2004	2008	2014	2017
Caribbean	40,4	37,2	37,3	35,4
Mediterranean	12,6	17,5	19,9	15,8
Other Europe	9,8	8,3	11,1	11,3
South America	1,4	2,9	3,3	2,1
Alaska	7,7	7,6	4,5	4,3
Asia	0,5	1,2	4,4	10,4
Australia	0,9	2,2	5,9	6,0

Cruise tourism provides significant economic contribution to the regions where cruise ports are located. The economic contribution of cruise tourism can be classified as direct, indirect and induced impacts. Direct contribution refers to the effect provided by onshore expenditures of cruise passengers and crew or purchases of cruise companies. Indirect impact refers to the spending by directly impacted businesses for those goods and services they require to support cruise industry. Induced contribution is arose from the increased income and expenditures of firms or households who get economic contribution from cruise industry directly and indirectly. (Marksel et al., 2016)

The direct economic contribution of cruise ships to the ports they visit takes place in three ways; onshore expenditures of cruise passengers, onshore expenditures of crew and purchases of cruise lines as stores and supplies for ships. However it is difficult to make a general estimation because onshore expenditures vary across different destinations. For instance, according to different studies and reports, average onshore spending of a cruise passenger visiting Caribbean Region ports is $95 while it is £50 at cruise ports in Slovenia. Another study shows that average spending is £79 at ports of Estonia. On the other hand, it is stated that passengers visiting ports on Atlantic coast of Canada spend an average of $63.

According to Business Research and Economic Advisors (BREA, 2017) it was estimated that cruise industry generated $57.9 billion direct economic contribution in 2016 by onshore expenditures of cruise lines, passengers and crew. In addition, BREA stated that $68.03 billion was generated as indirect and induced contribution and global economic impact of cruise industry reached $126 billion in 2016 according to latest data.

2.2. Cruise Tourism in Turkey

Turkey, with its location which provides natural beauties and its history that hosted many civilizations providing rich cultural heritage, has been one of the most demanded countries for tourism activities. The number of cruise passengers traveled to Turkey, which were approximately 582.000 in 2003, increased to 2.240.776 in 2013 as shown in Table 2.6. With a steady increase in general, except 2009 which an economic recession was experienced globally, number of cruise passengers showed a growth with a 13.8% CAGR until 2013. Number of cruise ships visited Turkey is also increased from 887 to 1572 between 2003 and 2013 years. (Ministry of Transportation and Infrastructure, 2018)

Number of passengers, which reached peak in 2013, began to slightly decline after that point but in 2015 these numbers were still close to previous years. However, in 2016 and 2017, a dramatic decline was experienced in the number of cruise ships and passengers visited Turkey. Over two years numbers of cruise ships visited Turkey which was 1456 in 2015, declined to 590 and then 307. Concordantly, the number of passengers decreased by more than 80% in two years. According to Turkish Ministry of Transportation, Maritime and Communication data, decline has continued in 2018 and until now only 176 ships and 155,414 passengers visited Turkey. Although 2018 is not yet finished, in the rest of the year, the number of passengers visiting the country is not expected to increase much.

Table 2.6. Number of Cruise Ships and Cruise Passengers Visited Turkey by Years
(Ministry of Transportation and Infrastructure, 2018)

	Number of ships	Number of passengers
2003	887	581.848
2004	927	645.264
2005	1048	757.563
2006	1317	1.016.314
2007	1421	1.368.400
2008	1612	1.605.372
2009	1328	1.484.194
2010	1368	1.719.098
2011	1623	2.191.420
2012	1685	2.133.930
2013	1572	2.240.776
2014	1385	1.790.125
2015	1456	1.889.370
2016	590	628.033
2017	307	306.887
2018	176	155.414

When the number of cruise ports in Turkey is examined, it is seen that an average of 20 ports met the demand between 2011 and 2016. In 2017, number of active cruise ports decreased to 15. Decreasing trend in demand of cruise passengers for Turkey resulted in a decrease in supply and so far in 2018 only 11 cruise ports welcomed cruise passengers. İstanbul, İzmir, Kuşadası and Marmaris ports took the first four places in terms of number of passengers in every year between 2011 and 2015. Between these years, these four ports accommodated at least 80 percent of the passengers visited the country. Although there were changes in the first four ports in 2016 and 2017, port of Kuşadası continued to become the most crowded cruise port. (Ministry of Transportation and Infrastructure, 2018)

The economic contribution to Turkey by cruise tourism is still continuing despite the decreasing trend; but by means of management of a cruise line, Turkey has no economic profits. Although Turkey had two cruise ships that have sailed under national flag in the past, at the present time there is not any Turkish owned cruise line or cruise ships (Turkish Chamber of Shipping, 2017). Also Bayazıt (2015) stated that there is not even one Turkish cruise ship among more than 400 cruise ships including river cruises and approximately 65.000 Turkish passengers traveling in 2014 are traveling by ships of foreign companies and spending their expenses on foreign company ships.

Although the cruise industry continues to grow globally, Turkey is in a downward movement on this field. Demand for Australia and Asia regions has increased especially in last years and shifting demand affected other regions negatively. Increasing demand for river cruising and increasing potential of cruising to polar region also have potential to affect other regions negatively by gaining a share from destination market. Also it can be considered that terrorist attacks occurred in Turkey in 2015 and 2016 caused security concerns on cruise passengers and have a noteworthy effect on decreasing trend in cruise tourism in Turkey.

2.3. Evaluation of Cruise Industry

When the data is examined for the last 20 years, a remarkable growth in cruise industry can be seen. To meet this increasing demand, number of cruise ships has been increasing and also new cruise ships are ordered for the future. Considering the growth in the cruise industry and increase in the number of cruise ships, it can be evaluated that there would be more employment opportunities for seafarers to work on cruise ships and this may lead Turkish watchkeeping officers to have more job opportunities in cruise industry.

3. GLOBAL STANDARDS OF MARITIME EDUCATION AND TRAINING

In this chapter, operational functions and procedures of IMO, content of internationally standardized maritime training and education and international requirements to become an officer was examined.

3.1. International Maritime Organization (IMO)

Shipping industry is one of the fields which has the most international interactions in globalized world. In the course of time, it was considered that there is a need for specifying rules and regulations for this multilateral industry. Approaching the end of 1940's, several countries mentioned that a body which has international authority should be established to create a safer and more effective framework for shipping industry. As a result of an international conference held in Geneva in 1948, participated countries agreed on adopting International Maritime Convention. The convention entered into force in 1958 and hereafter International Maritime Organization was founded as a specialized agency of United Nations in 1959. As of early 2019, IMO has 170 member states and 3 associated member states. At the top of IMO's management Assembly appears as the highest governing body which consists of all member states. Under the Assembly there is Council which is formed by 40 member states selected by the Assembly and acts as executive organ of IMO. Since IMO is a technical organization, most of its work is carried out by 5 committees and 7 sub-committees which are specialized in different fields. (IMO, 2018)

According to IMO's statement, "The mission of the International Maritime Organization is to promote safe, secure, environmentally sound, efficient and sustainable shipping through cooperation. This will be accomplished by adopting the highest practicable standards of maritime safety and security, efficiency of navigation and prevention and control of pollution from ships, as well as through consideration of the related legal matters

and effective implementation of IMO's instruments with a view to their universal and uniform application." The overall objectives of IMO can be summed up as safe, secure and efficient shipping on clean oceans. By the time IMO came into existence in 1958, several important international conventions had already been developed, including the International Convention for the Safety of Life at Sea of 1948, the International Convention for the Prevention of Pollution of the Sea by Oil of 1954 and treaties dealing with load lines and the prevention of collisions at sea. IMO's primary aim is keeping existing conventions up to date with amendments and to meet the objectives, IMO adopts international conventions and codes which are required by changing nature of maritime industry. Over the years, IMO has promoted the adoption of some 50 conventions and protocols and adopted more than 1000 codes and recommendations concerning maritime safety and security, the prevention of pollution and related matters. At the present time, IMO is shaping the global maritime industry by three main international codes which are basically related to maritime safety, environment protection and maritime education. These are The International Code for the Safety of Life at Sea (SOLAS), The International Convention for the Prevention of Pollution from Ships (MARPOL), The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) and Maritime Labor Convention. These conventions and Maritime Labor Convention issued by International Transport Workers Federation (ITF) which are also known as four pillars of maritime industry are shaping the global maritime industry. (IMO, 2018)

The submission of the conventions by the related sub-committees and their approval by the council is the first stage of a long process. As a result of approval by member states, a convention becomes binding for individual governments which have ratified it. Until the deadline stated in conventions, there would be a transitional stage for related parties to adapt new regulations and conventions come into force after deadlines. Although IMO has authority to promulgate codes and conventions, IMO does not have sanction authority directly to those who do not comply with them. IMO, which holds the legislative power, has transferred its executive and jurisdiction to the member states. Member states, as flag states and port states, have inspection authority on maritime companies, shipyards, vessels, seafarers and maritime education institutions. Member states have also authority to suspend activities or certificates of these parties in maritime industry when a minor nonconformity is

detected or to cancel their operations indefinitely when a major nonconformity occurs. (IMO, 2018)

Among the international conventions of IMO, STCW is the one regulating training and education of seafarers globally by setting minimum and same standards for each country who ratified the convention to achieve safer operations in the maritime industry.

3.2. The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)

STCW Convention was first adopted by Maritime Safety Committee under the Council of IMO in 1978 and entered into force in 1984. The main purpose of STCW can be summed up as to enhance a better training and certification for seafarers to develop a safer environment for human life or property and to protect marine environment from pollution of maritime operations. As stated in the STCW 1995 amendments, the convention became necessary in order to clarify the standards of competence required, introduce qualification requirements for trainers and assessors, provide effective mechanisms for enforcement of its provisions and allow greater flexibility in the assignment of functions on board ship and thus broaden the career opportunities of seafarers. Currently 164 member states of IMO have ratified STCW Convention and Turkey is one of the ratified countries since 1992. As stated in Article III of convention, the convention shall apply to the seafarers working onboard seagoing ships entitled under the flag of a party except to seafarers working onboard warships, fishing vessels, pleasure yachts not engaged in trade and wooden ships of primitive build. (IMO, 2018)

Following the adoption, STCW Code was amended several times. With the amendment in 1991, content related to Global Maritime Distress and Safety System (GMDSS) entered into code. In 1994, special training of personnel working on tankers and in 1997, special training of personnel on passenger and ro-ro ships were defined in the code. Also there were two major amendments in 1995 and 2010. 1995 amendment brought

enhancement of port state controls and quality standard systems, training assessment and certification procedures. In 2010 amendment, which is the latest version of the code, new rest hours of seafarers, grades of certificates of competency, refreshing training requirements, security training and new medical standards were defined. (STCW, 2010)

STCW Convention consists of three main sections which are the articles, the annex and the STCW Code. The articles forms the legal responsibilities of parties of the convention and the annex explains the technical details to meet responsibilities specified in the articles. The core part of the convention, STCW Code is formed by two parts. Part A outlines the mandatory minimum standards of maritime training and certification while Part B includes only recommended guidelines on maritime training and certification. General content of Part A of the Code can be listed as shown in Table 3.1.

Table 3.1. Contents of STCW Code Part A and Part B (STCW, 2010)

	Part A	Part B
Chapter I	Standards regarding general provisions	Guidance regarding general provisions
Chapter II	Standards regarding the master and department	Guidance regarding the master and department
Chapter III	Standards regarding engines department	Guidance regarding engines department
Chapter IV	Standards regarding radio personnel	Guidance regarding radio personnel
Chapter V	Standards regarding special training requirements for personnel on certain types of ships	Guidance regarding special training requirements for personnel on certain types of ships
Chapter VI	Standards regarding emergency, safety, medical care and survival functions	Guidance regarding emergency, safety, medical care and survival functions
Chapter VII	Standards regarding alternative certificates	Guidance regarding alternative certificates
Chapter VIII	Standards regarding watchkeeping	Guidance regarding watchkeeping

As stated in Article 10 of the convention, application, assessment and control authority is not executed by IMO directly but is done by member states such as execution other IMO conventions. Also according to Article 1 "The parties undertake to promulgate all law, decrees, orders, and regulations and to take all other steps which may be necessary to give the convention full and complete effect, so as to ensure that, from the point of view of safety

of life and property at sea and the protection of the marine environment, seafarers on board ships are qualified and fit for their duties." With regards the certification, this means that a party state has right to control ships other than specified in Article III to ensure that if seafarers working onboard are certificated correctly. Ships to be inspected by party states may be not only the ships sailing under the flag of party state, but also foreign flagged ships calling the ports of these states. In case of a nonconformity as a result of inspections, party states have right to impose sanctions on the ship and/or seafarers. (STCW, 2010)

After ratification, party states have also responsibility for regulating maritime training in their countries. The Convention requires that training and assessment of seafarers are administered, supervised and monitored in accordance with the provisions of the STCW Code; and those responsible for training and assessment of competence of seafarers are appropriately qualified in accordance with the provisions of the Code. Therefore, the primary task of party states is to set the minimum standards of maritime training and certification in the country through the relevant national administration in accordance with the national legislation. Besides setting the standards, according to regulation I/6 of the convention, party states must supervise and monitor the training and certification of seafarers in training institutions in accordance with the part A-I/6 of STCW Code which is mandatory. Thus it can be said that national administrations must inspect maritime training institutions at regular intervals to make assessment if they are compatible with the convention. This process covers the initial approval of a training institution. According to STCW, prior to approval and during the monitoring, administrations must be satisfied with the following issues:

- Scope and objectives of the training,
- Minimum entry standards,
- Staff qualifications, experience in subject, teaching and assessment skills,
- Necessary facilities and equipment,
- Syllabus, timetable and course materials,
- Methods of training and assessment,
- Certification on completion,
- Maintenance of records,
- Quality standards system.

On the other hand, because of IMO handed over the responsibility of implementation and inspection of STCW Convention to party states, European Union (EU) has authorized European Maritime Safety Agency (EMSA) which is a decentralized agency of EU to ensure if national administrations of EU countries regulate maritime training in accordance with the convention. Taking into account that EU flagged ships and ships sailing in EU waters are not manned only with seafarers from EU countries, EMSA broaden inspection scope including non-EU countries. In this context, EMSA conducts an audit on the legislation of the national administrations of the party states once in 5 years and then checks that the maritime education institutions comply with these legislation. (EMSA, 2018)

3.2.1. Competency and Level of Responsibility

Under the Part A of STCW Code, IMO defines the competency areas for every seafarer to be certified. Seafarer candidates must be certified in related competency field in accordance with their profession. As stated in part A-I/1 of the STCW Code, standard of competence means the level of proficiency to be achieved for the proper performance of functions on which is a way of classifying onboard duties in accordance with the internationally agreed criteria. IMO grouped standards of competencies under the following seven functions; (ITF, 2017)

i. Navigation
ii. Cargo handling and stowage
iii. Controlling the operation of the ship and care for persons on board
iv. Marine engineering
v. Electrical, electronic and control engineering
vi. Maintenance and repair
vii. Radio communications

IMO also defines levels of responsibility as management level, operational level and support level for seafarers to make correct certification. Management level refers to working as master, chief officer, chief engineer and second engineer. Operational level is the level of

responsibility which contains working as an officer in charge of a navigational or engineering watch of a ship. Support level can be defined as the level of responsibility in which the tasks and responsibilities ordered from a superior in management or operational level are carried out under the control of these superiors in accordance with procedures. The thinking behind dividing all duties on board into competencies, functions, and levels of responsibility is that certificates should be awarded on the basis of the specific duties the seafarer carries out on board rather than on ship departmental divisions. Below table shows relevant functions for each department and each level of responsibility. Navigation, cargo handling, controlling the operation of ship and care for persons on board and radio communication functions are related with seafarers at operational and management level of deck department who are capable of working as watchkeeping officers on board.

Table 3.2. Related Functions for Departments and Level of Responsibilities
(ITF, 2017)

Department	Function	Level of Responsibility		
		Management	**Operational**	**Support**
Deck	Navigation	X	X	X
	Cargo handling and stowage	X		
Deck and Engine	Controlling the operation of a ship and care for persons on board	X	X	
Engine	Marine engineering	X	X	X
	Maintenance and repair	X	X	
	Electrical, electronics and control engineering	X	X	
Deck/Radio	Radio Communication		X	

3.2.2. Departments and Ranks Defined in STCW

The crew on board merchant ships is divided into two main departments conventionally as deck and engine departments. Under the master who is the superior of these two departments, each department have different level of ranks related to level of responsibility and competency they must have. Figure 3.1 shows the different ranks in each department and their level of responsibility.
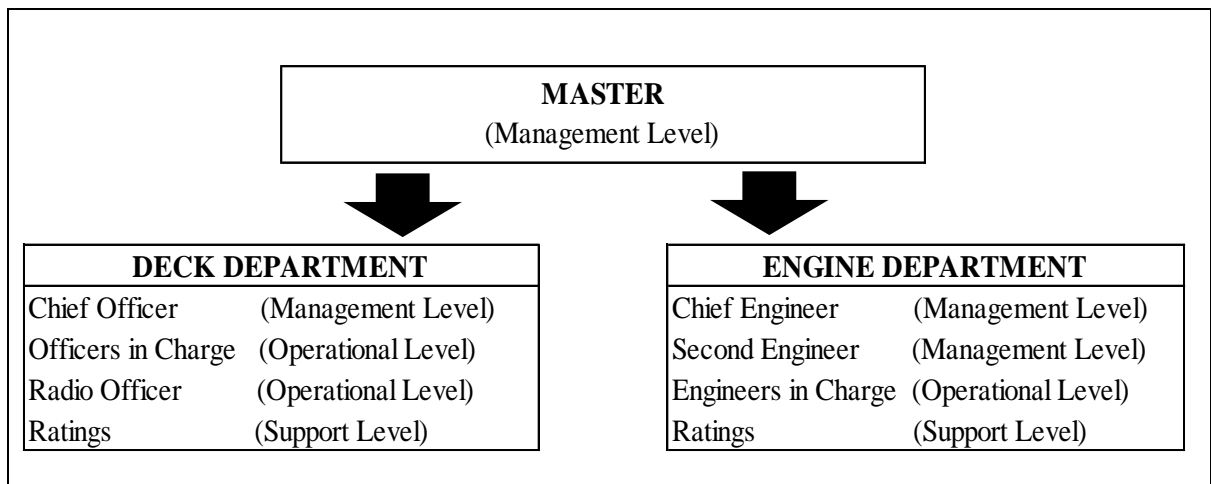
Figure 3.1. Departments and Ranks Defined by IMO (STCW, 2010)

On the other hand in terms of training and certification, in Chapter II of the Annex of the Convention and in the Part A of the Code, STCW separates the ranks in deck department in more detail as following:

- Master on ships of 3,000 gross tonnage or more
- Master on ships between 500 and 3,000 gross tonnage
- Master on ships of 3,000 gross tonnage or more
- Master on ships of less than 500 gross tonnage and engaged on near-coastal voyages
- Chief officer on ships between 500 and 3,000 gross tonnage
- Chief officers on ships of 3,000 gross tonnage or more
- Officer in charge of a navigational watch on ships of 500 gross tonnage or more
- Officer in charge of a navigational watch on ships of less than 500 gross tonnage and not engaged on near-coastal voyages
- Officers in charge of a navigational watch on ships of less than 500 gross tonnage and engaged on near-coastal voyages

3.2.3. Standards Regarding Seafarers in Deck Department

International requirements to obtain a certificate of competence as a watchkeeping officer, chief officer and master of ships bigger than 500 GT will be examined as follows. Although there are requirements for officers working on ships less than 500 GT, they will not be mentioned when size of cruise ships considered.

3.2.3.1. Standards Regarding Officers in Charge of a Navigational Watch on Ships of 500 Gross Tonnage or More

In order to have an international recognized certificate to work as officer in charge of navigational watch on ships of 500 gross tonnage or more, firstly a seafarer must follow an education and training program in a maritime training institution in accordance with the regulations specified in STCW Convention. Training program and institution issuing relevant certificate must be approved by national administration authorized by IMO. Also a seafarer must be at least 18 years old and fulfill medical requirements specified under the Regulation I/9 of the Convention. According to Regulation II/I of the Convention and Section A-II/1 of the Code, training program must include an on-board training requirement for completion based on a training record book prepared by institution and approved by national administration. Because of the requirement of on-board training, seafarers must serve as a cadet not less than 12 months on ships of 500 gross tonnage or more with a training record book, but in the case that seafarer does not have a training record book, minimum duration of on-board training must not be less than 3 years. During the execution of on-board training seafarer must perform bridge watchkeeping duties under the approval of master and supervision of master or a qualified officer at least 6 months. Table 3.3 shows minimum education and training requirements of relevant functions at operational level to qualify for having an internationally recognized certificate for serving as an officer in charge of a navigational watch on ships of more than 500 gross tonnage. (STCW, 2010)

Table 3.3. Required Education and Trainings at Operational Level (STCW, 2010)

Function	Competence	Knowledge and Proficiency
Navigation	Plan and conduct a voyage	- Plan and conduct a voyage - Terrestrial navigation - Electronic systems of position fixing - Magnetic and gyro compasses - Steering control - Meteorology
	Maintain a safe navigational watch	- Watchkeeping
	Use of radar	- Radar navigation
	Respond to emergencies	- Emergency procedures
	Respond to distress signal at sea	- Search and rescue
	Use of standart marine navigational vocabulary	- English language
	Transmit and receive information by visual signalling	- Visual signallig
	Manouvre the ship	- Ship maneouvring and handling
Cargo Handling and Stowage	Monitor the leading, stowage, securing, care during voyage, loading and discharging cargo	- Cargo handling, stowage and securing
Controlling Operation of Ship and Care for Persons Onboard	Ensure compliance with pollution prevention procedures	- Prevention of the pollution of the marine environment and anti-pollution procedures
	Maintain sea worthiness of ship	- Ship stability - Ship construction
	Prevent, control and fight fires onboard	- Fire prevention and fire fighting appliances
	Operate life-saving appliances	- Life saving
	Apply medical first aid	- Medical aid
	Monitor compliance with legislative requirements	- Basic knowledge of relevant IMO conventions concerning safety of life at sea and protection of marine environment

3.2.3.2. Standards Regarding Chief Officers on Ships of More Than 500 Gross Tonnage or More

For certification as chief officer on ships between 500 and 3,000 gross tonnage, a seafarer must primarily meet the training, medical and on-board training requirements for certification of officer in charge of navigational watch on ships of more than 500 gross tonnage according to Regulation II/2 of the Convention. In addition to that, a seafarer must complete an approved training program at management level which is defined in the Section A-II/2 of STCW Code. While training alone is adequate to be certificated as chief officer on

ships between 500 and 3,000 gross tonnage, an approved sea service on board as officer i charge of a navigational watch not less than 12 months is required for certification as chief officer on ships of more than 3,000 gross tonnage. (STCW, 2010)

3.2.3.3. Standards Regarding Masters on Ships of More Than 500 Gross Tonnage

For certification as master on ships of 500 gross tonnage or more a seafarer must primarily meet the training, medical and on-board training requirements for certification of officer in charge of navigational watch on ships of more than 500 gross tonnage according to Regulation II/2 of the Convention. In addition to that, a seafarer must complete an approved training program at management level which is defined in the Section A-II/2 of STCW Code. This section expands in depth the knowledge and proficiency listed in Section A-II/1 of SCW Code for officers in charge of navigational watch. Also for certification as master, a seafarer must have an approved sea service of not less than 36 months as officer in charge of navigational watch. However this period may be reduced to not less than 24 months if not less than 12 of such sea service has been served as chief officer. Table 10 shows minimum education and training requirements of relevant functions in management level to qualify for having an internationally recognized certificate for serving as chief officer or master on ships of more than 500 gross tonnage. (STCW, 2010)

Table 3.4. Required Education and Training at Management Level (STCW, 2010)

Function	Competence	Knowledge and Proficiency
Navigation	Plan and conduct a voyage	- Voyage planning in all conditions - Ship's routing and reporting according to ship reporting systems
	Determine position and accuracy of resultants	- Position fixing by celestial objects - Position fixing by terrestrial objects - Using modern electronic navigational aids
	Determine and allow for compass errors	- Principles of compasses - Knowledge and care of systems under gyro compasses - Compass errors
	Co-ordinate search and rescue operations	- Apply the procedures of IMO Merchant Ships Search and Rescue Manual
	Establish watchkeeping arrangements	- Effective bridge teamwork procedures - Application and intent of the principles to be observed in keeping a watch
	Maintain safe navigation through the use of radar	- Operational aspects of modern navigational systems - Evaluation of navigational data derived from all sources - Inter-relation and optimum use of all navigational data - System errors and operational aspects of modern navigational systems
	Forecast weather and oceanographic data	- Knowledge on the characteristics of various weather systems - Ocean current systems and tidal conditions - Understand and interpret a synoptic chart
Navigation	Respond to navigational emergencies	- Actions to be taken in case of grounding - Precautions for beaching a ship - Actions if collision is imminent - Assessment of damage control - Emergency steering and towing procedures
	Maneuver and handle ship in all conditions	- Maneuvering and handling a ship in all conditions including pilot stations, rivers and restricted waters, anchorage, dry docking, heavy weather, heavy traffic, vessel traffic services, ice conditions, berthing and unberthing
	Remote controls of propulsion plant	- Principles of marine power plants, ship auxiliary machinery and marine engineering terms
Cargo Handling and Stowage	Plan and ensure safe loading, stowage, securing and care of cargo during voyage, loading and unloading	- Apply international regulations, codes and standards on cargo handling - Use of trim and stability diagrams, stress calculating - Cargo handling gear, securing and lashing equipment - Cargo operations with regard to Code of Safe Practice for cargo Stowage and Securing - Establishing effective communication between ship and terminal personnel during cargo handling

Cargo Handling and Stowage	Carriage of dangerous goods	- International standards and regulations on the carriage of dangerous cargo - International Maritime Dangerous Goods Code and code of Safe practice for Solid Bulk Cargoes - Precautions on handling dangerous cargo during loading, unloading and voyage.
Controlling the Operations of the Ship and Care for persons on board	Control trim, stability and stress	- Ship construction, factors affecting trim and stability - Trim and stability in case of flooding and actions to be taken - Knowledge on IMO recommendations on ship stability
	Compliance with legislative requirements and measures to safety of life at sea and protection of the marine environment	- International maritime law and conventions - Certificates and documents to be carried on board ships - Responsibilities under International Convention on Load Lines, SOLAS, MARPOL, International Health Regulations - National legislation on implementing IMO conventions
	Maintain safety and security of ship's crew and passengers; life-saving, fire-fighting systems.	- Life-saving appliance regulations - Organizations of fire and abandon ship drills - Maintenance of safety and fire systems - Actions to limit damage and salve the ship after a fire, explosion, collision or grounding
	Develop emergency and damage control plans and handle emergency situations	- Preparations of contingency plans - Ship construction regarding to damage control - Methods for fire prevention, detection and extinction - Functions and use of life-saving appliances
Controlling the Operations of the Ship and Care for persons on board	Organize and manage the crew	- Personnel management, organization and training on board ship - Related international maritime conventions, recommendations and national legislation
	Organize and manage the provision of medical car on board	- Knowledge on the use and content of International Medical Guide for Ships, medical section of International Code of Signals and Medical First Aid Guide for Use in Accidents Involving Dangerous Goods.

3.3. Specific Training on Personnel Working on Passenger Ships

3.3.1. Standards Regarding the Personnel Working Onboard Passenger Ships

By means of amendment issued in 1997 and entered into force in 1999, IMO set new mandatory training and qualification standards for personnel working on board passenger ships involved in international voyages. New requirements was outlined in Regulation V/2

of the Convention and defined in different paragraphs of section A-V/3 of the STCW Code for different ranks on board in detail. Although new requirements are mandatory for personnel working on board ships on only international voyages, national administrations have authority to apply these requirements on domestic voyages. The training consists of 5 main competence and according to Regulation V/2 of the Convention each competence is mandatory for different seafarers on board. Table 11 shows the main competences with detailed content and relevant seafarers. According to Table 3.5, all competences in training for personnel on passenger ships are related with seafarers at different ranks in deck department. (STCW, 2010)

Table 3.5. Competences Related To Personnel Working On Passenger Ships
(STCW, 2010)

Competence	Knowledge	Relevant Seafarer
Crowd Management	- Awareness of life-saving appliance and control plans - Ability to assist passengers enroute to muster and embarkation stations - Mustering procedures	Personnel designated on muster lists to assist passengers in emergency situations
Familiarization	Ability to properly understand and observe any operational limitations imposed on the ship	Masters, officers and other personnel assigned specific duties
Safety training for personnel providing direct service to passengers in passenger spaces	- Ability to communicate with passengers during an emergency - Ability to demonstrate to passengers the use of personal life-saving appliances	Personnel providing direct service to passengers in passenger spaces
Passenger safety	- Embark and disembark passengers with special attention to disabled persons and persons needing assistance	Masters, chief officers and every person assigned responsibility for embarking and disembarking passengers
Crisis management and human behavior	- Human behavior and responses - Optimizing the use of resources - Development of emergency plans - Leadership and communication - Stress handling	Masters, chief officers, chief engineers, second engineers and any person having responsibility for the safety of passengers in emergency situations.

3.3.2. Training of Crowd Management

As stated in Resolution 5 of the Convention, Maritime Safety Committee of IMO decided that a training especially on crisis management and human behavior is essential for personnel on passenger ships in addition to other mandatory competences and established a detailed program for this training under the section A-V/3 of STCW Code as summarized in Table 3.6.

Table 3.6. Competences for Seafarers in Accordance with Crowd Management Training (STCW, 2010)

Competence	Knowledge and Proficiency
Organize ship board emergency procedures	- The general design and layout of ship - Safety regulations, drills, emergency plan and procedures - Awareness of pre-planned emergency procedures
Optimize the resources	- Ability to use of all personnel and equipment resources - Ability to organize realistic drills to maintain state of readiness
Control response to emergencies	- Ability to lead and direct others in emergency situations - Ability to identify the development of symptoms of excessive personnel stress - Affect of stress generated by emergency situations on personal performance
Control passengers and other personnel during emergencies	- Awareness of general reaction patterns of passengers and other personnel - Ability to control passengers in emergency situations
Establish and maintain effective communication	- Awareness of importance of clear and concise instructions and reports - Awareness of need to encourage an exchange of information with passengers and feedback from them - Ability to provide relevant information to passengers taking into account that variation of passengers from different nationalities with different languages

3.3.3. Crisis Management and Human Behavior Training

Under the Resolution 5 of STCW Convention, IMO adopted the training in crisis management and human behavior in 1995 amendments. With this resolution, IMO mandated that each officer to be worked on ro-ro and passenger ships in deck and engine department

at both management and operational level and any other personnel who is responsible for safety of passengers in emergency situations must be trained in crisis management and human behavior. Maritime Safety Committee of IMO also noted that this specific training is essential for key personnel working on ro-ro and passenger ships and should include the following qualifications:

- human behavior and responses,
- optimizing the use of resources,
- development of emergency plans,
- leadership skills,
- stress handling,
- communication.

3.4. Evaluation of Global Maritime Training

Maritime operations in the world are organized by IMO which has aimed to create safe, secure and sustainable shipping by setting international standards with conventions. STCW is the convention issued by IMO and implemented by national administrations to regulate training and education of seafarers. The convention defines the departments, ranks, competencies and standardizes the scope, objectives, content and methods of maritime training and education. While STCW standardizes maritime education and training of seafarers regardless which type of ships they work on, IMO accepted that some types of ships requires special training because of the nature of their operations. With the amendment in 1997 to STCW, IMO required two additional courses on crowd management training and crisis management training for personnel working on cruise ships. When content of these trainings are examined, it is apparent that skill like efficient communication, leading and control passengers, working under stress and efficient use of personnel etc. are important for officers working on cruise ships.

4. MARITIME EDUCATION AND TRAINING IN TURKEY AND TURKISH WATCHKEEPING OFFICERS

Implementation of maritime training standardized by IMO globally is executed by national administrations in accordance with the directives of STCW Convention. While Ministry of Transportation and Infrastructure (MTI) is the main responsible body of maritime training, Directorate General of Maritime and Inland Waters operating under the ministry is the executive organ. Due to Turkey has ratified the STCW Convention, national administration undertook to issue all laws, decrees, orders and regulations and to take other necessary measures to ensure the full implementation of the convention. Directorate General establishes the framework of maritime training in Turkey with two main regulations which are "Directive for Education, Training and Examination of Seafarers and Marine Pilots" and "Regulation for Seafarers and Marine Pilots" updated in 2018. The purpose of the regulations are to regulate the qualifications, training, examinations, certifications, health status, electronic registration procedures, shift rules and disciplinary procedures of the seafarers and guiding captains and administrative sanctions for maritime education organizations and seafarers.

Because of universities, high schools and private courses are authorized to provide maritime training in Turkey, Ministry of Education and Council of Higher Education have a role in maritime training system besides Ministry of Transportation and Infrastructure. Therefore, programs of the maritime institutions that wish to provide the certificate training required by STCW Convention and Regulation for Seafarers and Marine Pilots must meet the requirement of both Council of Higher Education and Directive for Education, Training and Examination of Seafarers and Marine Pilots requirements. Because of Turkey is one of the countries ratified STCW Convention, training program in the Directive must meet the minimum requirements defined in the section A-II/1 and A-II/2 of the Convention. When the Convention and the Directive are compared, it can be seen that Turkey meets the minimum standards of the Convention; moreover, the Directive has more requirements for training of seafarers which are not included in the Convention. For instance, although not included in STCW Convention, qualifications such as physics, mathematics, chemistry and

computer programming are required by national administration from Turkish officers and masters. Table 4.1 shows the main qualification titles stated in the Directive for Turkish officers and masters at operational and management level. (MTI, 2018)

Table 4.1. Qualifications for Officers at Operational and Management Level in Turkey (MTI, 2018)

Operational Level	Management Level
Mathematics	Navigation
Physics	Navigational Watchkeeping
Chemistry	Ship Construction
Seamanship	International Maritime Conventions
Safety and Security at Sea	Maritime Communication
Navigation	Marine Engineering Systems
Maritime English	Maritime Technical Management
Electric-Electronics	Maritime Commercial Management
Meteorology	Safety at Sea
Ship Construction	Maritime English
Navigational Watchkeeping	Electronic Navigation
Computer Programming	Meteorology
Cargo Handling and Ship Stability	Oceanography
International Maritime Conventions	Shiphandling
Shiphandling	Cargo Handling and Stowage
Maritime Communications	Ship Stability
Maritime Management	Marine Insurances
Quality and Safety Management	Leadership and Organization
Leadership and Organization	Maritime Law

When the certificates issued by national administration and level of responsibilities or competencies in deck and engine department are examined it is seen that although there are differences in appearance, regulation in Turkey is compatible with STCW Convention. However, besides Turkey meets the minimum standards of STCW Convention, more detailed requirements were introduced by national administration. For instance, there are different level of responsibilities such as restricted operational level and restricted management level which are not defined in STCW Convention. Also restricted officer of watch, restricted master, oceangoing watchkeeping officer, oceangoing chief officer and oceangoing master are the competences at deck department in Turkish regulation which are not seemed in STCW Convention. Table 4.2 shows the competences in deck department,

their relevant level of responsibility and ships they can work on board according to Regulation for Seafarers and Marine Pilots. As stated in Table, seafarers in restricted-titled competencies can work only on-board ships under 500 gross-tonnage and engaged in near-coastal voyages while watchkeeping officers, chief officers and masters can work on-board ships between 500 and 3,000 gross tonnage. Seafarer at these competencies also work one of the two watchkeeping officers on ships that must have at least two watchkeeping officers mandatorily due to Safe Manning Certificate of ship issued by flag state. Oceangoing-titled competencies are the highest ranks in Turkish regulation and there is not a limitation on ships they can work on board.

Table 4.2. Competence, Level of Responsibility and Relevant Ships Can Be Worked Onboard. (MTI, 2018)

Competence	Level of responsibility	Ships officer can work on board
Restricted watchkeeping officer	Restricted Operational	Ships under 500 gross tonnage and engaged in near-coastal voyages
Restricted master	Restricted Management	Ships under 500 gross tonnage and engaged in near-coastal voyages
Watchkeeping officer	Operational	- Ships under 500 gross tonnage - Ships between 500 and 3000 gross tonnage
Chief officer	Management	- Ships under 500 gross tonnage - Ships between 500 and 3000 gross tonnage
Master	Management	- Ships under 500 gross tonnage - Ships between 500 and 3,000 gross tonnage
Oceangoing watchkeeping officer	Operational	- Ships under 500 gross tonnage - Ships between 500 and 3000 gross tonnage - Ships more than 3000 gross tonnage
Oceangoing chief officer	Management	- Ships under 500 gross tonnage - Ships between 500 and 3000 gross tonnage - Ships more than 3000 gross tonnage
Oceangoing master	Management	- Ships under 500 gross tonnage - Ships between 500 and 3000 gross tonnage - Ships more than 3000 gross tonnage

4.1. Standards Regarding Deck Department According To Turkish Regulations

4.1.1. Standards Regarding Oceangoing Watchkeeping Officers

In order to be certificated as oceangoing watchkeeping officer in accordance with Turkish regulations, seafarers must firstly complete the training program specified in section A-II/1 of STCW Code in a 4-year faculty which is an approved maritime training institution after succeeding of an English language preparation program in institutions under the authority of Council of Higher Education. As STCW Convention directed, seafarers also have to perform an on-board training as a cadet on ships of more than 500 gross tonnage or more. Seagoing service must be at least 12 months and recorded in a training record book issued or approved by national administration. During the execution of on-board training seafarer must perform bridge watchkeeping duties under the approval of master and supervision of master or a qualified officer at least 6 months. Although STCW Convention has no directive on it, according to the Regulation, seafarers also have to take certification of competence exams of national administration after completing training and sea service. These exams are formed with the subjects of navigation, watchkeeping, cargo handling, maritime communication, maritime English, shiphandling and seamanship, maritime law and conventions. Also seafarers who have watchkeeping officer certificate can promote their certificates to oceangoing watchkeeping officer after sea service on ships at least 24 months and succeeding in the exams of national administration on same subjects. Seafarers holding this certificate can work on board any size of ship without any limitation. (MTI, 2018)

4.1.2. Standards Regarding Oceangoing Chief Officers

In order o have an oceangoing officer certificate, seafarers must at least meet the requirement to complete the training program defined in section A-II/2 of STCW Code in a 4-year faculty which is and approved maritime training institution and to be certificated as oceangoing watchkeeping officer. In addition to that, not less than 36 months of sea service as an oceangoing watchkeeping officer must be served on ships of 500 gross tonnage or more. After meeting requirements, seafarers must succeed in the certification of competence exams of national administration on the subjects of navigation, watchkeeping, cargo

handling, maritime communication, maritime English, shiphandling and seamanship, maritime law and conventions. Also chief officers can promote their certificates to oceangoing chief officer after serving not less than 24 month on ships. After sea service, they have to complete the training program defined in the section A-II/2 of STCW Code in an approved maritime training institution and take the certification of competence exams of national administration on same subjects. Seafarers holding this certificate can work on board any size of ship without any limitation. (MTI, 2018)

4.1.3. Standards Regarding Oceangoing Masters

In order to be certificated as an oceangoing master, seafarers firstly must be certificated as an oceangoing chief officer. Also seafarers must serve as oceangoing chief officer on ships of 500 gross tonnage or more not less than 36 months. After meeting the requirements seafarers must succeed in the certification of competence exams of national administration on the subjects of navigation, meteorology and oceanography, maritime English, maritime law and conventions, personnel organization, maritime transportation and management, cargo handling and watchkeeping. Seafarers holding this certificate can work on board any size of ship without any limitation. (MTI, 2018)

4.1.4. Standards Regarding Watchkeeping Officers

In order to be certificated as watchkeeping officer, first method is that a seafarer must complete the training program defined in section A-II/1 of STCW convention in a 4-year faculty or 2-year vocational school of higher education which is a maritime training institution approved by national administration. Second method is completing same training program in an approved private maritime course if seafarer is a high school graduate. For the seafarers who complete the program in a higher education institution, on-board training requirement is to work on ships of 500 gross tonnage or more as a cadet for not less than 12 months. Also maximum 4 months of total on-board training can be on ships navigating within only port limits. For those who completed training in a private maritime course, sea service requirement is to work on ships of 500 gross tonnage or more as a cadet for not less

than 12 months. During the execution of on-board training, seafarer must perform bridge watchkeeping duties under the approval of master and supervision of master or a qualified officer. On completion of training and on-board training, seafarer must succeed in certification of exams of national administration. Seafarers holding this certificate can work on ships between 500 and 3,000 gross tonnage or can work as one of the two watchkeeping officers on ships or more than 3,000 gross tonnage that must have at least two watchkeeping officers mandatorily due to Safe Manning Certificate of ship issued by flag state. (MTI, 2018)

4.1.5. Standards Regarding Chief Officers

In order to be certificated as chief officer, a seafarer must meet the requirements to be a watchkeeping officer and hold this certificate. Then seafarers have to complete the training program defined is section A-II/2 of STCW Convention in an approved maritime training institution. In addition, a sea service with watchkeeping officer certificate for not less than 36 months must be performed on ships of 500 gross tonnage or more. On completion of all requirements, seafarer must succeed in certification of competence exams of national administration. Seafarers holding this certificate can work on ships between 500 and 3000 gross tonnage as chief officer or can work as one of the two watchkeeping officers on ships or more than 3000 gross tonnage that must have at least two watchkeeping officers mandatorily due to Safe Manning Certificate of ship issued by flag state. (MTI, 2018)

4.1.6. Standards Regarding Masters

In order to be certificated as master, a seafarer firstly must complete the training program defined in section A-II/2 of STCW Convention and be certificated as chief officer. In addition, a sea service as chief officer must be performed on board ships of 500 gross tonnage or more. On completion of all requirements, seafarer must succeed in certification of competence exams of national administration. Seafarers holding this certificate can work on ships between 500 and 3000 gross tonnage as master or can work as one of the two watchkeeping officers on ships or more than 3000 gross tonnage that must have at least two

watchkeeping officers mandatorily due to Safe Manning Certificate of ship issued by flag state. (MTI, 2018)

4.2. Maritime Training Institutions in Turkey

Maritime training in Turkey is provided by faculties, vocational schools of higher educations, high schools and private maritime courses. As of 2019, there are a total of 96 maritime training institutions in Turkey. 11 of these institutions are faculties, 10 are vocational schools for higher education, 42 are high schools and 33 are private courses. While faculties and vocational schools are authorized by Council of Higher Education, high schools and maritime courses are authorized by Ministry of Education. However, the training programs that institutions are authorized to give are different. Therefore, the officer candidates who have graduated from the institutions have different certificate of competence as a result of the examination organized by national administration. As shown in Table 4.3, graduates of the faculties which have 4-year program have the right to take the oceangoing watchkeeping officer examination organized by national administration. Graduates of faculties also have Bachelor of Science in maritime transportation and management. Vocational schools have two-year maritime program and certificate of competence which graduates can have is watchkeeping officer degree. For the students who will be trained at faculties and vocational schools, one-year English preparatory education before program is required by the national administration. In order to enroll in maritime programs in faculties and vocational schools, students must be successful in the examination organized by the Higher Education Council. In addition, students are required to have an official document indicating that they meet the health requirements in the STCW Convention. The institutions where maritime training is provided at the lowest degree are high schools. Period of training programs is 4 year in high schools and graduates have right to get restricted watchkeeping officer certificate after examination of national administration. Although the number of courses providing maritime training is 33, only 9 of them provide training at officers level and others provide training for yacht captains and ratings. Of these 9 courses, 3 of them are authorized to provide maritime training at watchkeeping officer degree, while the other 6 are authorized to provide only restricted watchkeeping officer training. (MTI, 2018)

Table 4.3. Period of Training and Certificate Can Be Issued by Different Maritime Training Institutions

Training Institution	Period of Training	Certificate that graduates can have
Faculties	4 years after 1 year English preparatory program	Oceangoing Watchkeeping Officer
Vocational Schools for Higher Education	2 years after 1 year English preparatory program	Watchkeeping Officer
High Schools	4 years	Restricted Watchkeeping Officer
Maritime Courses	2 years	Watchkeeping Officer and Restricted Watchkeeping Officer

A significant increase is observed in the number of maritime faculties, which provide maritime training at oceangoing watchkeeping officer level, especially after 2008. While there is only one until 1990, number of faculties providing maritime training increased to 4 until 2000. While there were no changes between 2000 and 2008, finally number of faculties increased to 12 until 2019 due to new faculties started to provide maritime training as shown in Figure 4.1.
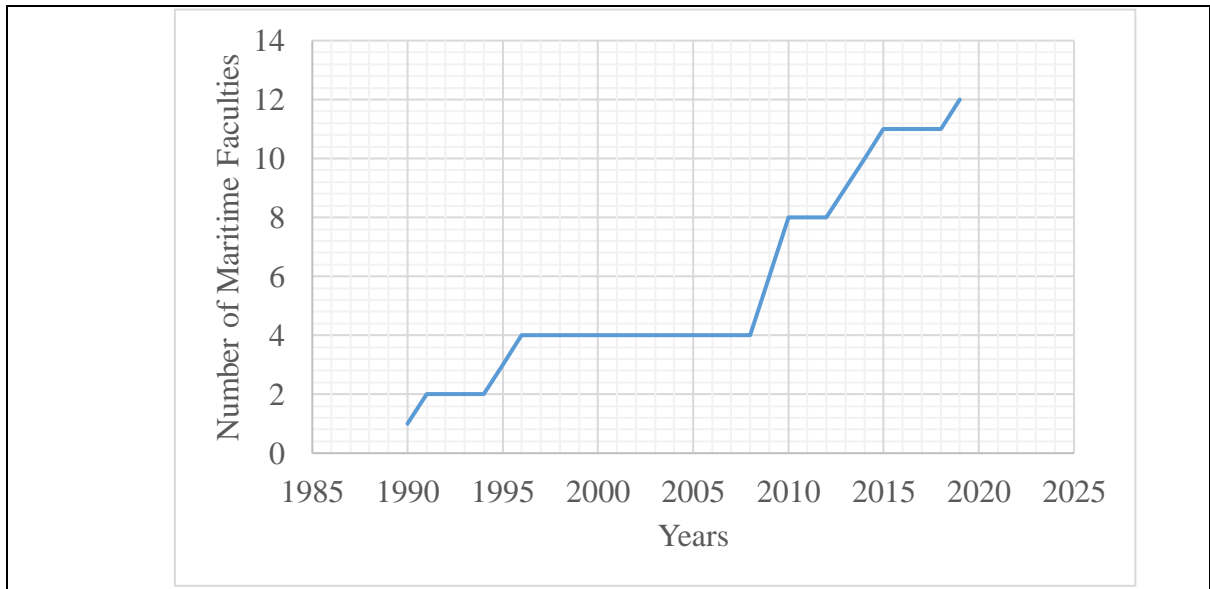
Figure 4.1. Number of Maritime Faculties in Turkey by Years

When the curriculums of maritime training institutions are examined, it is seen that institutions are in compliance with the latest version of STCW Convention after 2010 amendments. However, it is observed that 5 of the 12 faculties had English as the main language of training and that the language of training for the others is Turkish. Also the language of training in vocational schools, high schools and private courses is Turkish. Although there is no requirement in the STCW Convention on the language of training, in the training of a profession which mostly involves in international interactions, it can be considered that it would be beneficial for Turkish officers to have maritime training in English. As Koca (2016) stated, maritime industry is an international industry and foreign language knowledge of officers is a remarkable employment factor.

In Turkey, training for seafarers working on passenger ships is defined in the Directive of MTI. Both crowd management and crisis management trainings defined in STCW are provided under one training program prepared by MTI. Content of this program is stated in Appendix-A. However, this training mainly focuses on technical knowledge for seafarers. Also according to MTI, 24 class hours in total are sufficient to provide these trainings. Despite content and duration of these trainings is sufficient to issue a certificate to seafarers, it can be considered that they do not provide adequate knowledge and for watchkeeping officers to be competent for working on cruise ships.

4.3 Turkish Watchkeeping Officers

Considering the increase in maritime training institutions since the 1990s and 2000s, it can be said that the number of Turkish officers in the labor market for seafarers has increased considerably in the last 10 years. Çelik (2014) investigated the number of students started maritime training at faculties between 1996 and 2013. As shown in the Table 4.4, number of students started maritime training reached 648 in 2013 while it was 202 in 1996. In this 17-years period, a decrease was observed only in 1999, 2000, 2006 and 2012. CAGR of increase in number of students between 1996 and 2013 is 7.1%.

Table 4.4. Number of Students Started Maritime Training in Faculties between 1996 and 2013 (Çelik, 2014)

Years	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Students	202	231	231	216	184	187	222	253	266	271	225	278	341	480	558	640	617	648

Çelik also examined the numbers of Turkish officers at different ranks in deck department. As shown in Table 4.5, in this period there has been a remarkable growth in the numbers of Turkish watchkeeping officers, chief officers and masters. Number of oceangoing watchkeeping officers reached to 5747 from 1124 experiencing a 411% increase. As of 2013, total number of senior and junior officers who has oceangoing titled certificate was 13.611.

Table 4.5. Number of Turkish Officers between 2002 and 2013 (Çelik, 2014)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Oceangoing Watchkeeping Officers	1124	1416	1870	2375	2835	3186	3575	3886	4282	4801	5309	5747
Oceangoing Chief Officers	454	536	669	857	1108	1387	1828	2220	2589	2972	3313	3661
Oceangoing Masters	1653	1731	1801	1954	2162	2370	2620	2876	3117	3489	3841	4203

According to data gathered from Ministry of Transportation and Infrastructure, number of active watchkeeping officers has continued to increase in recent years. Data represents the total number of officers in both deck and engine departments. As shown in Table 4.6, there were 29.310 active officers in 2015. Between 2015 and 2018, number of active officers has increased significantly and reached 47.310 in 2018. It should be pointed out that especially between 2017 and 2018, 29% increase was experienced.

Table 4.6. Number of active officers between 2015 and 2018 (MTI, 2015-2018)

	2015	2016	2017	2018
Active Officers	29.310	31.380	36.500	47.310
Active Ratings	86.464	75.652	79.750	71.229

In Yılmaz's study (2017) on Turkish seafarers and maritime training and education in Turkey, a detailed survey was conducted with 652 participant seafarers. As a part of survey, it is found that what type of ships Turkish seafarers work on most. As can be seen in Table 4.7, general cargo ships are the type that Turkish seafarers work on most with 42,6%. Tankers follow with 24,1% and dry bulk carriers follow with 9,4%. 5,8% of Turkish seafarers work on container ships. In the sample of survey, there is not a Turkish seafarer working on a cruise ship.

Table 4.7. Distribution of Ship Types Turkish Seafarers Work on (Yılmaz, 2017)

Ship Type	Number of Seafarers	Percentage
General Cargo	278	42,6%
Tanker	157	24,1%
Dry Bulk Carrier	61	9,40%
Container	38	5,8%
Miscellaneous	38	5,8%
Ferry	27	4,1%
Ro-Ro	22	3,4%
Yacht	9	1,4%
Not answered	22	3,4%

On the other hand, as seen in Table 4.8, there has not been a major change in the number of students who enrolled maritime faculties. According to data gathered from Council of Higher Education, 2608 candidate oceangoing watchkeeping officer started to maritime training in the last 4 years. Between 2015 and 2018, the annual average of students who started maritime training in faculties is 652.

Table 4.8. Number of Students Started Maritime Training in Faculties between 2015 and 2018 (Council of Higher Education, 2018)

	2015	2016	2017	2018
İstanbul Technical University	130	131	133	127
Piri Reis University	125	133	116	85
Karadeniz Technical University	82	82	82	82
Recep Tayyip Erdoğan University	77	77	77	77
İstanbul University	72	72	72	72
Dokuz Eylül University	72	72	72	72
Girne Amerikan University	41	39	30	16
Ordu University	26	36	36	36
İskenderun Technical University	-	-	36	41
Girne University	13	5	14	9
Van Yüzüncü Yıl University	11	11	9	7
Bandırma University	-	-	-	-
	649	658	677	624

In Çelik's study (2014), it is seen that as of 2010, Turkish officers are the 4th in the global officer labor market as number supplied. With a total of 36,734 officer in deck and engine departments, Turkish officers covered 5,9% of global officers. However, according to Baltic International Maritime Council (BIMCO, 2015) it is seen that Turkey was not one of the top five countries which supply officers the most to global seafarer labor market anymore. Top five officer supplying countries are shown in Table 4.9 for 2010 and 2015.

Table 4.9. Countries Supplied Most Officers to Global Seafarer Market in 2010 and 2015 (BIMCO, 2015)

	2010	2015
1.	Philippines	China
2.	China	Philippines
3.	India	Russia
4.	Turkey	Ukraine
5.	Ukraine	India

BIMCO, in the same report, also examined the global demand and supply for seafarers in 2005, 2010, 2015 and made a projection for 2020 and 2025. According to report, global demand for officers reached 790.500 in 2015 while it was 476.000 in 2005. Also global

supply of officers reached to 774.000 in 2015 while it was 466.000 in 2005 and there was a global officer shortage between these years. BIMCO estimated that global demand for officers will continue to increase and global supply of officers will not meet the demand. As shown in Table 4.10, global demand for officers is estimated to be 952.000 in 2025 but global supply will be 805.000 and there will be a global shortage of officers.

Table 4.10. Global Demand and Supply for Officers (BIMCO, 2015)

	2005	2010	2015	2020(p)	2025(p)
Global demand for officers	476.000	637.000	790.500	881.500	952.000
Global supply of officers	466.000	624.000	774.000	789.500	805.000

Although these estimations seem to be positive for employment of Turkish officers, according to Ellis and Sampson (2008), it is seen that Turkish officers are mostly dependent to Turkish ships. Ellis and Sampson examined the percentage of seafarers working on their own nationality ships in the study and it was found that 69,8% of Turkish officers are employed only on Turkish ships. It can be considered that in order to take advantage of global officer shortage, Turkish officers should expand their opportunity to employment.

Gönel (2013) studied in similar field and examined the supply of seafarers and demand for seafarers in Turkey. According to Gönel, there is a surplus of officers in deck department and negative effects of this surplus will be experienced in the maritime industry of Turkey in near future. Koca (2016) also predicted that there would be excess supply in the employment of maritime faculty graduates in the future.

Muslu (2018) investigated the problems in employment of Turkish seafarers in global seafarer labor market. According to Muslu, maritime industry has the most globalized workforce today. However, it is difficult for Turkish seafarers to be employed in global seafarer labor market because of both internal and external factors. Employment of Turkish seafarers internationally is possible if necessary steps are taken. Requirements of global

maritime industry must be defined for the education and training of future seafarers. Firstly, inadequacies in language competency and occupational competency of maritime education and training should be eliminated and seafarers in the future should be trained in accordance with the working culture of international companies. Besides supplying qualified seafarers, employment agencies should be established for marketing qualified seafarers. (Muslu, 2018)

Another problem for Turkish officers to be employed on other than Turkish ships is the acceptance of certificates issued by Turkish national administration by other administrations. Although maritime training is standardized globally by IMO by means of STCW Convention, party states have right to not accept certificates issued by other states and it makes difficult the employment of Turkish officers internationally. EMSA (2016) reported the statistical review of seafarers in EU. According to report, only 4874 Turkish officers hold a certificate accepted by EU member states. Table 4.11 shows the number of Turkish officers holding accepted certificates by EU member states. Malta is the state that has the most Turkish officers working on ships under its flag.

Table 4.11. Number of certificates of Turkish Officers Accepted by EU Member States (EMSA, 2017)

Malta	Portugal	Lithuania	Cyprus	Netherlands	Denmark
4795	105	23	9	4	2

4.4. Evaluation of Maritime Education in Turkey and Turkish Watchkeeping Officers

When the regulations and directives related to maritime education and training in Turkey are examined, it is seen that there is a compliance with STCW. Besides, some basic sciences classes are mandatory in Turkey while they are not mandated by IMO to issue a certificate of competency to a seafarer. On the other side, language of training in courses, high schools and vocational schools for higher education is Turkish. Also, only 5 of the 12 faculties use English as main language of training. There is a training program defined by

national authority for watchkeeping officers working on passenger ships, it can be considered that it has not sufficient content and duration be competent in operations on cruise ships.

When the profile and statistics of Turkish watchkeeping officers are studied, it is apparent that they have difficulties in working on ships other than Turkish-owned fleet. Moreover, according to literature, almost there are not officers working on cruise ships. Inadequacy in use of English language and difficulties in adaptation to different working culture are important problems of Turkish watchkeeping officers. Number of active officers in Turkey has been increasing in recent years and this may lead an excess supply of officers in the future. These officers mostly work on general cargo, tanker and dry bulk carrier type ships. Also it is a problem for Turkish watchkeeping officers that EU countries do not recognize certificates issued by national authority in Turkey.

5. SHIPBOARD ORGANIZATION ON CRUISE SHIPS

In this chapter, it will be aimed to reveal marine operations on cruise ships, departments, differences from a cargo ship and manning procedures of cruise ships.

5.1. Organizational Structure on Cruise Ships

During the operation on board cruise ships, general process works based on hierarchical structure such as cargo ships. However, due to the nature of cruise ships, different ranks and departments can be seen in shipboard organization. Vukonic et al. stated that (2016), organization on cruise ships is pyramidal organization where all duties and responsibilities are distributed between departments and for the safe operation of the ship all departments must be in coordination taking into account the level in hierarchy. Vukonic outlines this pyramidal structure as showed in Figure 5.1.
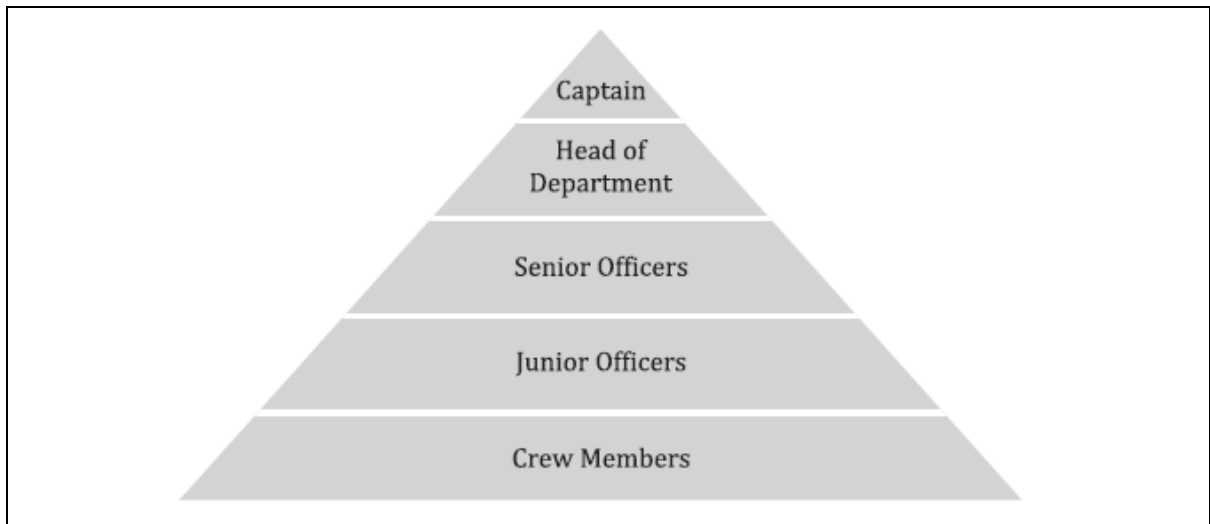
Figure 5.1. Pyramidal Structure on Cruise Ships (Vukonic et al., 2016)

Master is the direct representative of company and has ultimate responsibility in decision-making process in hierarchical structure. Master supervises the head of departments and ensures that shipboard operation is running in accordance with the international

regulations and company procedures in the context of safe navigation, passenger safety and security, environmental protection and efficient use of all kind of resources. Head of departments report to master and are authorized to make decisions realated to operation of their department to the extent permitted by master, international regulations and company procedures. Senior and junior officers work under supersvision of head of departments and they are responsible for more specific duties in accordance with their job description defined in company procedures.

A cargo ship is generally operated by aproximately 20 seafarers who have been trained to work on board ships as profession. On the other hand, because of cruise ships are a type of floating resorts, there are many personnel working in departments related to passenger care besides deck and engine department. Number of these personnel may be up to 2000 depending on the size of ship. Taking into account the fact that minor differences can be seen in organizations of different companies, shipboard organization on cruise ships can be summed up as showed in Figure 5.2.
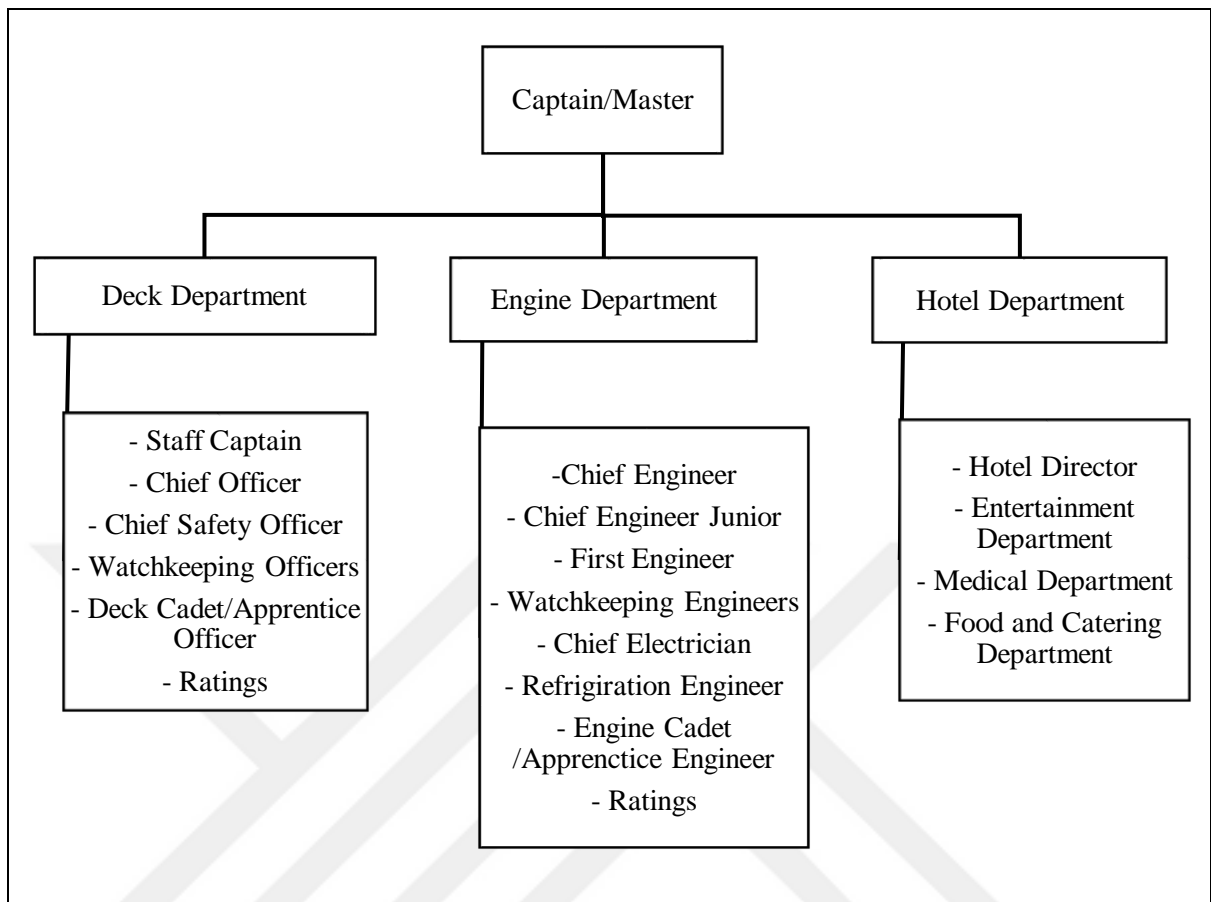
Figure 5.2. Shipboard Organization on Cruise Ships
(Drawn by author due to various sources)

5.2. Departments on Cruise Ships

In general, there are three main departments on cruise ships. While deck and engine departments can also be found on cargo ships, hotel department is unique for cruise ships.

5.2.1. Hotel Department

Hotel department, which can not be found on cargo ships, is the biggest department on a cruise ship with regards to the number of personnel. Hotel department has sub-departments such as entertainment, catering or medical depending on the company procedures and supervisors of sub-departments work under hotel director. As the capacity ship grows and the demand for quality content increases; in line with the need, it can be seen that the sub-departments are main departments in their own. As general organization of ship, each sub-

department has their own hierarchical structure. The problem about personnel in departments other than deck and engine is that despite working on board a ship, their profession is not seamanship actually. Also because of the number of personnel working in hotel department, a strong organization and management are required to operate. Medical department might be the most important sub-department because of the difficulty to reach the shore in case of medical emergencies on a ship with high number of passengers. Because of that, medical department directly falls under the master on some ships according to company policies. (Vukonic et al., 2016),(Veronneau, 2011)

5.2.2. Engine Department

Responsibility of engine department on cruise ships mostly similar with cargo ships but because of the size, number of passengers and crew, complexity and frequent need for maneouvring it is quite intense. Maintenance and repairing of all mechanical and electronic equipment on cruise ships are responsibility of engine department. Main engine, auxilary engines, generators, electronic and mechanical equipments in passenger spaces and cuisines and deck machinery are some of the main work areas of the department. Because of these kind of equipments are the physical strength of ship, it can be said that main duty of engine department is keeping the ship always seaworthy, ready for passengers and providing a better long-term condition. Chief engineer who works under the supervision of master is superior of engine department and he is assisted by chief engineer junior, also known as staff chief engineer in some companies. As on cargo ships, they are followed by first engineer and watchkeeping enineers. Due to the complex structure of cruise ships there are also specialized engineers which are not required on cargo ships such as refrigeration engineers, air conditioning engineers or electrical engineers specialized on niche operations. Number of engineers in engine department may be up to 60 depending on the size of the ship. (Vukonic et al., 2016),(Veronneau, 2011)

5.2.3. Deck Department

Although there is not such rank on cargo ships, staff captain is the head of deck department and report to master. Also, while master is the highest rank above all departments on cruise ships, staff captain acts as a traditional master for marine operations of deck and engine departments. Staff captain does not have own navigational watch except maneouvring of ship and works as a superviser to ensure safe operation of deck department is maintained. To work in this position, a seafarer must at least hold the certificate of masters working on board ships of 500 gross tonnage or more defined in STCW Convention.

Staff captain is followed by chief officer in hierarchical structure. A chief officer on cargo ships ordinarily has navigational watch 2 times in a 24 hour period and is responsible for handling and stowage of cargo, planned maintenance and organizing personnel management. However, main duty of a chief officer on cruise ships is to ensure that maintaining overall safety of ship and to carry out safet training for crew and safety drills for crew and passengers. Seafarers to work in this position on cruise ships must hold the certificate of chief officers on board ships of 500 gross tonnage or more defined in STCW Convention.

The group with the highest number of officers on cruise ships is the watchkeeping officers which are ranked under the chief officer in hierarchical structure of deck department. While the number of watchkeeping officers on cargo ships is generally 2 or 3, cruise ships can be manned with 6 watchkeeping officers on an average. Watchkeeping officers on cruise ships are sorted in a hierarchical order as follows; first officer senior, first officer junior, second officer senior, second officer junior, third officer and fourth officer. Their main duty is to ensure safe navigation of ship their navigational watches. While a watchkeeping team is formed by an officer and a rating as a lookout, watchkeeping team on cruise ships includes at least two watchkeeping officers assisted by ratings as lookouts. Each watchkeeping officer has two navigational watches in a 24-hour period. Apart from that, each officer may have other specific duties such as security of ship, preparing navigation plans, documentation on

bridge, assisting chief officer in safety related works or maintenance and operation of radio communication equipments. (Vukonic et al., 2016),(Veronneau, 2011)

5.3. Manning of Cruise Ships

Manning of ships with officers and ratings is regulated by flag states primarily by the authorization of IMO. Each flag state may have their own regulations besides meeting the minimum standards of IMO and STCW Convention. Regulation of flag states may have some restrictions on manning ships with crew from different nationalities. For instance, according to Turkish Law, only Turkish citizens can work on board Turkish flagged ships navigating between Turkish Ports in accordance with cabotage rights. However, in maritime industry today, shipping companies have right to choose the flag which they want their ships to sail under. Because of the lower standards to meet, shipping companies mostly tend to sail their ships under the flag of open registries, also known as flag of convenience. Shipping companies have also flexibility on manning ships with different nationalities through the minimal regulatory of flags of convenience.

Manning of cruise ships is one of the crucial part of cruise line management. Because of the number of people on board and value of cruise ships equipped with high technology, in case of an advert situation, loss of life or financial burden may be greater. Also due to advertising and public recognition are very important in cruise industry on contrary of cargo shipping, such situation may result in unexpected losses for cruise companies. Mileski et al. (2014) demonstrated the importance of manning cruise ships with qualified crew. In the study, it is stated that 26% of incidents of cruise ship mishaps are caused by direct human error by crew while 60% of them are caused by lack of maintenance. Because of vital operations like navigation, safety, security etc. are handled by deck and engine departments, it increases the importance of selection of qualified deck and engine officers.

Veronneau (2011) states that "in order to obviate problems resulting from poor hiring, a company typically works with a few specific nations to fill officer positions , establishing

links with local hiring partners and more or less hiring only those nationals". Despite the fact that IMO has standardized the maritime education and training globally, due to similar communication traditions and ship handling styles, cruise companies tend to hire officers from same nations as far as possible. For example, according to data compiled by author from various sources, Royal Caribbean Corporation and Disney Cruise Lines traditionally employs Scandinavian officers while Carnival Corporation and MSC Cruises tends to work with Italian officers and Celebrity Cruises with Greek oficers. Cunard Lines and Holland-American Lines mostly provide British and Dutch officers to their ships. In addition, according to company statement Crystal Cruises employs only EU citizens or nationals and Princess Cruises employs officers from only the nations that their certificates issued by national administartion are accepted by United Kingdom Maritime and Costguard Agency (MCA). According to Competency Equivalent List of MCA which was last revised in 2017, Turkey is not one of the accepted administrations. Similarly, Viking Cruises have cooperation with some maritime education centers only located in UK. According to Christine (2008) seafarers from Global North hold the higher positions on cruise ships and especially seafarers from North American and Western European countries are mostly employed in senior officer positions. Christine also noted that cruise officers are the highest paid officers in maritime industry. Wu (2015) remarks that more than 75% of senior officers and more than 60% of junior officers working on cruise ships are provided from countries of advanced economies. On the other hand, advanced economies provide only 15% of ratings and 85% of ratings on cruise ships are from Asia, Latin America and Eastern Europe. Zhao (2002) also expressed that the senior officers are almost exclusively employed from Western Europe or North America or other developed countries while ratings and junior officers are, in contrast, recruited from Asia, Eastern Europe, Latin America and other developing countries. As the qualifications and skills required by the position to be worked increases, it can be said that the seafarers working in these positions are more preferred from advance economies by cruise lines.

5.4. Importance of Education and Training of Officers on Cruise Ships

Vukonic (2016) indicated that the most of the cruise companies sustain their own on-board and on-shore education and training courses. Some of these courses are refresher

trainings on the qualifications defined in STCW Convention. However, these courses includes trainings that are not mandatory by IMO but to provide awareness and proper knowledge on the subjects arised from different nature of cruise ships. By this means, cruise companies aims to reduce human error effect in undesirable cases on board. Vukonic also states that these courses should contain at least the following subjects;

- Management of emergency situations
- Training of crew
- Communication with passengers and crew

Main emergency cases on ships can be classified as collision, grounding, fire, medical cases, casualty, man overboard and abandoning ship. Frequency of collision or grounding may be similar with cargo ships but medical cases, casualty, man overboard situations are expected to be more frequent and impact of abandoning ship is expected to be greater due to number of passengers and crew on cruise ships. It would not be wrong to say that officers working on cruise ships should have more knowledge and awareness of these more frequent emergencies.

Contrary of crew members on cargo ships, majority of crew on cruise ships are employed in hotel department. In the study of Wu (2015), it is indicated that 85% on average of crew is employed in hotel department and 15% on average of crew is employed in deck and engine departments. Although the profession of crew in hotel department is not seamanship primarily, they have a role in muster list of ship and they must help passengers by way of directing, motivating and leading them to ensure safe operation. Also they must help passengers on using personal life-saving equipments and survival crafts so they should have the latest knowledge on some of the technical equipments cruise ships. Because of the onboard trainings of crew in hotel department are handled by officers in deck department, it is not enough for officers to have proper knowledge they should also have skills to train and teach the crew. It can be considered that officers required to train other crew should be provided with a training of trainers course to increase efficiency of onboard trainings.

Communication may be the most important part of managing an emergency situation on cruise ships effectively. The term of communication in case of emergency situations may refer to both verbal and non-verbal communication and also good leadership, good self-presentation and decisive attitude of officers managing the situation. During emergency situations, clear communication helps to create a co-operation among officers, other crew members and passengers. Controlling the crowd by means of these kind of skills has greater importance on cruise ships than cargo ships. Taking into account that there may be passengers and crew from many different nations; besides English which is generally common language on board, it would be beneficial to know different languages and to be aware of cultural differences. Considering the fact that the passengers hosted on cruise ships will especially come from the countries that provide highest number of passengers to cruise industry and from the countries in the region that ship sails in, it can be said that having languages of these countries would be distinctive for officers. Also this can increase the efficiency in daily operation of ship which is manned with multinational crew. When career pages at official websites of various cruise companies are examined, it is apparent that additional languages other than English are required for officers to apply for positions in deck department. Some companies also specify in details that which languages are required. (Vukonic et al., 2016),(Christine, 2008)

On cargo ships, seafarers can only communicate with each other. According to Akduman et al. (2018), in addition to the communication of officers with each other, on cruise ships it is important to have positive communication of officers with passengers. Officers should be friendly, understanding and positive when meeting their requests especially about safety of life. They should be psychologically strong and emphatetic in performing their risky and stressful duties. Developing these skills of all officers working on cruise ships and have interaction with passengers is one of the most important issues as in aviation industry.

5.5. Evaluation of Organization on Cruise Ships

Because of their intended purpose, significant differences can be seen on cruise ships in comparison with cargo ships or other passenger ships. Personnel in different departments and passengers on board cruise ships forms a multinational group with huge number and their proficiency is not marine operations mainly. Different from cargo ships, being an officer on cruise ship requires interaction with both personnel in other departments and passengers. In routine operation, onboard training of hotel personnel and drills involving passengers are performed by officers. Emergency operations are performed by both officers and hotel personnel provided onboard training by officers. Both in routine and emergency operations; communication skills, handling of stress, knowledge on human behaviour, psychology and different cultures become prominent to prevent harm or loss of life. When literature and statistics are reviewed, it is seen that manning procedures have great importance for cruise lines and most of the officers are from North America, Northern and Western Europe.

6. QUESTIONNAIRE AND RESULTS

To conclude this thesis as a beneficial study and to reach effective results, questionnaire was prepared for cruise lines which are the principal decision-makers in employment of watchkeeping officers on cruise ships. As a result of reviewing on literature related to cruise industry, international associations of cruise industry and reports benefitted for previous chapters of this thesis; as of the beginning of 2019, there are 55 active cruise lines. Hence, the size of universal set is accepted as 55.

Aim of the questionnaire was to obtain data about watchkeeping officers' employment process of cruise lines. To achieve this, there are questions on language requirements, internal training programs, internship policy and manning policy. Questionnaire consist of both single and multiple response questions. Questionnaire was conducted between December 2018 and April 2019 and sent to cruise lines directly or their crew departments on electronic media. At the end of the period, responses received from 16 cruise lines out of universal set which consist of 55 cruise lines. Data obtained via questionnaire was analyzed using IBM SPSS Statistics 22 program. Questionnaire format can be found in Appendix-B.

Firstly it is aimed to identify which ship types are operated by cruise lines responded. As stated in Table 6.1, 81,3% of sample is operator of ocean cruises and 18,3% is operator of river cruises.

Table 6.1. Results of Question 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Q1-What kind of cruise vessels does your company operate?					
Valid	Ocean cruises	13	81,3	81,3	81,3
	River cruises	3	18,8	18,8	100,0
	Total	16	100,0	100,0	

As can be seen in Table 6.2, English is predominantly used as common language on cruise ships with a 87,5%. Frequency of "other" answers is 2 out of 16 and these participants stated that German and Croatian are common languages on thesis ships due to majority of passengers are originated from these nations.

Table 6.2. Results of Question 2

Q2-What is the common language onboard for officers?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	English	14	87,5	87,5	87,5
	Other	2	12,5	12,5	100,0
	Total	16	100,0	100,0	

When crosstab analysis applied, it can be seen that the cruise lines that does not require English as common language are river cruise operators as shown in Table 6.3.

Table 6.3. Crosstab for Question 1 and Question 2

Crosstab for Q1 and Q2				
		What kind of cruise vessels do you recruit for?		Total
		Ocean cruises	River cruises	
What is the common language onboard for officers?	English	13	1	14
	Other	0	2	2
Total		13	3	16

As shown in Table 6.4, 68,8% of sample require one and 18,8% of sample requires two additional languages besides common language. A total of 87,5% of cruise lines require at least one additional language.

Table 6.4. Results of Question 3

Q3-How many different languages are required other than common language?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	12,5	12,5	12,5
	1	11	68,8	68,8	81,3
	2	3	18,8	18,8	100,0
	Total	16	100,0	100,0	

A total of 27 responses obtained from 16 participants for the question related to additional language as shown in Table 6.5. Italian is the most preferred one with 29,6% and Spanish followed with 22,2%. French is another preferred language with 11,1%. Frequency of "other" answer is 6 and according to statements of participants responded as "other" 4 of them is German and 2 of them is Dutch.

Table 6.5. Results of Question 4

Q4-Which languages are required other than common language?				
		Responses		
		N	Percent	Percent of Cases
Which languages other than common language are required?	English	1	3,7%	6,3%
	Spanish	6	22,2%	37,5%
	Italian	8	29,6%	50,0%
	French	3	11,1%	18,8%
	None	3	11,1%	18,8%
	Other	6	22,2%	37,5%
Total		27	100,0%	168,8%

As stated in Table 6.6, 87,5% of cruise lines in the sample have their own internal training programs for officers. Frequency of participants do not have internal training program is 2 and as shown in Table 6.7, they are cruise line operating river cruises.

Table 6.6. Results of Question 5

Does your company have an internal training program for officers?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	14	87,5	87,5	87,5
	No	2	12,5	12,5	100,0
	Total	16	100,0	100,0	

Table 6.7. Crosstab for Question 1 and Question 5

Crosstab for Q1 and Q5				
		What kind of cruise vessels do you recruit for?		
		Ocean cruises	River cruises	Total
Does your company have an internal training program for officers?	Yes	13	1	14
	No	0	2	2
Total		13	3	16

There are 45 responses from 16 participants for question on the content of their internal training programs. As shown in Table 6.8, cruise lines in sample focuses on safety related training most. Distribution of contents are as follows; 31,1% safety, 22,2% ISPS, 13,3% navigation, 11,1% language, 8,9% watchkeeping and 8,9% MARPOL.

Table 6.8. Results of Question 6

Q6- What are the subjects of internal training program?				
		Responses		
		N	Percent	Percent of Cases
What are the subjects of internal training program?	Navigation	6	13,3%	37,5%
	Safety	14	31,1%	87,5%
	ISPS	10	22,2%	62,5%
	Watchkeeping	4	8,9%	25,0%
	Language	5	11,1%	31,3%
	MARPOL	4	8,9%	25,0%
	None	2	4,4%	12,5%
Total		45	100,0%	281,3%

As stated in Table 6.9, 43,8% of participants have internal trainings on communication skills, psychological stability or human behavior for officers.

Table 6.9. Results of Question 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Q7-Does your company have a training program for officers on communication skills, psychological stability or human behavior?					
Valid	Yes	7	43,8	43,8	43,8
	No	9	56,3	56,3	100,0
	Total	16	100,0	100,0	

43,6% of participants have an agreement with maritime training institutions on employing cadets of graduates as shown in Table 6.10. Also 68,8% of participants have an agreement with crewing agencies on employing officers or cadets as shown in Table 6.11.

Table 6.10. Results of Question 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Q8-Does your company have any scholarship, an internship agreements or relationships with maritime colleges/academies?					
Valid	Yes	7	43,8	43,8	43,8
	No	9	56,3	56,3	100,0
	Total	16	100,0	100,0	

Table 6.11. Results of Question 9

		Frequency	Percent	Valid Percent	Cumulative Percent
Q9-In the process of manning ships with officers, does your company have a cooperation with crewing agencies?					
Valid	Yes	11	68,8	68,8	68,8
	No	5	31,3	31,3	100,0
	Total	16	100,0	100,0	

As seen in Table 6.12, while 50,0% of cruise lines employ cadets before they graduate from maritime training institutions for their internship period, 50,0% of cruise lines

employ cadets only after they get the watchkeeping officer license. In addition, 68,8% of cruise lines employ watchkeeping officers as apprentice/trainee officer when they work on a cruise ship first time. Also 18,8% employ them as watchkeeping officer in charge of navigation and 12,5% employ them as radio officer for their first time as seen in Table 6.13.

Table 6.12. Results of Question 10

Q10-Please explain your internship policy.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cadets do not need to be graduated.	8	50,0	50,0	50,0
	Cadets must be graduated and hold OOW license.	8	50,0	50,0	100,0
	Total	16	100,0	100,0	

Table 6.13. Results of Question 11

Q11 Please specify the position of a new graduated deck officer					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Navigation officer	3	18,8	18,8	18,8
	Radio officer	2	12,5	12,5	31,3
	Apprentice/Trainee Officer	11	68,8	68,8	100,0
	Total	16	100,0	100,0	

As stated in Table 6.14, 43,8% cruise lines offers 3-months contracts to their officers to work on board their ships. 31,3% of them offers 4-months contracts and 12,5% of them offers 2 months contracts. Ratio of cruise lines offering contract to their officers for 6 months or more is 12,5%.

Table 6.14. Results of Question 12

Q-12 Please specify duration of your contracts for officers in general					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 months	2	12,5	12,5	12,5
	3 months	7	43,8	43,8	56,3
	4 months	5	31,3	31,3	87,5
	6 months or more	2	12,5	12,5	100,0
	Total	16	100,0	100,0	

CONCLUSIONS

Cruise industry has been growing continuously in last 20 years. Number of passengers preferring cruising as vacation has showed an increase each year correspondingly cruise ship fleet has been growing to meet increasing demand. When taking into consideration the estimations and fixed cruise ship orders, cruise industry is expected to maintain increasing trend in the future. Correspondingly, it can be evaluated that number of officers and other personnel working on cruise ships would increase in the future. On the other and cruise tourism in Turkey is a decreasing trend in last 5 years. Although Turkey has an important place in international maritime industry with shipping companies and fleet, there are not Turkish-owned cruise lines or cruise ships.

IMO is the highest regulating body of maritime industry. Maritime education and training was standardized by IMO via STCW. Maritime education and training of each country who has ratified the convention must be in compliance with STCW. STCW also defines all ranks, level of responsibilities and certification standards of seafarers. While main content of STCW is regardless from any specific ship type, with an amendment IMO mandated different requirements for personnel working on passenger ships. This requirements mainly consist of skills and knowledge related to interaction with human.

Because of high number of passengers and personnel other than officers on cruise ships different from cargo ships, officers on cruise ships are required to have some different knowledge and skills. In routine operations, officers on cruise ships are in charge of onboard trainings of other personnel and performing drills for passengers. In emergency cases, they must lead all passengers and other personnel. When considering the profession of passengers and other personnel is not marine operations and they form a multinational group whose number may reach more than 3000 on some ships, it can be evaluated that officers on cruise ships should have more knowledge and experience about skills about relations with people, communication and handling of stress than officers on cargo ships. Since, different from officers on cargo ships, officers on cruise ships have to communicate with passengers in

addition to communication among each other, they should be more understanding, friendly and empathetic.

It is observed that, cruise lines try to employ officers from same nations in order to maintain quality in operations on board and avoid problems arising from poor hiring and similar communication and seamanship styles although IMO standardized maritime education and training internationally. Majority of senior and junior officers are from North America and Western Europe. Also cruise officers are highest paid ones in maritime industry.

As an IMO member state, regulation of national maritime industry is executed by Turkish Ministry of Transportation and Infrastructure. When the directive identifying content of maritime education and training in Turkey examined, it is seen that there is compliance with STCW. Maritime training institutions in Turkey are faculties, vocational schools of higher educations, high schools and private courses. Number of institutions has been increasing significantly especially in last 10 years. However, only 5 out of 12 faculties have English as main education language. Also other institutions other than faculties provide education in Turkish. There is a training program defined by national authority for watchkeeping officers working on passenger ships, it can be considered that it has not sufficient content and duration be competent in operations on cruise ships.

When literature and statistics are examined, it is seen that the number of active Turkish officers is increasing. Depending on the increasing number of educational institutions, it can be predicted that this number will continue to increase in the future. According to a previous study, 76% of Turkish watchkeeping officers work on general cargo, dry bulk and tanker type ships. In the sample of that study, a Turkish wathckeeping officer working on a cruise ship was not found. There will be shortage of officer supply in global maritime industry in the future. But, on the other hand, Turkish officers are mostly dependent on Turkish owned ships. It is difficult for Turkish seafarers to be employed in global seafarer labor market.

Turkish watchkeeping officers are experiencing inadequacy about level of English language and they have difficulty in adaptation to different working cultures.

As a result of survey conducted, having a good level of English is vital for cruise officers. Besides, cruise lines mostly tend to employ officers who have more than one language. Spanish and Italian are the most preferred additional languages. As also stated in literature, it is revealed that most of the cruise lines have their own internal training programs for officers. Cruise lines mostly includes safety related training in their internal programs for officers. Moreover, nearly half of the companies provide training for officers on communicational skills and human behavior. Some cruise lines have agreements with maritime institutions to employ cadets or graduates of that institution. Also cruise lines tend to cooperate with crewing agencies in manning of ships. When employing cadets for internship period, half of cruise lines require them to be graduated. It can be considered that cruise lines prefer more competency and experience for even cadets. When employing new officers, cruise lines employ officers as apprentice officers which is a rank conventionally cannot be found on cargo ships.

Following conclusions are reached for the research questions determined at the beginning of the study. Considering that Turkish watchkeeping officers can work on many type of ships, maritime education and training system in Turkey is in compliance with international standards and also there are some additional requirements in maritime education and training defined by national authority, it can be evaluated that Turkish watchkeeping officers have potential to work onboard cruise ships. On the other hand, although it is seen that standard maritime education and training in Turkey meets the requirements of STCW, it can be found insufficient in terms of employability on cruise ships when necessary acquisitions and skills for cruise ships are determined via the data gathered from literature and questionnaire. Recommended additional courses for maritime training institutions and additional acquisitions for Turkish watchkeeping officers to facilitate their employability on cruise ships are specified in suggestions below.

As a result of this study, it is thought to be beneficial that following suggestions are practiced.

- Maritime training institutions should be encouraged by national authority to use English as main language of maritime education and training.
- Besides Maritime English which is focused on technical use of language, English classes focusing on developing communication and cultural skills of seafarers should be included in curriculums.
- Because of the multinational characteristics of crew and passengers on cruise ships, even if as an elective course, additional foreign language education should be included in curriculums of faculties.
- Courses including trainings on crowd management and crisis management should be established in the curriculums of faculties and vocational schools of higher education.
- For maritime students who prefer work on cruise ships, elective courses including trainings to improve their psychological strength, empathetic ability, behavior under stress, handling of stress and effective communication skills should be included in the curriculums of faculties and vocational schools of higher education.
- Additional trainings psychological strength, empathetic ability, behavior under stress, handling of stress, effective communication skills and training program defined by MTI for seafarers working on passenger ships grouped under a program as an alternative path running in parallel with mandatory classes for students who prefer working on cruise ships.
- Content of training program for seafarers working on cruise ship defined by MTI should be enriched with training on psychological strength, empathetic ability, behavior under stress, handling of stress and effective communication skills. Also duration of program should be extended.
- Maritime Crewing Agencies should be established under supervision of national authority facilitate employment of Turkish officers on ships owned by foreign countries.

- Because of there are many EU based cruise lines in the industry, there should be proposals by national authority to increase number of EU countries that accept certificates of officers issued by Turkish authority.

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APPENDICES

APPENDIX-A

MINIMUM TRAINING REQUIREMENTS FOR SEAFARERS SERVING ON PASSENGER SHIPS

1) **CURRICULUM**

CURRICULUM FOR SEAFARERS SERVING ON PASSENGER SHIPS TRAINING

1) **CROWD MANAGEMENT TRAINING**
   a) Knowledge on lifesaving appliances and control plans
      i) Muster list and emergency instructions
      ii) Emergency exits
      iii) Restrictions on the use of elevators
   b) Assisting passengers en route to muster and embarking stations.
      i) Giving clear and reassuring orders
      ii) Passenger control in corridors, staircases and passageways
      iii) Maintaining escape routes clear of obstructions,
      iv) Methods available for evacuation of disabled persons and persons needing special assistance, and
      v) Search of accommodation spaces,
   c) Mustering procedures
      i) Importance of keeping order,
      ii) Use procedures for reducing and avoiding panic,
      iii) Use, where appropriate, passenger lists for evacuation counts,
      iv) Ensure that the passengers are suitably clothed and have donned their lifejackets correctly.
 	
2) **SAFETY TRAINING FOR PERSONNEL PROVIDING DIRECT SERVICE TO PASSENGERS IN PASSENGER SPACES**
 	
   a) Communication
      i) The language or languages appropriate to the principal nationalities of passengers carried on the particular route,
      ii) The likelihood that an ability to use an elementary English vocabulary for basic instructions can provide a means of communicating with a passenger in need of assistance whether or not the passenger and crew member share a common language,
      iii) The possible need to communicate during an emergency by some other means, such as by demonstration, or hand signals, or calling attention to the location of instructions, muster stations, life-saving devices or evacuation routes, when oral communication is impractical,
      i) The extent to which complete safety instructions have been provided to passengers in their native language or languages,
      ii) The languages in which emergency announcements may be broadcast during an emergency or drill to convey critical guidance topassengers and to facilitate crew members in assisting passengers.
 	
   b) Lifesaving appliances
   Teaching passengers to use personal lifesaving appliances
 	
   c) Embarking passenger procedures
   Embarking and disembarking passengers, with special attention to disabled persons and persons needing assistance.

MINIMUM TRAINING REQUIREMENTS FOR SEAFARERS SERVING ON PASSENGER SHIPS

3) CRISIS MANAGEMENT AND HUMAN BEHAVIORS
   a) General information
      i) General design and layout of ships
      ii) Safety regulations
      iii) Emergency plans and procedures
   b) Developing of ship-specific emergency procedures
      i) Emergency organization on board
      ii) Proper use of human and material resources
      iii) Responding to emergencies and control
      iv) Leadership ability
      v) Preventing and relieving the people's stress in working environment
      vi) Controlling the crew and passengers in case of emergencies
      vii) Human behaviors and reactions
      viii) Establishment and maintenance of effective communication

4) PASSENGER SAFETY, CARGO SAFETY AND HULL INTEGRITY TRAINING
   a) *Loading and embarkation procedures*
      i) Loading and discharging vehicles, rail cars and other cargo transport units, including related communications,
      ii) Lowering and hoisting ramps,
      iii) Setting up and stowing retractable vehicle decks, and
      iv) Embarking and disembarking passengers, with special attention to disabled persons and persons needing assistance.
   b) *Carriage of dangerous goods*
      Ability to apply any special safeguards, procedures and requirements regarding the carriage of dangerous goods on board ro-ro passenger ships.
   c) Securing the cargoes
      i) Apply correctly the provisions of the Code of Safe Practice for Cargo Stowage and Securing to the vehicles, rail cars and other cargo transport units carried,
      ii) Use properly the cargo-securing equipment
   d) Stability, trim and stress calculations
      i) Proper use of the stability and stress information provided,
      ii) Calculate stability and trim for different conditions of loading, using the
      iii) stability calculators or computer programs provided,
      iv) Calculate load factors for decks,
      v) Calculate the impact of ballast and fuel transfers on stability, trim and stress.
   e) Opening, closing and securing hull openings
      i) Apply properly the procedures established for the ship regarding the opening, closing and securing of bow, stern and side doors and ramps and to correctly operate the associated systems,
      ii) Conduct surveys on proper sealing.
   f) Ro-Ro deck atmosphere
      i) Use equipment, where carried, to monitor atmosphere in ro-ro Cargo spaces, and apply properly the procedures established for the ship for ventilation of ro-ro cargo spaces during loading and discharging of vehicles, while on voyage and in emergencies.

Additional Acquisitions for Turkish Watchkeeping Officers to be Employed onboard Cruise Ships

Dear Participant,

This questionnaire was designed to collect data for a M.Sc thesis titled "", in Piri Reis University Institute for Graduate Studies in Social Sciences" under the supervision of Asst. Prof. Dr. Murat Selçuk Solmaz.

We kindly request you to make valuable contributions for the success of the study and its benefit to the maritime industry.

If you have any questions or comments, please contact Mr. İ. Çağrı Kolçak (ickolcak@pirireis.edu.tr)

Thank you for your participation.

Kind regards.

Your personal data is protected. If you have questions regarding data protection, please have a look at: https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu_en

1. **1) What is the common language onboard for officers?**
   Uygun olanların tümünü işaretleyin.

   ☐ English
   ☐ Spanish
   ☐ Italian
   ☐ Chinese
   ☐ French
   ☐ Other

2. **1a) If your answer is "Other", please specify.**

   _____

3. **2) How many different languages are spoken other than common language?**
   Yalnızca bir şıkkı işaretleyin.

   ○ 0
   ○ 1
   ○ 2
   ○ 3
   ○ More than 3

4. **3) Which languages other than common language are required for officers?**

Uygun olanların tümünü işaretleyin.

- [ ] English
- [ ] Spanish
- [ ] Italian
- [ ] Chinese
- [ ] French
- [ ] Russian
- [ ] None
- [ ] Other

5. **3a) If your answer is "Other", please specify.**

_____

6. **4) Does your company have an internal training program for officers?**

Uygun olanların tümünü işaretleyin.

- [ ] Yes
- [ ] No

7. **5) If your company have an internal training program for officers, please specify the subjects stated as below.**

Uygun olanların tümünü işaretleyin.

- [ ] Navigation
- [ ] Safety
- [ ] ISPS
- [ ] Watchkeeping
- [ ] Language
- [ ] MARPOL
- [ ] None

8. **6) Does your company have a training program for seamen about communication skills, psychological stability or human behaviour on cruise vessels?**

Yalnızca bir şıkkı işaretleyin.

- ( ) Yes
- ( ) No

9. **7) Does your company have any scholarship, an internship agreements or relationships with maritime colleges/academies?**

Yalnızca bir şıkkı işaretleyin.

- ( ) Yes
- ( ) No

10. **10) In the process of manning ships with officers, does your company have a cooperation with crewing agencies?**

Yalnızca bir şıkkı işaretleyin.

○ Yes

○ No

11. **11) Please explain your internship policy;**

Yalnızca bir şıkkı işaretleyin.

○ Cadets do not need to be graduated.

○ Cadets must be graduated and hold OOW licance.

12. **12) Please specify, the position of a new graduated deck officer;**

Uygun olanların tümünü işaretleyin.

☐ - Navigation Officer

☐ - Safety Officer

☐ - Radio Officer

☐ - Apprentice/Trainee Officer

☐ - 3rd Officer

13. **13) Please specify duration of your contracts for officers in general?**

Uygun olanların tümünü işaretleyin.

☐ 1 month

☐ 2 months

☐ 3 months

☐ 4 months

☐ 5 months

☐ More than 5 months

14. **15) What kind of cruise vessels do you recruit for?**

Uygun olanların tümünü işaretleyin.
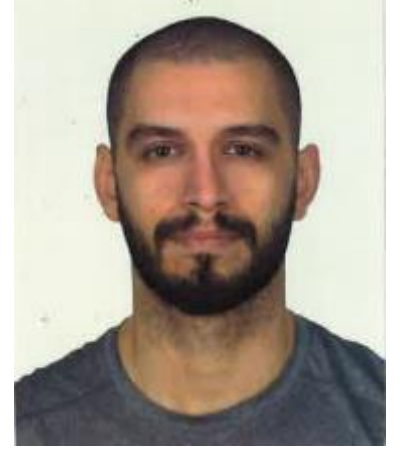
☐ Ocean

☐ River

☐ Expedition

☐ Other

15. **15a) If you select "Other", please specify.**

<div align="center">**CURRICULUM VITAE**</div>

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    Kolçak, İ., Ç., Solmaz, M., S., Review of Cruise Tourism in the World and in Turkey, Global Trends and Local Factors Affecting Cruise Tourism in Turkey, International Journal of Tourism, Economic and Business Sciences, 2(2), 113-120.