

THE IMPORTANCE OF CELESTIAL (ASTRONOMICAL) NAVIGATION COURSE IN MARITIME EDUCATION- IMPLEMENTATIONS IN TURKEY

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Abstract text: Maritime education is a very comprehensive and international education. With the STCW Convention, the compulsory courses, content and curriculum have been determined for maritime education institutions. In Turkey, according to the STCW Convention and Regulation on the Shipmen Training and Examination, which courses should be given, the curriculum and its contents have been determined. One of these courses is celestial navigation. With the development of GPS, DGPS and ECDIS, which play an important role in the progress of the technology and accordingly fixing the location, it can be considered by many people that celestial navigation is not essential anymore. But this is a wrong belief. Because it should not be forgotten that the technology can also be disabled and malfunctioned. In case the GPS in the ship is damaged and can not be repaired, it may become compulsory to apply celestial navigation. Therefore, celestial navigation must take place at the beginning of the topics that need to be emphasized. The aim of this research is to emphasize the importance of navigating celestial in maritime education and to mention about the implementations in Turkey. According to the results of the research, it is observed that almost all of the associate and undergraduate education institutions providing maritime education in Turkey give necessary importance to celestial navigation and it is taught as a compulsory course.

Keywords: celestial navigation, maritime education, STCW Convention

Introduction

Maritime education shows many differences when compared to other educational areas. Maritime education not only addresses to not only the field of social sciences, it also addresses to the field of science. In addition; the lectures that should be given in maritime education, their content and curriculum have been determined in STCW Contract. In this respect; all educational institutions giving maritime education have to give education in

accordance with STCW. The lectures, their content and curriculum that should be given in the institutions giving maritime education have been determined with the Regulation on the Shipmen Training and Examination published by the Ministry of Transport, Maritime Affairs and Communication General Directorate of Sea and Inland Waters Arrangement depending on STCW in Turkey. Again; which labs should be existent and the materials that should take place in these lab have been determined with the same Regulation. According to this; the lectures taking place in the educational curriculum at deck operation level are sequenced as the following in the Regulation on Shipmen Training and Examination; Math, Physics, Chemistry, Shipping, Safety at Sea and Ship Safety Educations, Navigation, Maritime English, Electronics, Electricity, Meteorology, Ship Building, Watchkeeping Standards, Computer Programming and Usage, Cargo Handling and Ship Stability, International Maritime Conventions, Ship Maneuvering, Maritime Law, Maritime Communication, Maritime Management, Safety and Quality Management and Leadership and Team Work Skills. In addition; the lectures that should be given at deck management level have also been determined with the Regulation on Shipmen Training and Examination.

When STCW and the Regulation on Shipmen Training and Examination are examined, it is observed that all the lectures necessary for a deck officer and ship master have been clearly and obviously determined. All given lectures have a separate importance within themselves. However; it is also clear that one of the concepts coming to mind related to shipping is navigation. Within this respect; it could be said that the lecture of navigation has a separate importance among all the lectures. Navigation is “a science showing the methods and instructions necessary for taking a ship from a position to another within the shortest time and in safety” (Yağız, 1998). Navigation is also separated into different branches among itself. Types of navigation are as follows in terms of their methods; terrestrial navigation, electronic navigation and celestial navigation (Yağız, 1998). The purpose of this study is to emphasize the importance of celestial navigation being one of the branches of navigation.

The Importance of Celestial Navigation and the Implementations in Turkey

Celestial navigation is one of the oldest known navigation methods. One of the navigation methods most frequently applied in geographical explorations, ocean transitions and in periods in which GPSs have not been found is celestial navigation. “It is specified in written resources that the Chinese have prepared their maps in 4000 BC and Babylonians have prepared their maps in 1200 BC, Phoenicians have navigated in the shores of Mediterranean

in the same periods and they assign directions according to the stars in Homer's Odyssey (8 BC)" (Aktuğ, [http:// www. kaptanhaber.com/ haber/31917/ neden-hala-goksel-seyir.html](http://www.kaptanhaber.com/haber/31917/neden-hala-goksel-seyir.html), Access Date: 04.05.2017). "It is expressed in the work called "The Aeneid" written by Virgil in 19 BC that Palinurus the Quartermaster found the direction by looking at the stars" (Aktuğ, [http:// www. kaptanhaber.com/ haber/31917/ neden-hala-goksel-seyir.html](http://www.kaptanhaber.com/haber/31917/neden-hala-goksel-seyir.html), Access Date: 04.05.2017).

"When we look at today, it is seen that celestial navigation has started to disappear and it is the least used navigation method" (Aktuğ [http:// www. kaptanhaber.com/ haber/31917/ neden-hala-goksel-seyir.html](http://www.kaptanhaber.com/haber/31917/neden-hala-goksel-seyir.html), Access Date: 04.05.2017). "Especially together with the usage of GPS, DGPS and ECDIS, it could be said that celestial navigation methods have stayed in the background and their usage ratio has decreased"(Aktuğ, [http:// www. kaptanhaber.com/ haber/31917/ neden-hala-goksel-seyir.html](http://www.kaptanhaber.com/haber/31917/neden-hala-goksel-seyir.html), Access Date: 04.05.2017). "However; there are also the institutions in which its usage is obligatory. For instance; within the scope of Ship Inspection Report (SIRE) Programme applied by Oil Companies International Maritime Forum, it is foreseen that the compass errors should be checked via the celestial objects or the electronic positioning process in open sea should certainly be verified with celestial navigation"(Aktuğ, [http:// www. kaptanhaber.com/ haber/31917/ neden-hala-goksel-seyir.html](http://www.kaptanhaber.com/haber/31917/neden-hala-goksel-seyir.html), Access Date: 04.05.2017). "As per "The Convention of the Standards of Training, Certification and Watchkeeping for Seafarers (STCW-78)"; the teaching of the principles of celestial navigation to the officers who shall take charge in the trade ships is obligatory in all over the world in the institutions giving shipping education" (Aktuğ, [http:// www. kaptanhaber.com/ haber/31917/ neden-hala-goksel-seyir.html](http://www.kaptanhaber.com/haber/31917/neden-hala-goksel-seyir.html), Access Date: 04.05.2017). "A new part has been added to STCW related to celestial navigation within the scope of "2010 Manila amendments" and the subjects necessary to be taught have been clarified" (Aktuğ, [http:// www. kaptanhaber.com/ haber/31917/ neden-hala-goksel-seyir.html](http://www.kaptanhaber.com/haber/31917/neden-hala-goksel-seyir.html), Access Date: 04.05.2017). It is seen that the subjects related to the celestial navigation take place in the subjects necessary to be obligatorily taught among the lectures regarding the deck operation level taking place in the Regulation on Shipmen Training and Examination in Turkey. It is also seen that celestial navigation is among must courses in the vocational schools of higher education in which shipping programs take place, vocational maritime higher schools and faculties of maritime studies giving education in Turkey. For example; celestial navigation takes place among the must courses given as 5 hours per week in Kocaeli University Karamürsel Vocational Higher School- Maritime Transport and Business Program (Lesson

Plan of Karamürsel Vocational Higher School- Maritime Transport and Business Program, 2016). When the lesson plan prepared in 2014-2015 Education Year by Yalova University Yalova Vocational Higher School- Maritime Transport and Business Program, it is seen that there is the lecture of celestial navigation in both terms as Celestial Navigation-I and Celestial Navigation-II (<http://www.yalova.edu.tr/tr/icerik/737/737/program-hakkinda.aspx>). When the lesson plan of Istanbul Technical University Maritime Faculty-Department of Maritime Transport and Business Engineering after the term 2013-2014 is examined, it could be observed that the lecture of Celestial Navigation takes place as 2,5 credits (<http://www.sis.itu.edu.tr/tr/dersplan/plan/DUI/201410.html>). Again; Celestial Navigation also takes place as a must course in the Lesson Plan of Dokuz Eylül University Maritime Faculty (http://debis.deu.edu.tr/ders-katalog/2016-2017/tr/bolum_1160_tr.html).

Conclusion

Maritime education is a comprehensive and wide education type. The subjects and lectures necessary for a deck officer and ship master to know both within the context of operation and technique have a wide range. There is no doubt that each lecture and each subject taking place in this range has a significant importance. Navigation has a separate place among these lectures; because one of the concepts which are associated with maritime is shipping and the other one is navigation. In this respect; it could be said that the lecture of navigation has an importance place. Celestial navigation being a branch of navigation and not being used so much today is another important area. The purpose of this study is to emphasize the importance of celestial navigation and the implementations in Turkey. When the implementations conducted in Turkey are examined, it could be seen that the lecture of celestial navigation takes place as a must course in almost all of the institutions giving associate degree and undergraduate degree education. This situation is an important approach in terms of maritime education; therefore, it is understood that the necessary importance is given to celestial navigation by the educational institutions in Turkey.

It should not be forgotten that the method of navigation that will be applied in the event of the failure of the electronic devices notifying location during the navigation at sea, especially at open sea and ocean will be celestial navigation; for this reason, the more importance is given to the electronic navigation today, the more it should be given to celestial navigation within the same direction. Celestial navigation methods should not be only used in the detection of compass errors or sunrise-sunset times. Watchkeeping officers should get benefit from the

celestial navigation at least once during their watch as a positioning method. Within this context; importance should be given to celestial navigation as much as the electronic navigation and terrestrial navigation by the watchkeeping officers and it should be benefited frequently during the navigation.

References

AKTUĞ, Şems, 2017. Neden Hala Göksel Seyir. [http:// www. kaptanhaber.com/ haber/31917/ neden-hala-goksel-seyir.html](http://www.kaptanhaber.com/haber/31917/neden-hala-goksel-seyir.html), Access Date: 04.05.2017.

http://debis.deu.edu.tr/ders-katalog/2016-2017/tr/bolum_1160_tr.html

<http://www.sis.itu.edu.tr/tr/dersplan/plan/DUI/201410.html>

<http://www.yalova.edu.tr/tr/icerik/737/737/program-hakkinda.aspx>

Lesson Plan of Karamürsel Vocational Higher School, 2016. Maritime Transport and Business Program

YAĞIZ Fethi,1998. Seyir-I (Basic Navigation). ISBN-975-96590-0-X. Tasarım Matbaacılık, İstanbul