



Research Article

Entrepreneurship Education in Blue Universities

Pınar ÖZDEMİR*

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Abstract

People with entrepreneurial skills and mindset have a great role in stirring the economy and meeting financial, social, and humanitarian needs by taking risks, especially when there is uncertainty. It is vital to take every action to stimulate the entrepreneurial potential of society, to promote entrepreneurial culture, and to have more people with an entrepreneurial mindset and skills. One of these actions is giving entrepreneurial education, especially to the young. On the other hand, there are more chances in some sectors for entrepreneurs to be successful. Maritime is one of these, with its fast development, involvement of people from different backgrounds and cultures in all parts of the world, and multinational, multicultural, and multi-regional character in terms of stakeholders. These points make entrepreneurial education in maritime schools an important issue. In this research, entrepreneurial education given in maritime universities, which are referred to as "Blue Universities," was looked into, its strong and weak sides were investigated, and recommendations for its development were given

Keywords

Entrepreneurship,
Entrepreneurship Education,
Maritime,
Higher Education Institutions

1. Introduction

In recent years, our world has seen unexpected changes in every field. While rapid technological, social, and economic changes were taking place, the emergence of the pandemic deeply affected all institutions. In the beginning stages of the new normal, economic stagnation and recession started, and the number of unemployed people skyrocketed as a result of the shutdown of everything. Unemployment hit a record high. The IMF described the decline as the worst since the great depression of the 1930s (Jones et al., 2020). As businesses around the world have closed their doors to curb the virus's spread and as the coronavirus has been inflicting severe damage on global economies, governments have done their best to help their citizens who have been laid off from shuttered businesses and to keep the effects of the crisis as small as possible (Zeballos-Roig, 2020). They allotted billions of dollars to help their people survive the crisis. Of these, the USA put aside the two-trillion-dollar coronavirus stimulus bill, which is mostly focused on helping people after they've lost their jobs (Foran et al., 2020). During this time, while a lot of enterprises have closed their doors, new ones have opened, since crisis time is full of opportunities for people who can think outside the box and see the hidden gold in the mud.

Realizing opportunities during times of uncertainty and making good use of them to promote the welfare of not only individuals but also states necessitates people having efficient entrepreneurial skills and mindset, which entrepreneurial education can widely provide. Entrepreneurship education is one way to stimulate the entrepreneurial potential of the people and give way to the creation of new enterprises through which countries may recover from their problems and reach prosperous days. This is only possible with people who have an entrepreneurial mindset and skills, who realize the opportunities, who can take risks, and who can take the initiative to create their own businesses. These individuals establish micro-, small-, or medium-sized businesses, which represent the primary moving mechanism for the creation of new jobs and an increase in the gross domestic product (Belás et al., 2015).

 Otel, Lokanta ve İkrım Hizmetleri Bölümü, Ařçılık Programı, Denizcilik Meslek Yüksekokulu, Piri Reis Üniversitesi
İstanbul, Türkiye. pozdemir@pirireis.edu.tr

1.1 Entrepreneurship and Entrepreneurship Education

Entrepreneurship has long been regarded as the powerful force behind economic growth and as a vital component of a prosperous and healthy society. It encourages the innovation needed to not only take advantage of new opportunities, increase productivity, and generate jobs, but also to help address some of society's most difficult problems in accordance with the Sustainable Development Goals of the United Nations (SDGs). Many governments, research institutes, non-governmental groups, and international bodies see entrepreneurship as a vital element to ending impoverishment and social injustice, progressing women's empowerment, and putting in place business solutions to the world's ecological problems (Bosma et al., 2020).

Researchers studying entrepreneurship have defined it in many ways and emphasized different features that an entrepreneur should have. Some of them say entrepreneurial intention is closely related to personal traits (Sahin et al., 2019; Arru, 2020; Bazkiaei et al., 2020), while others emphasize that creativity is very important in entrepreneurship and a person who can create a new business is an entrepreneur (Tantawy et al., 2021). Some researchers focus on the risk-taking feature of entrepreneurial activity as the most important feature (Zhao et al., 2010). In addition, conscientiousness, openness, and extraversion are among the main characteristics of entrepreneurs (Kristanto and Pratama, 2020; Liu et al., 2021; Li et al., 2022). According to Drucker (1985), entrepreneurs are people who always search for change, respond to it, and exploit it as an opportunity. Innovation, an important element of entrepreneurship, was added to the definitions of entrepreneurship by Joseph Schumpeter as early as 1934 (Growth Analysis, 2009).

As can be seen, there are many perspectives on who an entrepreneur is and what entrepreneurial behavior is because the definition of entrepreneurship changes as a result of new attributions to entrepreneurs, the way entrepreneurs respond to societal demands, and the expectations of entrepreneurs, which change in tandem with societal needs (Shane and Venkatamaran, 2000). In short, entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation, and risk-taking as well as the ability to plan and manage projects to achieve objectives (VESVET, 2019). All the advantages brought by entrepreneurship make it important for societies to have people with an entrepreneurial mindset. One of the ways to provide this is to give people EE (entrepreneurship education).

It is found that there are strong positive effects of EE on long-term entrepreneurial outcomes such as business creation, business income, and business survival. Those who participated in entrepreneurship education exhibited a 30% higher likelihood of starting their own business over the 10 years of getting EE in high school. They had over 10% more business income. It is also found that students participating in entrepreneurship education may enhance their self-efficacy, or belief in their ability to successfully start a new business. Other research on the subject has shown that EE has positive effects on students' analytical ability, persistence, and proactiveness, all of which are important skills in entrepreneurship. Entrepreneurship education can have strong, long-lasting effects on entrepreneurial outcomes (Elert et al., 2015).

Additionally, it has been observed that university graduates who have taken entrepreneurship courses are more likely to choose entrepreneurial jobs, work in small enterprises, and create patentable ideas, novel processes, services, or goods. Entrepreneurship education and training may have a positive impact on behavior by improving the skills required to start and grow a business (Thomas and Kelley, 2011).

1.2 Entrepreneurial Opportunities in Maritime

In the maritime sector, a lot of changes are expected in the years to come. According to the MESA (Maritime Europe Strategy Action) Report (2016), in 2030, the world will be shaped by powerful and relatively certain global trends that we observe today, which will be influential for the future of the waterborne industries. An increase in population and urbanization will cause increased waterborne transport, including use of ferries, cruise ships, and leisure craft in particular, while the increase in food and water demand will require transport of freshwater and food and the construction of desalination plants. Possibly, some facilities for fish farming or aquafarming will be established, and these will require special infrastructure. On the other hand, there are some environmental concerns, such as the use of cleaner fuels or hybrid solutions, or technological developments for sea-going vehicles, which call for special attention. The need for raw materials will increase since Africa will take the place of Asia in

terms of the highest economic growth rate, so the waterborne trade to and from Africa, which has rich sources of raw materials, will increase. The expansion of waterborne trade will also be influenced by the rising worldwide demand for food, water, and technological goods, as well as by the economic development of developing nations.

These are just some of the signals that show why the maritime sector has great potential to develop, which means it will present numerous opportunities for entrepreneurs. Creative disruption in the maritime sector can introduce promising business opportunities, create new jobs, and transform traditional processes into more productive and sustainable activities (Stockfish, 2015; MESA, 2016; Lam et al. 2020).

This demonstrate why there are numerous chances for innovation and growth in the maritime sector, particularly for prospective business owners. It consists of businesses whose operations provide cutting-edge goods and services for the maritime industry. This sector of the economy is underdeveloped since few entrepreneurs have yet to pay attention to it. The sector might also help the nations export goods, which would immediately boost their economies. In addition, it may be able to help the unemployed find employment (SEAMAP, 2019).

1.3 Entrepreneurship Education in Maritime Higher Education Institutions

It is important to equip people, especially the young, with entrepreneurial skills so that they may have a mindset that will help them see what others cannot, have the courage to establish their own start-ups or businesses, or at least be intrapreneurs who come up with ideas to develop their present work. To provide this, most schools all over the world have started to give entrepreneurship education at all levels as required by the Oslo Agenda for entrepreneurship education (Oslo Agenda for Entrepreneurship Education, 2006).

Like all HEIs (Higher Education Institutions), maritime universities, which will also be called "Blue Universities" in this study, started to give courses to develop their students' entrepreneurial capacity. This study aims to see to what extent these courses are included in the curricula and activities of "Blue Universities" and to see if entrepreneurial education is being given the importance it deserves in these programs, which prepare their students for a sector full of opportunities for people with entrepreneurial viewpoints, mindsets, and skills.

2. Methodology

Most of the research on entrepreneurship education has focused on its effects on individuals or on the relationship between some characteristics of individuals and their entrepreneurship tendency. There is not much research related to entrepreneurship education in schools. However, there are comparative studies examining the situation of schools in terms of entrepreneurship education, although they are few in number. In one of these studies, conducted by Turner and Gianiodis (2018), website searches supplemented by email and phone enquiries were used to gather information. In another study titled "Entrepreneurship education in U.S. community colleges," Barnard et al. (2019) used structured literature review methodology to collect data.

In this study, the content analysis method, which is a quantitative research method, was used. Content analysis is defined as a technique that allows the observed content of any communication to be examined objectively, systematically, or quantitatively. It is a useful measurement technique that is widely used in studies in the field of social sciences, including web communications (Keskin and Çilingir, 2010).

The reasons for the preference of this method are the difficulty of finding the person responsible for entrepreneurship education in universities that are abroad and the acceptance that websites provide accurate and precise information about the activities of universities. When the required information could not be reached, searches were made on the internet using keywords. In the course of the data gathering period, although emails were sent to several schools, no response was received. Therefore, it was concluded that gathering data through emails could be possible when there was a certain contact person or office to send the mail to. The schools' being in different countries was another drawback to getting the data through emails or phone enquiries. Entrepreneurship education in these universities was, then, evaluated in accordance with the criteria determined by considering the requirements of a good entrepreneurship education. The criteria consisted of the properties that maritime universities should have, the courses they should give, and the activities they should hold in order to provide successful entrepreneurship education. Accordingly, the following questions were sought to be answered during the data collection process.

Does the university...

- mention entrepreneurship among the objectives of at least some of the courses it gives?
- have a separate school, faculty or department for entrepreneurship?
- have courses related to entrepreneurship?
- have an entrepreneurship center?
- have incubators?
- organize entrepreneurial activities?

In this research, the top 20 maritime universities according to webometrics ranking (2021) were taken into consideration. Table 1 gives the list of the universities that were studied in this research.

Table 1. Ranking of Maritime Universities
(Webometrics Ranking, 2021)

RANKING in MARITIME UNIVERSITIES	NAME of the UNIVERSITY	RANKING in WEBOMETRICS
1	Dalian Maritime University	1112
2	Shanghai Maritime University	1332
3	Arab Academy for Sci.&Tech. and Maritime Trans.	2189
4	Gdynia Maritime University	3055
5	Korea Maritime University	3572
6	Maritime University in Szczecin	3821
7	Australian Maritime College	3929
8	Chabahar Maritime Academy	5635
9	World Maritime University	6249
10	State Univ. of Maritime and River Fleet Adm. S O Macarov	7713
11	California State Univ. California. Maritime Academy	7814
12	State Univ. of New York Maritime College	8041
13	Massachusetts Maritime Academy	7404
14	Maine Maritime Academy	8431
15	Mokpo National Maritime University	8441
16	Constanta Maritime University	9124
17	National Univ. Odesa Maritime Academy	9238
18	Regional Maritime University	9568
19	Admiral Nevelskoy State Maritime Univ.	9780
20	Jiangsu Maritime Institute	9831

The content evaluation form was filled out after the web pages of the maritime universities included in the scope of the research were thoroughly examined. Table 2 gives the information in this form. Finally, the status of these universities in terms of entrepreneurship education was analyzed and interpreted in line with the information obtained.

3. Results and Discussion

As Table 2 shows, the data acquired as a result of the research revealed that ten of the top 20 maritime universities mention entrepreneurship among the objectives of the various courses they offer. These courses may not necessarily be entrepreneurship courses, despite one of their objectives being determined to boost the entrepreneurial intentions of the students. Among these courses are "Innovative Enterprise, Innovative Transport and Logistics Systems, Maritime and Coastal Tourism, Economics of Sustainable Development and Transport and Logistics in the Global Economy."

Seven universities have a special school, faculty, or department to give entrepreneurship education. The school is named "The School of Innovation and Entrepreneurship", the faculty is "Faculty of Entrepreneurship and Quality Science", and the department is "Management and Entrepreneurship in Maritime Transport". These offer courses

related to entrepreneurship and innovation, together with maritime-related courses. One of the universities offers a bachelor's degree in entrepreneurship, which is "Digital Technologies in Trade and Entrepreneurship." Another university has a post-graduate degree called "Entrepreneurial Activity in Sea Transport".

Half of the universities in the list offer entrepreneurship courses under different names, such as "Innovation and Entrepreneurship Management", "Entrepreneurship in International Transport and Trade", "Enterprise E-Commerce Management", "Entrepreneurship in International Transportation", "Social Entrepreneurship and Maritime Activities Through Community-Based Collaboration", "Innovative Entrepreneurship and Startup Management" or just "Entrepreneurship". All these courses aim to create an entrepreneurial perspective and mindset in students.

Eight universities out of twenty have Entrepreneurship Centers, some of which have different names such as "Entrepreneurship Support Centre", "The Innovation Centre" or "Small Innovative Enterprise Center". One of the universities states the aim of the center as cooperating with entrepreneurs, experts, investors and consultancy agencies so that comprehensive training can be provided to the students at the maritime university. In addition to entrepreneurship centers, some universities have technology transfer offices such as the "Centre for Maritime Technology Transfer". Only two of the universities have incubator centers that are focused on maritime technologies. One of them, which is the "Maritime Global Technologies Innovation Center", is a collaborative incubator fostering technology developments in the maritime space through entrepreneurial innovations, bringing together maritime, technology, and financial interests to accelerate tools for commercial growth (Clott, 2017).

Most universities have various kinds of activities related to entrepreneurship. Among them are entrepreneurship competitions, projects, conferences, field trips, research activities, talks, and question-and-answer sessions to which maritime entrepreneurs or experts are invited.

Table 2 shows all the entrepreneurship-related activities in the top 20 maritime universities. In this table, the top 20 universities are ranked according to the number of entrepreneurship-related activities they offer. In other words, the university in the first row of the table is not the maritime university that tops the world rankings according to webometrics.

Table 2. Number of Entrepreneurial Activities in Maritime Universities*

	Objective	A separate school, faculty or department	Courses	Centers	Incubators	Activities	Total
1	x	x	x	x		x	5
2		x	x	x	x	x	5
3	x	x	x	x		x	5
4		x	x	x		x	4
5	x	x	x			x	4
6	x		x			x	3
7	x		x			x	3
8			x	x		x	3
9	x		x			x	3
10	x			x		x	3
11		x		x	x		3
12	x					x	2
13	x		x				2
14				x			1
15	x						1
16		x					1
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
	10	7	10	8	2	11	-

* This table is based on the number of entrepreneurship-related features of universities, not their ranking in webometrics.

Apart from these, a European Union Project, MELES (More Entrepreneurial Life at European Schools), has been realized with the collaboration of several universities, two of which are maritime universities, and one of them is among the top 20 maritime universities. The primary target of the project is the introduction of items aimed at gaining knowledge and entrepreneurial skills to the curriculum (MELES, 2020).

A similar project to MELES is the CEI-MAR Project (2014). CEI-MAR, which means "The International Campus of Excellence in Marine Science", is a meeting point and collaboration center between researchers and institutions, and it has a specialized and creative program to support entrepreneurship. Projects like this are realized through the collaboration of several universities and some stakeholders in the sector and aim to create an entrepreneurial mindset in students through various activities.

Although the data from the top 20 universities according to Webometrics (2021) were studied in this research, there are some maritime higher education institutions that are not covered in this research but give importance to entrepreneurship education. Some of them even have innovation and incubation centers and activities to encourage their students to engage in entrepreneurial activities (CEII, 2022). However, the number of such schools is unfortunately very small.

When all that has been mentioned so far is considered, it is seen that entrepreneurship education is given at different intensities and different levels in maritime universities. Some offer a master's degree, while others don't have any kind of entrepreneurship activity. Some of them have a separate school or department for entrepreneurship, while others don't have even a single course for the students who want to get it. Most universities don't have an entrepreneurship club, which is also the center of activities related to entrepreneurship, such as conferences, seminars, or contests, along with other activities. Therefore, it is seen that there are some attempts to give entrepreneurship education to maritime students at the tertiary level, but when considered as a whole, these initiatives are not sufficient. Entrepreneurship education can greatly benefit students and give them quite a different perspective if they have a chance to receive it. It doesn't mean that everybody who gets it will become an entrepreneur; they can also be intrapreneurs, who are needed by not only the maritime sector but also all sectors. Apart from this, entrepreneurship education, besides teaching students about starting and running a business, promotes creative thinking, innovation, and a strong sense of self-esteem and discipline, as well (Chux et al., 2019).

Entrepreneurship, which is not given the place it deserves in the curricula of maritime universities, has found a very secure position in the universities of most developed countries. At these universities, all students have a chance to get it, whether as a course, club activity, competition, or seminar, since its importance is appreciated by all. Generally, in western countries, serious efforts are being made to instill entrepreneurial thinking skills in students (Rashid, 2019). When the literature was reviewed, no study on entrepreneurship education in maritime schools was found. However, there are studies that investigate various aspects of entrepreneurship education in universities in general. According to these studies, over 5000 entrepreneurship courses are taught in two- and four-year programs at American universities each year (Schramm, 2019). In addition, universities offer various extra-curricular activities, including competitions, events, and student clubs, and they provide entrepreneurial support (Pittaway, 2021). In European universities, the main aim of entrepreneurship education is to develop an entrepreneurial mindset among students and faculty, as well as to create an entrepreneurial culture at the university. It is seen as the responsibility of all parties concerned, and they try to promote it through a combination of activities such as research, teaching, incubating, mentoring, coaching, and the like. Both curricular and extra-curricular activities are used to increase the students' interest in entrepreneurship. Naturally, different entrepreneurship education programs are offered for different target groups, including the unemployed in these universities (Volkman and Autretsch, 2017).

In Türkiye, activities promoting entrepreneurship in the maritime sector and in universities have started to take place, albeit very slowly. For example, the SEAMAP Project, funded by the Erasmus+ Program of the European Union, aims at enhancing the entrepreneurial skills of the people dealing with maritime issues (SEAMAP, 2019). In addition, universities have been increasing their entrepreneurship and innovation-related activities in recent years. Some of these universities have maritime faculties, which means maritime students have had the chance to take part in entrepreneurial activities. Apart from the slowly increasing activities at the universities, there are some activities held by other institutions. For example, the Chamber of Shipping organizes the "Seafaring Nation,

Seafaring Country" idea contest every two years. The aim of this competition is to bring together innovative ideas and projects in the sector within the framework of the mission of developing the Turkish maritime sector in a free and competitive environment, increasing its international competitiveness and contributing to the development of the country.

4. Conclusions

Entrepreneurship is getting more and more important as the world economy is going through an unstable period and a lot of small businesses are having a hard time surviving, or they simply close, which leads to high unemployment. In such a hard time, all activities aiming to promote employment should be given special importance, and entrepreneurship education is no exception.

Entrepreneurship education is quite a sought-after subject for students, no matter which sector they will go into in the future. It is usually given, especially in business and management departments or engineering faculties, as a core course and supported by various activities such as club meetings, contests, seminars, conferences, or guest speakers. Even if it is not given as a course to students, they still have a chance to get it through these activities, as a result of which they can have a more entrepreneurial mindset or skills to help them create new enterprises or lead innovative changes in their jobs.

This study has revealed that entrepreneurship is not given due importance in maritime universities, at least in those maritime universities ranked in the top 20 in the world. There are a few entrepreneurship-related courses and activities at these universities, though they are not sufficient in number. On the other hand, some universities don't have any entrepreneurial activities at all. That means students at these universities don't have a chance to have an entrepreneurial mindset and perspective. However, in today's world where unemployment is increasing and people are losing their jobs for various reasons, it is of great importance to have an entrepreneurial mindset and perspective for people to start their own businesses or open new job opportunities.

In light of this information and within the framework of this research, it is concluded that maritime universities should give more importance to entrepreneurship education. For this purpose, giving more courses on entrepreneurship, organizing various activities through entrepreneurship centers, and explaining the importance of entrepreneurship to students and staff are among the first steps to be taken. One of the most important steps that can easily be taken in this regard is to host entrepreneurs in the maritime sector and have them share their experiences and advice with students.

As in all sectors, the maritime sector is a sector where people with an entrepreneurial perspective can see various gaps and fill them in innovative ways. That is, they can start new enterprises and, as a result, increase employment. In addition, entrepreneurship education provides the necessary mindset not only to create new jobs, but also to evaluate existing jobs from different perspectives and to do them in better ways. It equips students with skills like critical thinking, problem solving, working in teams and taking initiative, which are considered among the most important entrepreneurial skills. In this respect, providing this training to all students, regardless of which sector they are from or whether they intend to become entrepreneurs or not, will first and foremost contribute to their personal development.

The next study to be conducted in this regard could be to identify the entrepreneurial tendencies of students in blue universities and to determine what needs to be done to provide entrepreneurship education in line with the needs of the sector and the demands of students.

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