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Research Article

AQUA PRODUCTS AND EDUCATION[1]

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ABSTRACT

While the fishing adventure started with the ancestor training in the coastal areas with the same methods, it is necessary to teach this work in the coastal areas and to understand that the education is taken correctly. That's why schools open. Fishing life begins with high school education in some places for younger generations. Then it continues with the department names such as fishery, aqua products opened in universities. The first trainers gave this to themselves by mastering this work.

As educational institutions grow, this work will be done in a professional way and quality work areas will be opened for future generations.

From past to present, fisheries and aquaculture departments provide dozens of higher education opportunities. The most important reason for the sustainability of aquaculture, which constitutes a large part of our country's exports in recent years, is to increase the training activities in the same speed. Residual ancestral methods are replaced by new and more useful methods, and aquaculture is provided to support fishing activities. This makes a significant contribution to our country and of course the nature we live in.

Keywords: *Education, Aqua Products, Fishery*

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1. INTRODUCTION

Education is the most important experience in every field of human life. The first education starts in the family and will learn by imitating everything. While the fishing adventure that started from ancestral training continues in the coastal areas with the same methods, it is necessary to teach this work in the inner parts and to understand that the training is taken correctly. That is why schools are opened. Fishing life starts with high school education in some places for younger generations. Then, it continues with the department names such as fishery and aquaculture. The first tutorials gave them years of mastery. As educational institutions increase, this work will be done professionally and quality workspaces will be opened for future generations. From past to present, fishing and aquaculture departments provide dozens of higher education opportunities.

Especially, the most important reason for sustainable aquaculture, which constitutes a high proportion of our country's exports in recent years, is to develop and increase the training activities at the same speed. New and more useful methods are now being replaced by ancestral methods, and aquaculture is carried out to support fishing activities. This makes a significant contribution to our country and of course to the nature we live in. Fisheries, fisheries high schools, which provide education at the secondary level, guide young people who have no marine experience. During this training, the love of water and sea is imbued and technicians equipped with theoretical and practical methods are trained in many fields from active use of water to production and protection control of aquatic organisms.

After the proclamation of the republic as the first higher education program within the framework of the Darülfunun Scientific Zoo (zoology) within the framework of fishing education and French Prof. Dr. Raymond Hovasse. Since Hovasse is the place of migration in fish migration movements, Balta Port Zoology Station is established in the Bosphorus with the idea that the researches will be conducted more easily and healthily [1, 2]. This institute is an example of the most important Hydrobiology Research Institute. After the university reform in 1933, the transition from Darülfünun to the University was made. During this period, Professor of Zoology from Switzerland. Dr. André Naville is on duty shortly. Fahire Battalgil, an associate professor in 1938, a professor in 1944 and the first researcher of inland waters in Turkey, gave it to her [3]. In the period of Ataturk (1937), have come to Istanbul that Curt Kosswig was appointed as the director of the Zoo Institute at the Faculty of Science at Istanbul University. Kosswig focuses on field studies [3, 4]. The marine laboratory in Balta Port has been allocated to these works to establish the scientific principles of fisheries in our country. In the light of these positive developments, Kosswig's initiative and with the support of Rector Prof. Dr. Nazım Terzioğlu, a Hydrobiology Research Institute was established in 1951 for the first time in our country. Prof. Dr. Remzi Geldiay took an active role in Ege University Faculty of Science in 1955 and contributed to the development of zoology. In 1964, Remzi Geldiay initiated the establishment of a Hydrobiology Research Center in Izmir under the Chair of General Zoology. Remzi Geldiay biological oceanography and ichthyology have been become Turkey's most productive academic group in marine biology and limnology [3]. In 1962, within the framework of the 10-year dam's agreement with the State Hydraulic Works of Turkey (DSI), a large number of researches were carried out, especially in the fishery of the dam lakes. In 1978, as a result of the intensive efforts of Fethi Akşıray, "Sapanca Inland-Aquaculture Production, Research and Application Unit" was put into operation in Sakarya province, Sapanca district, Kurtköy to realize the artificial production of carp and trout. In 1970, the State Planning Organization (DPT) and the United Nations Food and Agriculture Organization (FAO) in utilizing the structures of cooperation and agreement on the location of Hydrobiology Research Institute "Turkey Fisheries Development Department" were established and it has created Turkish personnel structure of the institute members [5]. 1975 years since the existence

of environmental problems in Turkey's seas have also begun to make itself felt. Studies have been conducted on pollution in the Marmara Sea and especially in the Gulf of Izmit.

Istanbul University Faculty of Science the Department of Zoology only provides training on hydrobiology and fishery biology. "Benthic invertebrates", "Turkey systematics of marine bony fishes" have started giving courses. In the 1965 academic year, oceanography was opened for the first time and this training was given by world-famous oceanographer Richard Fleming. In the 1970s, the Fisheries Department was established under the Ministry of Agriculture. Agricultural engineers with agricultural training are assigned in this branch. In 1971, the Law coded 1380 on Fisheries entered into force to allow the authorities to co-exist. In 1974, the Department of Fisheries was established within the Faculty of Agriculture of Ankara University and the Department of Fisheries and Game Animals was opened at the Faculty of Veterinary Medicine of Ankara University. Training on fish breeding has started to be provided on both chairs. In 1978, the "Fisheries Department" was opened in the Faculty of Agriculture. The department of the veterinary faculty was closed with the opening of the aquaculture departments. In line with the report given by İsmet Baran, who is the dean of the Faculty of Veterinary Medicine of Istanbul University in 1980, the foundations of today's Fisheries Faculties were laid legally with the law numbered 2547. Firstly, Fisheries and Fisheries Faculties were established in İstanbul, İzmir, Isparta, Elazığ and Trabzon [4, 6].

A total of 25 programs have been identified at the undergraduate level that provides training on aqua products/fisheries. The students who get the required scores from the entrance exams of the universities established by TC.OSYM (Republic of Turkey. Presidency of Measurement, Selection and Placement Center) are settled in the departments in our country. Students who successfully graduate from the departments start to work in the private sector and government institutions as engineers or technical personnel. A person who willing to establish its own business continues to contribute to the production of seafood.

As can be seen, aquaculture, which started with ancestral methods in the developing and changing time, has been replaced by the education of fisheries by gradually renewing itself and strengthening with higher education.

This area, which was started under the name of aquaculture in our country and later tried to be reinforced with the departments like fishing technology and the living things in it, finds its place with different names from abroad. Both in European countries and the U.S. of America and other countries of the world, "Marine Biology, Fisheries Technology or Fisheries Faculty is manifested by names as such [7, 8]. Although training objectives and topics have similarities varied widely, education has been some differences in Turkey. The only faculty named "fisheries" in the world is in Turkey. Content is too comprehensive, thus it does not match with the faculties of other countries causing some problems in student exchange.

2. MATERIALS AND METHODS

The data used in the study were compiled by using domestic and international scientific and non-scientific publications "[9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20]".

3. RESULTS AND DISCUSSION

Work preparing when taken into account the information obtained starting from researching the proclamation of the republic to aquaculture and fisheries issues in Turkey were given importance since and has been supported in the field of education by opening and colleges in several cities of the country on behalf of sustaining it. Besides, scholarships are granted by YÖK (Higher Education Council) in various amounts under the support of recruiting students to these schools.

However, it has been seen that in addition to these supports, the opportunities of graduating students to find a job have been ignored. This has made these sections less preferred or not preferred at all. Although there are opportunities to work in state and private sector institutions, the lack of sufficient staff quota in the state institutions has reduced the selectability of departments due to the desire of private sector organizations to employ cheap personnel. In addition to this, since the field has been included in the veterinary and agricultural faculties in the past, job opportunities have been restricted especially by the private sector, as the authorities and responsibilities have been shared with these two other fields.

To grant the rights of the fisheries and fishery technology fields, the fisheries directorate opened under the Ministry of Agriculture and Forestry was supported, but individuals who graduated from this field were supported but could not increase their eligibility in education due to unauthorized powers and responsibilities.

Unemployment due to such limited powers and responsibilities has reduced the likelihood of the fishery and fishery technology departments to be preferred day by day.

In 2013, the number of quotas for 25 programs was 665 and 145 in 2015. In 2017, the number of the quota was reduced to 18 and 7 departments faced closure. Already for 18 sections, the number of quotas is 325 people. The latest status of the fisheries and fishery technology sections are as summarized in Table 3.1 [4, 13].

Table 3.1. Quotas in Fisheries Faculties and Fisheries Technology Engineering

Universities	**Quotas**				
	2013	**2014**	**2015**	**2016**	**2017**
Aqua Products Faculty					
1-Fisheries Faculty of Istanbul Unv. (Aqua Science Engineering)	52	41	40	52	52
2- Fisheries Faculty of Ege Ünv. (İzmir)	52	31	30	41	52
3- Fisheries Faculty of İzmir Kâtip Çelebi Ünv.	26	26	X	11	11
4- Fisheries Faculty of Akdeniz Ünv. (Antalya)	26	11	10	16	26
5- Fisheries Faculty of Mersin Unv.	26	11	X	11	11
6- Fisheries Faculty of R.T. Erdoğan Ünv. (Rize)	26	11	X	11	11
7- Fisheries Faculty of Kastamonu Ünv.	26	11	X	X	X
8- Fisheries Faculty of Süleyman Demirel Unv. (Isparta)	26	11	X	11	11
9- Fisheries Faculty of Fırat Ünv. (Elazığ)	26	11	40	11	11
10- Fisheries Faculty of İnönü Ünv. (Malatya)	-	11	X	X	X
11- Fisheries Faculty of Çukurova Ünv. (Adana)	26	11	X	11	11
12- Fisheries Faculty of Muğla Sıtkı Koçman Ünv.	26	11	X	11	16
13- Fisheries Faculty of Yüzüncü Yıl Ünv. (Van)	26	11	X	X	X
14- Fisheries Faculty of Atatürk Ünv. (Erzurum)	26	11	X	X	11
15- Fisheries Faculty of Tunceli Ünv.	26	11	X	X	X
16- Fisheries Faculty of Sinop Ünv.	26	11	X	11	11
Sum of Quotas	442	241	120	197	234
Aqua Products Engineering of Agriculture Faculty Department					
1-Agriculture Faculty of Gaziosmanpaşa Unv. (Tokat)	26	-	X	X	X
2- Agriculture Faculty of Bingöl Ünv.	26	-	X	X	X
3- Agriculture Faculty of Adnan Menderes Ünv. (Aydın)	26	11	X	X	X
4- Agriculture Faculty of Ankara Ünv	41	26	25	26	26
Agriculture Faculty of Ankara Unv. (English)	-	21	X	11	21
5- Agriculture Faculty of Kahramanmaraş Unv.	-	-	X	X	X
Sum of Quotas	119	58	25	37	47
Marine Sciences and Technology Faculties					
1-Marine Sciences and Technology Faculty of 18 Mart Ünv. (Çanakkale)	26	11	X	X	11
2-Marine Sciences and Technology Faculty of İskenderun Tech.Unv.	26	11	X	X	11
3- Marine Sciences and Technology Faculty of M.K. Ünv. (Hatay)	X	X	X	X	X
Sum of Quotas	52	22	0	0	22
Fisheries Technology Engineering Program					
1-Karadeniz Tech. Unv. (Trabzon) Sürmene Marine Science Faculty	26	11	X	11	11
2- Ordu Unv. Fatsa Marine Science Faculty	26	11	X	X	11
Sum of Quotas	52	22	0	11	22
General Sum of Quotas	665	343	145	245	325

As can be seen, it is thought that some universities may prefer the departments by changing their names, but although they are supported by scholarships and scholarships, their eligibility is not increased. Uncontrolled new programs, the first time has given excessive and

then the problem of quota due to lack of choice, tried to be preferred, name changes, programs closed for not receiving students, the rapidly increasing number of faculties and departments, considering the causes and consequences of Fisheries and Fisheries Sciences It shows that parts are no longer preferred as before.

It should be understood that the reasons why these departments cannot be preferred are the low employment opportunities if they graduate. To increase this, the department should be given the authority and responsibilities it deserves, and then base salaries should be made by the state in the employment of the graduates and the job descriptions of the graduates in these fields in the private sector should be made clear. Besides, before the new departments and faculties are opened, the employment conditions of the graduates should be considered and the instructor needs of the existing faculties and colleges should be provided in a way to make the training equipped.

This is because the departments abroad tell their graduates where they will find a job and how they will be employed. Besides, since graduates are referred to as "marine biologists or fishery technology" graduates, they can select jobs that are suitable for their fields and adapt to working conditions more easily. Even if this name confusion is solved, hierarchical pressure and unacceptability will continue to make it difficult for the graduates of aquaculture and fishery technology because of the intertwined occupational branches in our country.

If you want to exemplify this as follows; A person who graduated from aquaculture and specializes in fish diseases is not authorized to treat fish health. The reason is the lack of a veterinary surgeon. However, during the education life, only the aquaculture engineer who is confronted with aquaculture and is familiar with all the disease problems in aquaculture areas and leads to the solution of the problems has to do the treatment authority with the medication written by the veterinarian at the desk even if he is an expert. How can this be resolved? Because fish is an animal and animal health is said to be concerned with veterinarians, seafood engineers who have made high specializations in seafood diseases are ignored.

This does not include a difficult solution. A student who is a graduate of fisheries or fishery technology departments who wants to specialize in their diseases is required to receive specialization courses under a special department opened in the name of aquatic diseases in veterinary faculties and to be authorized only for aquatic organisms their authority and responsibility. Thus, the engineers who are strong in the field of aquaculture will create more efficient production areas when working with the people who specialize in aquatic health and leave minimum pollution load to the environment.

The area of employment will be expanded if a student trained in the field of the fishery is provided with opportunities that start on fishing vessels and then take the distant route. The graduates of aquaculture and fishery technology who are deployed with the requirement of compulsory employment in registered fishing vessel fleets and landing points will have more employment areas.

Of course, in the creation of these areas of employment without being attracted to the favorability of the average quota of more than 40 students in the future if the quarry that may arise in the future will be prevented.

While making such arrangements in education, support programs prepared by the directorate within the Ministry of Agriculture and Forestry should also support employment. As can be seen, the preferability of this field can be increased with the small touches to be made in the field of education and the supports to be made through the ministry.

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