

FISHERIES EDUCATION IN TAIWAN*

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ABSTRACT

After a brief historical review, the paper describes the four fisheries vocational schools of Taiwan and the two higher level colleges. It refers also to the training classes conducted by the Taiwan Fisheries Bureau which enrolled 309 trainees in 1964 and 1965. Tuitung Fishermen's Training Centre which offers a three months summer course is described briefly.

HISTORICAL

Fisheries education in Taiwan is patterned after the Japanese system. In 1922, during the period of Japanese occupation, the first fisheries vocational school was established at Makung on the Pescadore Islands. A second fisheries school was established at Tungkang in the following year. These two schools gave two-year instruction in fisheries. In 1925, another school was established at Anping, giving a three-year course in fisheries.

The most advanced training in fisheries during the Japanese occupation was given by the Keelung Institute of Fisheries, established in 1936. Its standard was equivalent to that of a vocational high school, and separate courses in fishing, fish culture, and fish processing were given. The Institute had made notable contribution to the fisheries development of Taiwan. Many of its graduates are employed in fisheries administration, fisheries research, and private enterprises at present.

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FISHERIES VOCATIONAL SCHOOLS

There are now the following four fisheries vocational schools in Taiwan:

Penghu Fisheries Vocational School. The predecessor of this school was the Makung Fisheries Vocational School. Offers courses in fishing and fish processing. Equipment: (1) 2 powered boats, one 21-ton and one 5.6 ton, with long lining and drift-netting gear, (2) 1 motor boat, 2 sampans, and 8 row boats, and (3) small cannery.

Keelung Fisheries Vocational School. The predecessor of this school was the Keelung Institute of Fisheries. Offers courses in fishing, marine engines, fish processing, fish culture and management of fishery enterprises. Well equipped, particularly for instruction in fishing and marine engines, the Institute has a fishing boat of 130 tons.

Kaohsiung Fisheries Vocational School. Established in 1946 after the restoration of Taiwan to the Republic of China. Located in the most important fishing port and an important fish culture area, this school gives instruction in fishing, fish culture, fish processing, and marine engines. It has for practice use a 126-ton long liner, 2 shipyards, a net factory, a cannery, and refrigeration plant, fish ponds, a workshop, etc.

This school has set up buildings and instruction at Anping and Tungkang in 1960 and 1961 respectively. The enrolments are, however, small and teaching facilities inadequate.

Suao Fisheries Vocational School. Founded in 1963, this new school has a small teaching staff and gives instruction only in fishing.

All the four fisheries vocational schools give instruction of a standard equal to those of a senior high school. Graduates of junior high schools are admitted for three years' instruction. The more important technical courses of instruction are:

- a. For those specialized in fishing: Meteorology, oceanography, fishing gears, fishing methods, seamanship, navigation, marine engines, ship building, fishery economics and fisheries legislation.
- b. For those specialized in fish culture: Meteorology, bacteriology, oceanography, limnology, fish disease, fish culture, pond construction, fishery economics and fisheries legislation.
- c. For those specialized in fish processing: Mechanical engineering, bacteriology, processing of edible fishery products, processing of industrial fishery products, processing of agricultural fishery products, processing of medicinal fishery products, refrigeration, industrial management, fishery economics and fisheries legislation.

d. For those specialized in marine engines: Steam engines, internal combustion engines, auxiliary engines, electrical engineering, mechanical drawing, engine room practice, navigation, fuels and combustion, metals, refrigeration, and meteorology.

e. For those specialized in management of fishery enterprises: Meteorology, management of fishery enterprises, book-keeping, commercial fishery products, marketing, fishery economics, industrial and commercial legislation, fisheries statistics, accounting, industrial management, and business correspondence.

HIGHER EDUCATION IN FISHERIES

Taiwan Maritime College. Founded in 1956 at Keelung, the Maritime College gives four-year courses in six departments to graduates of high school. These departments are: Fishing, navigation, marine engines, fish processing, ship building, and hydraulic engineering. The aim of the College is to train people for the fishery industry and the mercantile fleet.

The more important courses of instruction are:

For Fishing Department: Fishery biology, fishing gear and methods, fishing grounds, fishing vessels, navigation, seamanship, meteorology, oceanography, internal combustion engines, electronic navigation equipment, ship building and handling of fish catch.

For Fish Processing Department: Fishery biology, fishery chemistry, food chemistry, chemical engineering, processing of edible fishery products, processing of industrial fishery products, processing of agricultural fishery product, processing of medicinal fishery products, bacteriology, refrigeration, thermodynamics, and industrial management.

National Taiwan University. In 1954, the National Taiwan University began to give courses of instruction in fishery biology within the Department of Zoology. The following courses related to fisheries are now given: introduction to fisheries, limnology, oceanography, biometry, ichthyology, planktonology, fish disease, fish embryology, fishery biology, and fish culture.

Over a hundred students majoring in fishery biology have graduated from the University up to the present. Most of them have gone abroad for advanced study. Some are working in the Taiwan Fisheries Research Institute and the Taiwan Fisheries Bureau, and some have joined the teaching staff of the University.

TRAINING CLASSES

Training classes of various types are conducted yearly by the Taiwan Fisheries Bureau, with most of them financed by the Joint Commission on Rural Reconstruction (JCRR). These training classes are instituted as the need arises and prove to be very helpful to the fishing industry. The following is a list of the training classes conducted by the Bureau in 1964 and 1965:

<u>Type of training</u>	<u>Year</u>	<u>No. of trainees</u>
Engineers for deep-sea fishing vessels	1964	21
Wireless operators for deep-sea fishing vessels	1964	46
Captains for tuna clippers	1964	26
Chief engineers for tuna clippers	1964	47
Captains for shrimp trawlers	1964	39
Engineers for deep-sea fishing vessels	1965	22
Deck officers for deep-sea fishing vessels	1965	29
Captains for shrimp trawlers	1965	44
Captains for inshore fishing boats	1965	33
Wireless operators for deep-sea fishing vessels		

TAITUNG FISHERMEN'S TRAINING CENTER

The most practical and effective training in Taiwan, this training center was established in 1946, the year Taiwan was restored to the Republic of China. It is located at Hsinkang, one of the two fishing ports on the eastern coast of Taiwan.

One training session is held in the Center each summer from the middle of July to the middle of October, which is the slack fishing season in Taitung. The instruction of each session of training includes:

Classroom instruction	306 hrs.
Shop practice	100 hrs.
Practice on board vessel	270 hrs.
Total	676 hrs.

The aim of the instruction is to train the local youths in harpoon fishing for marlins and sharks, drift netting for flying fish, and pole fishing for skipjack, which are important fisheries of the region. The Center has since 1946 given training to 659 men, more than 80% of whom are aborigines.

Practically all the trainees have been able to find employment on fishing vessels. Many are now working on tuna clippers and trawlers.

The facilities and equipment of the Center consist of a classroom, a work-shop, a net loft, a dormitory, and two training vessels (one of 18.7 gross tons and one of 3 gross tons).