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EDUCATION XII. VOCATIONAL AND TECHNICAL SCHOOLS

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Attempts to train Persians in modern technology began under the crown prince ʿAbbās Mīrzā (q.v.) and his vizier, Mīrzā Abu'l-Qāsem Qāʾem-Maqām, in the 1810s and 1820s, when seven students were sent to England, three to Russia, and two to France for training in various technical skills. In 1260 Š./1844 the grand vizier Ḥājī Mīrzā Āqāsī (q.v.) sent five students to England, and in 1266/1850 the reforming grand vizier, Mīrzā Taqī Khan Amīr Kabīr (q.v.), sent five craftsmen to Russia for advanced training in various industrial arts (Maḥbūbī, *Moʾassasāt* I, pp. 187-95).

The first modern technical school in Persia was an agricultural school (Madrasa-ye falāḥat-e moẓaffarī) founded in Tehran in 1319/1901 by the Ministry of Public Services (Wezārat-e fawāʾed-e ʿāmma; see FACULTY OF AGRICULTURE), but the technical school that had the greatest influence over the longest period was the Persian-German School (Madrasa-ye ṣanʿatī-e Īrān o Ālmān) founded in Tehran in 1325/1907 through the initiative of Mīrzā Maḥmūd Khan Eḥtešām-al-Salṭana (q.v.). Annual enrollment was about 250 students ("Qomšaʾī," p. 13). The school closed with the outbreak of World War I but reopened in 1300 Š./1921. In 1329/1911 the Persian painter Moḥammad

Ḡaffārī Kamāl-al-Molk opened a school of studio arts (Madrasa-ye ṣanāyeʿ-e mostaẓrafa). Also founded in this period were two additional agricultural schools: Dabestān-e bar-zegarān in Tehran in 1335/1917 and one in Rašt in 1334/1916 (Maḥbūbī, *Moʾassasāt* I, pp. 406-07).

The formative period 1921-41. In 1300 Š./1921 the Persian-German School reopened under a new German director, a Dr. Strunk, and with a new program. It continued with both German and Persian instructors until 1940. The program included welding, electricians' skills, automobile mechanics, construction, and carpentry ("Qomšaʾī," p. 13). Every year a number of graduates were sent by the Persian state railways to Germany for further study. Upon their return, they played a significant role in the establishment and operation of the Trans-Iranian Railway system. Under Reżā Shah (1925-41) various ministries founded vocational schools with the purpose of educating qualified staff. Reżā Shah stressed technical education in his program of reforms, and, when foreign schools were taken over by the government in 1940, the only one that continued to operate with foreign instructors was the Persian-German technical school (Menashri, p. 115; Banani, pp. 97-98). The German instructors were, however, forced to leave Persia when the country was occupied by the Allies in 1941. Until 1978 the school continued in operation with Persian instructors.

In 1922 an agricultural school (Madrasa-ye kešāvarzī o ṣanāyeʿ-e rūstāʾī) was founded in Karaj, near Tehran (Maḥbūbī, *Moʾassasāt* I, pp. 406-07). In 1930 a technical school for girls (Honarestān-e doḵtarān) was founded in Tehran (Elwell-Sutton, p. 140); the curriculum was centered on home economics. In 1935 the Faculty of Agriculture (q.v.) founded an agricultural secondary school in Karaj to prepare students for college training in the various aspects of the subject (Maḥbūbī, *Moʾassasāt* I, pp. 406-07). In the same year a five-year school was founded in Ḵūzestān to train skilled technicians for the oil industry. Students were admitted upon completion of six years of primary school (Arasteh, pp. 60-61). In the 1930s other vocational schools (*honarestān*s) for industrial training were founded in Tehran, Tabrīz, Shiraz, and Mašhad (Arasteh, p. 60). Furthermore, government agencies like the state railroad, the post and telegraph, the national bank, the police, and the army established semiprofessional institutes for training personnel (for details, see Arasteh, pp. 53-61). By 1940 the number of public vocational schools had reached ten, a number that remained unchanged until the academic year 1953-54.

American technicalassistance in the 1950s. From the beginning of the 1950s the

educational program of the U.S. Technical Cooperation Administration (T.C.A.) in Persia "was conceived in vocational terms" (Hendershot, p. 153). Most of the American advisers in the early 1950s were specialists in agricultural education. In 1953 an agreement was signed between the Ministry of Education (Wezārat-e farhang) and the T.C.A. for development of vocational education in six areas, including defining a new concept of vocational education, teachers' training, curriculum, facilities and equipment, textbooks, and extension of vocational education to all levels of the educational system (Hendershot, p. 154). Furthermore, in 1955 a joint vocational-education committee of the Ministry of Education, the United Nations Economic, Social and Cultural Organization (UNESCO), and American advisers began to develop plans for industrial training. In 1956 the Tehran Institute of Technology was founded to train technicians for industry; it also trained teachers for vocational schools.

In 1958 the General Department of Vocational Training (Edāra-ye kollī-e taʿlīmāt-e fannī) was established in the Ministry of Education. It was responsible for establishing a number of agricultural, industrial, commercial, and secretarial schools in both the capital and the provinces. By 1963 their number had reached ninety-six; by 1973 it had passed 500 (Table 1). At the same time the Supreme Council on Education (Šūrā-ye ʿālī-e farhang) adopted rules governing the administration of agricultural and other vocational schools, establishing a three-year course of study following completion of primary school. According to local needs, the courses might include welding, automobile mechanics, carpentry, construction, dyeing, and textile weaving. In 1960 rules governing commercial schools were adopted by the Supreme Council, setting forth curricula and courses of study for female students in design and dressmaking, culinary arts, secretarial work, and the like (Ḵallāqī, p. 15).

In the 1960s a number of schools were founded to train teachers specifically to teach in vocational schools. For example, in 1960 the French founded a one-year school for this purpose. The following year another institution for training instructors for girls' vocational schools was founded. The Higher Institute of Nārmak was founded in 1962 to train technical instructors for vocational schools (Ḵallāqī, p. 14).

In 1971-72 a number of vocational schools with one- or two-year courses of study were also established in villages, but the three-year first and second phases typical of urban schools (see vii, above) did not become

institutionalized there (Hendershot, p. 163).

Reforms of 1966-78. In the 1950s and 1960s Persian educational planners and their American advisers considered vocational training the principal weakness in the educational structure (Hendershot, pp. 16, 153-97; Baldwin, pp. 155-56). The main obstacle was the attitudes of students and their parents toward manual work: "When a student was given an assignment to cultivate some ground, his family sent a laborer to do the work. To demonstrate the use of shop equipment, mechanics were used while the teacher and students merely observed. The graduates of agricultural high schools and the agricultural college expected to be not farmers, but desk officers in the Ministry of Agriculture" (Hendershot, pp. 153-54).

Meanwhile, the rate of total secondary-school enrollment grew much more rapidly than that of vocational schools in the period 1933-54. Enrollment in vocational schools as a percentage of total secondary-school enrollment dropped from a little over 6 percent to less than 1 percent (Table 2). The main objective of the reforms of 1966-78 was to prod a significant percentage of secondary-school students into vocational training, in order to meet increasing demand for technicians and skilled labor in the rapidly growing Persian economy. In middle schools active efforts were made to discover the aptitudes and academic or vocational potential of students and to guide them to appropriate choices of secondary schools (see vii and x, above). In 1974 a student completing middle school could pursue one of forty-four specialized vocational fields. It was expected that under the new educational structure more than 40 percent would choose vocational schools (Eṭṭelāʿāt, 9 Ādar 1348 Š./30 November 1969; Menashri, p. 197), but in fact the proportion of students in vocational school rose to only 14.5 percent in the next ten years and declined slightly in the decade after that, owing to persistent negative attitudes toward manual labor among students and parents.

The postrevolutionary period. The organization and structure of vocational training since the revolution have changed little. One major innovation was the introduction of a work-study program (*kār o dāneš*) designed to acquaint secondary-school students with the work place. It was introduced in academic secondary schools in 1982. Each student was to choose one technical field and spend one school day each week learning it in an industrial establishment (Mehran, pp. 298-99). In the early 1990s this program became one of three separate branches of secondary education: academic, vocational and technical, and work-study. The practical work-study program is designed to

prepare the student, through practical experience, for work in such fields as electricity, drafting, tailoring, carpet weaving, and agriculture. Vocational and technical training, on the other hand, is designed to prepare students for careers in agriculture, industry, and various services, and they are trained in school workshops. Graduates either join the work force or continue their education at technical colleges. Agricultural training encompasses natural resources, farming and horticulture, and animal husbandry. Industrial training is much more defined, including mechanics (printing, metal industries, design and drafting, installation of equipment, automobile mechanics, structure and production of metals, and woodworking skills), electronics, construction and architecture, maritime industrial skills (marine communications, mechanics of marine motors, and navigation), and materials (ceramics, metallurgy, textiles, mining, and chemistry). Services include arts and crafts (music, performing arts, plastic arts, designing and sewing, handicrafts), administrative and financial skills (statistics and accounting), home economics, health-care skills, and computer software (Wezārat-e Āmūzeš o Parvareš, 1993, pp. 20-27).

In 1990 a new program for the general educational system was adopted by the Supreme Council for the Cultural Revolution (Sūra-ye ʿālī-e enqelāb-e farhangī). It combines vocational and technical training with the general curricula of comprehensive schools (*madāres-e jāmeʿ*; Ḵallāqī, pp. 14-18).

Training vocational teachers. The first center for training vocational instructors (Honarsarā-ye moqaddamātī-e pesarān) was established in Tehran in 1950, with sixteen students in the fields of electricity, welding, automobile mechanics, and industrial drafting. In the following year a center for female instructors was founded, with thirty-three students; it closed after nine years, however. Because of the increasing number of vocational schools, the Ministry of Education decided to train instructors at the university level (Qomšaʾī, p. 22). As a result, a number of institutes offering B.A. degrees in vocational instruction were founded. They included Dānešsarā-ye ʿālī at Bābolsar, founded in 1973 with 160 students, and Dānešsarā-ye ʿālī-e fannī in Kermān, founded in 1975 with 168 students. In addition, the Ministry of Education signed an agreement with the Tehran Polytechnic Institute (now Amīr-Kabīr University) to instruct the graduates of schools of vocational training for a further two-year period (Qomšaʾī, p. 6).

The Science and Industry University (Dānešgāh-e ʿelm o ṣanʿat) is a center for training vocational instructors. It was founded in 1929 with the help of

German instructors and was originally known as Honarsarā-ye ʿālī. It received its present name in 1972 (Marjānī, p. 252; for additional vocational schools, see Qomšaʾī, pp. 24, 48).

An evaluation of vocational education. The quality of vocational and technical education in Persia has generally remained low. Despite Reżā Shah's enthusiasm, vocational schools developed very slowly, and standards remained low (Menashri, p. 116). Under Moḥammad-Reżā Shah (1941-78) vocational schools developed sluggishly at first and became numerous only toward the end of his rule; quality, however, remained low even then. "Applicants were mostly elementary school graduates with a poor academic record; the level of instruction was low; the schools lacked proper equipment; the curriculum was not properly geared to the needs of the economy; and the graduates had little motivation to go to work in the trades they had trained for" (Menashri, p. 200). Vocational education has continued weak under the Islamic Republic. Educational leaders are aware of persistent problems, notably ambivalence about the future of vocational schools: "Should the schools be training their students to enter institutions of higher education, [or] to enter the job market?" (Menashri, p. 325).

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