

**Machinery: The Hiroshima Prefectural Worker
Training School
Dyeing and Weaving: The Minami-Tsuru Dyeing
and Weaving School**

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I. Technical Schools and Apprentice Schools

This chapter deals with the industrial sector in Japan's vocational education history, especially as it relates to modern industrial sectors. Regarding the viewpoint that the central problem of "modernization" lies in "industrialization," the leaders of the Meiji period who upheld the slogan "Increase Production and Promote Industry" seemed to share the same outlook. It is not difficult to point out the many historical bases upon which to arrive at this conclusion. When history is viewed quantitatively, one can come across interesting facts pertaining to the history of secondary vocational education. Concerning the number of secondary vocational schools established and the number of students enrolled, for example, overwhelming emphasis was placed first on the agricultural sector, and then on the commercial sector. The implementation of secondary vocational educational institutions in the industrial sector lagged far behind.

The vocational educational institutions for industry in the 1890s were technical schools and apprentice schools. Table 7.1 shows the apprentice schools that had been established by 1897; Table 7.2 shows the technical schools of the same category. These tables show that most of the early apprentice schools and technical schools established in the early period were involved in such traditional industries as dyeing, weaving, ceramics, woodwork, and lacquerwork. The Hiroshima Prefectural Worker Training School was the only apprentice school that had a course related to the modern machine industry.

There have been many countries besides Japan where the textile

Table 7.1. Apprentice Schools in the Late 1800s

Prefecture	School Name	Founding Body	Founding Year	Courses	Number of classes	Total Income from Tuition	Total Annual Expenditure
Kyōto	Kyōto City Dyeing and Weaving School	City	1894	Dyeing and weaving	2	159	10,924
Hyōgo	Tsuna County Ceramics School	County	1897	Ceramics	1	—	1,216
Gumma	Kiryū Dyeing and Weaving School	Town	1896	Dyeing and weaving	3	220	18,554
Aichi	Seto Ceramics School	Town	1895	Ceramics	1	24	2,293
Yamanashi	Minami-Tsuru Dyeing and Weaving School	County	1896	Dyeing and weaving	2	79	2,810
Miyagi	Industrial Apprentice School	City	1896	Woodwork	2	123	2,465
Fukushima	Hongō Ceramics Apprentice School	Village	1895	Ceramics	1	—	974
Yamagata	Shōnai Dyeing and Weaving School	Town	1895	Dyeing and weaving	2	54	2,492
Akita	Akita City Technical Apprentice School	City	1896	Woodwork Metalwork	1 1	—	3,133
Ishikawa	Yamanaka Lacquerware Apprentice School	Village	1896	Lacquerwork Add-lacquering	1 1	—	1,543
Hiroshima	Hiroshima Prefecture Worker Training School	Prefecture	1897	Lacquering Woodwork Engineering	1 1 1	—	7,365

Table 7.1 (continued)

Prefecture	School Name	Founding Body	Founding Year	Courses	Number of Classes	Total Income from Tuition	Total Annual Expenditure
Saga	Arita Apprentice School	Town and village	1895	Ceramics	3	18	3,910
Kagoshima	Kagoshima Girls' Vocational School	City	1896	Dyeing and weaving, Embroidery, Artificial flower making	5	622	4,211

Source: *Mombushō dai-25 nempō* [Ministry of Education 25th annual report] (1897), pp. 550-51.

Table 7.2. Technical Schools in the Late 1800s

Prefecture	School Name	Founding Body	Founding Year	Courses	Number of Classes	Total Income from Tuition	Total Annual Expenditure
Kyōto	Kyōto City Art and Craft School	City	1891	Art and craft	20	255	14,108
Tochigi	Tochigi Prefectural Technical School	Prefecture	1895	Craft	3	248	8,668
Yamagata	Yonezawa City Technical School	City	1897	Dyeing and weaving	4	252	19,355
Ishikawa	Ishikawa Prefecture Technical School	Prefecture	1887	Craft	7	—	13,290
Toyama	Craft School	Prefecture	1894	Craft	4	—	5,586
Fukuoka	Fukuoka Technical School	Prefecture	1896	Engineering	3	316	9,865

Source: Same as Table 7.1., pp. 545–48.

industry and the machine and metal industries were the industrial sectors which were the driving forces of industrialization. These two industrial sectors became increasingly capital intensive in the raw material production sector run by large-scale management, and increasingly labor intensive in the area of end-products run by small-scale management. In the case of Japan, even though the industrial structure was completed with an approximate organic link from upper management to the lower management, the contrast between both extremes was excessively pronounced.

In the textile industry, especially the cotton-spinning industry, whose foreign market had been explored at an early stage simultaneous with the development of its domestic market, there was an early formation of monopolistic management. The cartel organization named the Spinning Association was completely established by 1890. Various spinning companies introduced Western production facilities. By resorting to large-scale production, not only were they able to radically reduce the amount of imports but also they succeeded in securing overseas markets. In contrast, most of the cotton textile industry was pursued by small and medium enterprises; a similar situation prevailed in the dyeing industry. The work in the sewing industry was done by very small cottage industries and as side jobs. Due to the luxurious nature of the silk-reeling industry's products, its domestic market was not as extensive as that held by cotton products. Since the silk thread was exported as a final product rather than as a material to be used in the related sectors, the process to make even the reeling sector large-scale and capital intensive was delayed. Dyeing and weaving demands were so diversified in both the domestic and the overseas markets that these sectors had to remain labor intensive. In the silk fabric industry the expansion in the scale of management was also delayed and antiquated labor-management relationships continued to exist in several regions.

As there had been no drastic change in the pattern of production, the development of the machine and metal industries in Japan was greatly limited partially because of the delay in mechanizing the production of consumer goods centering on textile products. Not only did state capital play a significant role in such a material sector as the steel industry but, regarding final products such as arms, a policy was pursued so that they were produced by army and navy arsenals. Excluding such an industry as shipbuilding, which was protected by a special subsidy, the development of the machine and metal industries by private firms in Japan was insufficient. For a long time the military arsenals had to produce even the smallest parts internally.

Regarding the general characteristics of Japan's industrialization, two apprentice schools were chosen from the early apprentice schools to carry out individual studies. The Hiroshima Prefecture Worker Training School was chosen for study for five reasons.

First, it was the first apprentice school established in Japan with a course related to mechanical engineering. Second, it was established in the Hiroshima region which did not have a history related to modern machine and metal industries. Third, there is a possible correlation between the Hiroshima Prefecture Worker Training School and the Kure Naval Arsenal established in the neighboring city of Kure in 1889. The former was founded in the same period as the latter, which expanded later into what was said to be the "largest plant east of the Suez Canal." Fourth, when various factors pertaining to the development of the machine and metal industries in Japan are taken into consideration, the history of this school is a reflection of the characteristics and limitations of Japan's industrialization.

The Minami-Tsuru Dyeing and Weaving School was chosen for the following five reasons:

First, the Gunnai region in Yamanashi Prefecture where this school was founded has been an area producing silk fabric through small-scale businesses. Although this region is engaged in the weaving of silk thread and synthetic thread to this day, the number of looms per management is 3.3 units, which is one-third the national average. As many as 80% of the producers are engaged in weaving in addition to agriculture.

Second, in the Gunnai region dyeing and weaving are pursued by the same business. There were many cases in the Meiji period when even sericulture and spinning were jointly managed. A characteristic typical of underdeveloped regions was the inadequate division of labor.

Third, since the Tokugawa period the silk fabrics of this region had produced more labor-intensive types of fabric such as yarn-dyed fabrics called *kaiki*.

Fourth, despite the lack of distinct change in production machines, there was an expansion of the silk fabric industry in this region from the Meiji period onwards in the value of production, the number of employees, and the number of businesses as the industry sought an alternative in export.

Fifth, the Minami-Tsuru Dyeing and Weaving School can be viewed as an appropriate case study of the role played by a vocational school in a region which supported the lower base of Japan's textile industry and the trade structure.

1. The Hiroshima Prefectural Worker Training School

The Hiroshima Prefecture Worker Training School was founded in 1897. On the basis of a recommendation made by the principal of the Tokyo College of Technology, Tejima Seiichi, during his observation tour to Hiroshima, a proposal was presented to the governor by the Prefectural Assembly in 1895, and the school was established as a prefectural apprentice school. Since in most cases apprentice schools had been founded by the county, city, town, or village, this school was the first in Japan to be founded under prefectural management.

In August 1897 the first principal, Ogata Sakukichi took up his post and classes convened from September. The initial teaching staff consisted of four persons including the principal. There were two courses, one in woodwork and the other in metalwork, each of which offered an educational content similar to training in the traditional arts and crafts. However, in the following year, the educational emphasis shifted to courses in machinery and Western-style metal processing. In 1906 the curriculum was revised and came to comprise three courses: machinery, architecture, and crafts. Under these three courses were 12 subjects. There was no tuition initially and the students were given a subsidy for school expenses, although the amount was gradually decreased. The subsidy for school expenses was abolished totally during the great revision of school rules in 1906 and a set tuition of ¥6 a year was imposed. Incidentally, the name of the school was changed to the Hiroshima Prefectural Worker Training School.

After the revision of the school's rules in 1906 the school was reclassified as an advanced technical school in 1907. Since this school had been the largest apprentice school in the country and had steadily achieved good results in sending out manpower to the mechanical engineering sector, the Ministry of Education was hesitant to approve of a change in the "model of nationwide apprentice school education." Nevertheless, the Ministry eventually conceded because of the strong local demand. However, the school's name remained the same; later in 1916 it was renamed the Hiroshima Prefecture Hiroshima Technical School. At that time, the craft course which succeeded the traditional craft section extant from the time of its founding was abolished, and the school offered only the two courses of machinery and architecture. Upon entering the 1920s, the electricity course which had been offered from 1911 in the machine course was made independent. A civil engineering course was added in 1925. During the Taishō period, the number of students doubled, and in 1925 the school had 800

students and ranked as one of the largest technical schools in the country.

A characteristic of this school was its budget. The primary revenue of the school was granted by the prefecture since it was prefecturally run. There was not only a subsidy granted by the Ministry of Education in accordance with the National Subsidy for Vocational Education Act but also additional subsidies were granted repeatedly by the State Treasury under such titles as the Subsidy on Equipment Funds. Besides these sources, the income derived from the sale of students' works was so great that it was greater than the revenue from tuition even after 1906 when the payment of a set tuition was made compulsory for all students. This tendency continued up to the period of World War I. Because of the large budget, this school ranked in the top group of nationwide secondary vocational schools.

The internal system of the school became complicated because of the establishment of various courses as World War II approached. Although the period from the 1930s onwards is not included in the theme of this chapter, the fact that the Senior Mechanic Training Center was additionally established in the school in 1941 deserves to be mentioned. This fact reveals that the practical training buildings of this school were of a high standard even when viewed from the level of Japan's machine industry of the time.

Having lost most of its staff members as well as buildings as a result of World War II, the school went through several postwar changes and has been succeeded today by the Hiroshima Prefectural Technical High School. Apart from the above, another school, the Hiroshima Higher Technical School was established in the Hiroshima region in 1920. With the use of its buildings and staff this school founded the Hiroshima City Special Technical School in 1924. This school was established in accordance with the Regulations for Vocational Continuation Schools. This school, however, was changed to the Hiroshima City Technical High School after World War II. Moreover, the Hiroshima Higher Technical School has been succeeded by today's Hiroshima University's Department of Engineering.

2. The Minami-Tsuru Dyeing and Weaving School

The Minami-Tsuru Dyeing and Weaving School was established in 1896 by Minami-Tsuru county in Yamanashi Prefecture. In the same period textile-related vocational schools were being founded in succession not only in this area but also in various areas which were called silk fabric areas of the Kantō region. Most of the schools such as the Ashikaga Technical School, the Kiryū Dyeing and Weaving School,

and the Isesaki Dyeing and Weaving School were opened through the expansion of already established dyeing training centers. A great interest in artificial dyes which were introduced during the Meiji period existed at this stage. In addition, an urgent need was felt by traditional weaving areas to improve dyeing methods. Thus dyeing training centers were established at various public places to meet the need of the producers. Although the County-run Dyeing Center had been established jointly by North and South Tsuru counties in the Gunnai area, it ceased after becoming a private business. Therefore, in response to a new demand made by the area, the dyeing and weaving school was opened seven years after the discontinuation of the center.

The management of this school at the time of its founding with a principal and a teacher was extremely difficult. There was no dyeing facility nor manpower. The school was a difficult place to reach in spite of its proximity to Tokyo and there was an internal conflict of interest in the area. Nevertheless, two courses, in dyeing and weaving and machinery, were gradually improved as a result of the expansion of the equipment and the teaching staff. In 1900, this school became the County Association Minami-Tsuru Dyeing and Weaving School managed by both North and South Tsuru counties. In the following year it was upgraded to an advanced technical school.

Moreover, the school's management was transferred to the prefecture in 1905 and it became the Prefectural Yamanashi Technical School. In 1906 the school was renamed the Yamanashi Prefectural Technical School. This was the school's heyday due to reasons such as the upgrading of the school system, the expansion of buildings, the steady increase in the number of staff members and students, and the growth of the local silk fabric industry. In 1904 the North Tsuru County Kaiki Trade Union was established, and in 1905 the South Tsuru County Kaiki Trade Union was established. Both unions were organized into a federation in 1905. At the end of the same year Yamanashi Prefecture Technical Research Center was established in accordance with Prefectural Ordinance No. 38. The principal of the technical school also acted as director of the research center. Henceforward, through mutual use of buildings and exchange of personnel, the technical school, the trade union federation and the technical research center were to grow into leading organizations for the improvement and development of the silk-weaving industry in Gunnai.

Due to such factors and regional conflict in the prefecture, however, this school was downgraded to an apprentice school in 1910. Nevertheless, the contribution made by this school to the local silk-weaving industry became greater from that period onwards due to a decrease

in the ratio of graduates both entering higher institutions and moving out to the metropolis, leading to a higher settlement rate in the local district.

It was a rare case in Japan to be nominally a prefectural technical school and yet to be prescribed as an apprentice school by the Ministry of Education. Thus, this school stood in good contrast to the Hiroshima Prefecture Worker Training School which kept the name of "worker training school" despite its status as a prefectural technical school. The school was revised in 1920 to be prescribed again by the Regulations for Technical Schools and in 1923 it became the Yamana-shi Prefectural Technical and Commercial School through an amalgamation with the Minami-Tsuru County Vocational School which offered a commercial course. After a period as the Prefectural Yamura High School after World War II, it was succeeded by the Prefectural Yamura Technical High School.

No further history pertaining to these two schools will be given, but it should be understood that each of these schools will be referred to as either the worker training school or the dyeing and weaving school without differentiating the names of the school with a different status.

II. The Schools and Their Teachers and Students

Regarding the management pursued by the two apprentice schools whose histories have just been outlined, there were two types of teachers. The first type consisted of those who took up their teaching positions after graduating from either the Tokyo College of Technology (which became the Tokyo Institute of Technology from 1901) and its annexed Technical Teacher Training Center or the various higher technical schools. They came from diversified parts of Japan and often they ascended the social ladder by moving from one apprentice school or technical school to another which were located at various spots throughout the country. Although their life style was somewhat reminiscent of itinerant artisans in pre-modern ages, their philosophy was firmly based upon knowledge and comprehension regarding modern science and technology. Nevertheless, in the 1930s they gradually had found it difficult to be itinerant and thus they tended to settle in various prefectures.

The other type consisted of those who became teachers after having been either senior master artisans or highly skilled artisans with experience at job sites; this type in particular was consistently found at the Hiroshima Prefecture Worker Training School. They took charge

of practical training, and without moving from one school to another they returned to their former jobs when they retired from the school. They were generally full of personal charm and often became very popular with the students. However, they gradually disappeared from the school in the 1920s, as it had become more common to recruit graduates of higher technical schools.

Despite the disparity regarding the type of teacher to be found, one common factor was that they were totally indifferent to the popular image of the "worker." The perception at that time was that workers who were employed by others were pitiful beings engaged in whatever tasks they were commanded to do and they were not regarded as respectable members of society. Nevertheless, the teachers of both schools, including the principals, not only exhorted the value of skilled work and technology but also actively led the actual work and practical training themselves. Moreover, the rich personalities and serious work ethic exhibited by these teachers of practical training who used to be artisans themselves changed the social value of the students and played a great role in enabling the students to acquire diligence. However, their values and world view were at times extremely ambiguous albeit full of zeal. This was because their view was an amalgamation of a careerism, an ascetic work attitude and the concept of obligation based upon traditional service. Their view was also so emotional that it was difficult to elucidate logically. Although such characteristics were seen in both schools, it appears that they were more firmly entrenched in the Worker Training School than in the Dyeing and Weaving School which increasingly sent out graduates to be engaged in independent business.

A certain similarity can be found regarding the family backgrounds of the students attending both schools. Many came from rural families of the middle and upper classes. It should be pointed out, however, that they belonged to the middle and upper classes only on the basis of a relative comparison among Japanese villages before World War II when there were many small-scale farmers. It appears that one of the characteristics regarding the apprentice schools and technical schools even when they had been established in urban areas revealed that there was a small proportion of students from the cities. In particular, the enrollment ratio of children of merchants was small. This ratio contrasted sharply with the commercial schools, where the enrollment consisted primarily of children of urban and suburban merchants. Since students entering technical schools and apprentice schools which correlated to the modern industrial sector came from widely diffused rural areas, many of these schools were fully equipped with

large dormitories. This was also the case with the Worker Training School. The Dyeing and Weaving School was not a boarding school, since it had been established in a rural community from the beginning; in consequence, there were many children belonging to weaving and farming families in the vicinity. However, the school adopted a system of authorizing a privately run dormitory.

As for the future of the students after graduation, the greatest number of graduates from the Worker Training School from its early period were employed by such state-run enterprises as the military arsenal, national railways and the Yawata Iron Works. There were many who became independent managers after working for several firms. Among the graduates from the 1920s who became managers, there was an increase in the number of those who, after completing higher technical school, succeeded in climbing the ladder at their work place. What is noteworthy is that the ratio of graduates employed by the military arsenal rose again from the 1920s. This fact revealed the limitation of the Japanese economy before World War II, as the expansion of the machinery and metal industries was possible only through reliance upon munitions.

The greatest number of graduates of the Dyeing and Weaving School either entered independent family businesses or became employed by local enterprises and institutions related to textiles. In the early period there was no significant difference between this number and the total number of those who entered higher education and those who were employed in big cities. Nevertheless, from about 1910 when the school status was changed to that of an apprentice school, the percentage of those who entered independent family businesses and those who became locally employed increased gradually.

With regard to class management, both schools offered long classes with many hours of practical training. Although the regulations of the Ministry of Education stipulated more than 27 hours a week for technical schools and more than 12 hours a week for apprentice schools, both schools, while still apprentice schools, scheduled class hours in keeping with the standard extant at technical schools. The Worker Training School in particular often scheduled extracurricular classes over and above regular classes, and when afternoon classes were not sufficient, the school offered early morning classes as well. Partially because the school ordered all students to commute on foot, there were some students who had to get up at four o'clock and leave their homes at five to attend early morning classes. The school required many hours of practical training, and those who could not finish had to stay until the small hours. It was reported that the school even conducted all-

night practical training. Although it is believed that the lengthy classes including practicals were not unique to these two schools, the present survey does not provide enough data to decide whether this was a characteristic common to all apprentice and technical schools.

The textbooks for general subjects were the same as those used by middle schools and thus they were available on the market. Specialized subjects were taught mostly through lectures given by teachers who at times used mimeographed texts made by themselves. Although textbooks on specialized subjects began to be sold on the market in the 1920s, they were still so limited that mimeographed texts from the 1930s also were used in the school.

It is difficult to evaluate both the qualitative content of the classes and the practical training objectively, but it is possible to make a comparative examination of the above with the technological standard of the workers at that time. Apart from large-scale factories such as military arsenals, the educational content of both schools in many ways generally surpassed the average technological standard of the society. The Dyeing and Weaving School in its initial stage, for example, introduced the latest Western technology. It has been mentioned that the educational level was so high that the weaving industry of the Gunnai region which consisted of many small businesses could not quite benefit from it. After the establishment of the Yamanashi Prefecture Technical Research Center in 1905, the production of test products and the requests for material testing came to be handled mainly by the center. Prior to its founding, however, the Dyeing and Weaving School had taken care of those matters. Even after 1905, there were times when experiments in response to producers' questions and demands were performed at the Dyeing and Weaving School partially because many staff members held positions at the school as well as at the testing center. In other words, the knowledge and the technological standard possessed by the testing center and the school were consistently superior to those of the producers in the region. In spite of the above, the technological standard of the local producers and that of the Dyeing and Weaving School and the technical testing center drew closer together. In 1910, after the Dyeing and Weaving School became an apprentice school, the rate of graduates settling in the local community increased. Given the improved technological standards in the region, the alumni had an increasingly greater role to fulfill in the Gunnai region.

A similar fact was observed in the Worker Training School. This school provided lathes and drilling machines used for practical training internally. Its products were so good that it received the second

place medal at the Fifth Domestic Industrial Promotion Exhibition held in 1903, and from 1904 the school came to accept production orders from private enterprises. As stated already, the income from the sale of such works made in the school exceeded that from tuition. This fact reveals that the school's production technology was superior to that extant in private machine tool factories. Excluding some giant factories, the graduates were expected to be at the forefront of various enterprises immediately. Thus, the school made an effort to obtain technological information pertaining to machine manufacturers at various places so that graduating students were said to have generally understood the equipment, technological standard, and problems of their respective workplace prior to entering the enterprise of their employment. Nevertheless, unlike the weaving industry in the Gunnai region where the pace of technological innovation was gradual, the machine industry in Japan grew rapidly beginning in World War I. There was such a clear reversal of positions in this period that the technology of the Worker Training School could not even correspond to that possessed by medium-scale factories. The school abolished its excessively specialized training curricula and reorganized them into four courses in 1925. This reorganization reveals that the school felt the need to equip the students with wider knowledge rather than with independent specialized practical training.

III. Historical Roles of the Schools

When industry-related vocational schools are examined, it is necessary to mention as a special point of consideration those people who took the initiative and were the driving force in their founding. Unlike commercial schools and agricultural schools, there were few cases of industry-related schools where there was social recognition of them leading to demands for their establishment by local communities.

In particular, although the Hiroshima Prefecture Worker Training School was the first of the apprentice schools to incorporate subjects related to the modern machine industry on a full-scale basis, the demand for its establishment and the reaction to it in the city were extremely slow partially because there was virtually no industrial base in Hiroshima City. The Hiroshima Chamber of Commerce which was already a powerful economic organization in the country existed in Hiroshima City. Even though the Chamber of Commerce had resolved requests for the establishment of a vocational school and a vocational continuation school which were related to commerce, it did not make any move regarding an industry-related school.¹

A move was finally made at the political level in the prefecture, and in 1895 the Prefectural Assembly presented to the governor a proposition regarding the establishment of a vocational school. It was recorded that this proposition was the impetus for the founding of the Hiroshima Prefecture Worker Training School in 1897.

Such trends at the prefectural level, however, were triggered by Tejima Seiichi's recommendation to the Hiroshima prefectural authorities during his observation tour of the Hiroshima region. In deciding to found this school, the prefectural assembly attempted to mold public opinion and also take the governor's feelings into consideration. In the final analysis, however, the move by the prefectural authorities was based upon the collaboration between the Ministry of Home Affairs, which appointed prefectural governors, and the Ministry of Education, which was behind Tejima and others. The notification regarding the issuance of a subsidy in accordance with the National Subsidy for Vocational Education Act was granted almost without any qualification. When the fact is taken into account that additional and extraordinary subsidies in terms of provisional funds were granted repeatedly, this school even though an apprentice school could be said to have been a political creation of the state. It was rare for an apprentice school to be founded by prefectural management.

In contrast to the Hiroshima Worker Training School in Hiroshima City which had no base for the machine industry, the Minami-Tsuru Dyeing and Weaving School was founded in a region which had had several centuries of tradition in the silk fabric industry. It was established in response to a request made by local industry. Research reveals, however, that it is not possible to detect such a trend in the data of the time, aside from being mentioned in later data. Rather, the founding of the school can be attributed to the personal enthusiasm of Yatsushiro Komao who served as the head of Minami-Tsuru county office although he was still in his twenties. As far as the limited data left behind are concerned, he appears to have been a zealous nationalist who seriously accepted the Meiji government's slogan of "Increase Production and Promote Industry," and he did his utmost to apply it somehow in a manner appropriate to the Gunnai region. There were truly many projects that he attempted such as an electricity generation plant with the use of the Katsura River's hydro power and an improvement project regarding sericulture as well as bridge and road construction. The founding of the Dyeing and Weaving School was also one of the policies to "increase production and promote industry" that he attempted in Minami-Tsuru county. As in the case with

many other plans, innumerable difficulties arose over the founding of a dyeing and weaving school. Even though a principal and a teacher finally took up their positions and the school somehow managed to open, the school's continuation was at stake when the principal left the school in less than a year's time. The difficulty pertained not only to the acquisition of a principal and a teacher. It seems that a more serious problem also existed since the influential community members did not cooperate or, to put it differently, an institution to organize their cooperation was nonexistent. Partially due to such circumstances, Yatsushiro took his own life leaving many tasks unfinished at a time when he had secured the prospect for a new principal of the Dyeing and Weaving School.

The management of the Dyeing and Weaving School was set on its way due greatly to Kawaguchi Takashi who had taken up a teaching position in 1898 and then became principal in the following year at the age of twenty-two. Although this position was partially dependent on his personal qualities, what was most decisive was that he came from the most respected family in the Gunnai area. Both his father and his father-in-law were leaders of local political and economic circles, and an industrial organization such as the Kaiki Trade Union was promoted under their leadership. The achievements of Kawaguchi as principal were greatly related to this strong social background. A trade union was formed which included all those aspects in the local weaving industry that had existed since olden times. Then a tie-up between this union and the vocational school emerged. As a result of this tie-up the school was better able to demonstrate its function in the community because it had the support of the county office and the local industrial circle.

On the basis of these facts, it can be pointed out that the Meiji governmental policy of production increase and industrial promotion could show effective influence for the first time over small industries in various areas when human resources and systems covering either one county or several counties became available. This aspect contrasted sharply with the Hiroshima Prefecture Worker Training School, which was created under the leadership of the central and the prefectural governments without any local foundation.

One of the characteristics common to the histories of both schools pertained to the social view which was generally held by teachers and particularly by principals of both schools. It could be called a kind of empiricism which valued practical work as well as technological improvements and devices with the use of experiences obtained at job sites. This empiricism was taught not merely as a way of thinking. The

principals themselves visited the practical training sites of their students as well as factories where their graduates had been employed and gave them guidance directly. Furthermore, they were consulted by managers on technological issues and they tried to ameliorate problems that they themselves had found.

Kawaguchi Takashi, the principal of the Dyeing and Weaving School, visited on foot various villages located in a glen at the foot of Mt. Fuji, held lecture meetings, gave on-the-spot instruction, and invited trainees who aimed to master specific technological subjects in a short time. He accepted requests to manufacture products and test products as far as possible and continued holding exhibitions. When graduates found employment, he not only called on their prospective employers but also made a detailed study of the technological problems found at work so that he could teach the graduating students concrete themes, implanting in them a sense of mission.

The principal and the teachers of the Hiroshima Worker Training School were a fair match in this regard. They gave lectures for local businessmen who were unfamiliar with technical education. The principal and the teachers acted in unison in the education of the technical continuation school and endeavored to extend the base of technical education. Their practical training classes continued not only until late at night but also throughout the night and were always pursued with the presence of these teachers at the center. Several accounts portray the attitude of the principal and the teachers who, in the midst of such an overcrowded schedule, painted the school building and quietly cleaned the pond.

Another common point was that the school system up to the period of World War I underwent many changes and readjustments. One example is epitomized by the history of the Dyeing and Weaving School which went back and forth between the status of apprentice school and technical school. Moreover, there were many changes regarding the detailed organization of the curriculum and the content of the classes. This process reveals, however, that it was a period of trial and error for the new system to adjust to social needs. The *raison d'être* of the apprentice schools in the Meiji and Taishō periods, in a microscopic way, rested on such active efforts and pursuits, and in a broad way, it can be pointed out that there was a unique historical meaning. This was the case because schools which started off in the same way as apprentice schools can be classified into those that remained apprentice schools for a long time and those that were transformed into technical schools at an early stage and were upgraded to higher specialized schools. It could be said that this reveals the multi-

tude of roles played by apprentice schools in the local industries and in Japan's industrialization. As for the apprentice schools which were started mainly with dyeing and weaving alone, the one in the Kiryū region became a higher technical school while the one in Minami-Tsuru remained an apprentice school for a long time. The difference did not derive from the problems pertaining to the attitude of the school, but rather it can be considered to have been correlated to the scale and the technological standard of the silk fabric industry. In other words, dependent upon various conditions of production found in the society, apprentice schools were either continued or discontinued. It is in this regard also that one of the historical characteristics of the apprentice schools is seen.

Note

1. This point was not ascertained when compiling a previous survey report. Refer to this writer's article "The Hiroshima Chamber of Commerce in the Latter Half of the Meiji Period" in *Hiroshima shōkō kaigisho 90 nen shi* [A 90-Year History of the Hiroshima Chamber of Commerce and Industry], Hiroshima Chamber of Commerce and Industry, 1982.