Introduction

Vocational Training and Vocational Education in Postwar Japan: An Overview

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Introduction

Japanese labor practices have long been associated with the three core components of seniority wages, lifetime employment, and enterprise unions. Scholar Moriguchi Chiaki has taken a more nuanced look at the dynamics of Japanese labor, identifying a Japanese-style human-resource management model comprising seven mutually complementary human-resource policies whose roots she traces to Japan’s postwar period of rapid growth: (1) selective, once-a-year recruitment of new graduates, (2) extensive company training programs and education, (3) periodic pay raises and internal promotion based on evaluations, (4) flexible job assignments and small-group activities, (5) employment security until the age of mandatory retirement, (6) enterprise unions and joint labor-management consultations, and (7) unified personnel management of white-collar and blue-collar employees (Moriguchi 2014, 61).

The main theme for this edition of *Japanese Research in Business History*, the 37th in the publication’s history, is in-house education in postwar Japan—one of the pillars of the Japanese-style human-resource management model. The “postwar” element is key here, as it provides the temporal context for company-sponsored, in-house education as part of the country’s overall educational system. During the US occupation of Japan after World War II, the Japanese educational system underwent drastic changes through occupation-driven reforms. Two of the most pivotal elements of that transformation were the lengthening of compulsory education from six years to nine years and the subsequent shift toward a co-educational policy for every phase of the educational framework, including secondary and higher education.

Whereas the educational system in prewar Japan was single-sex outside of primary education and compulsory education, the postwar transition saw essentially every element of the educational structure—including secondary and higher education—go co-educational. In prewar Japan, children who chose not to go on to secondary education

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1 See Moriguchi 2000 for a long-term analysis of changes in human-resource management policies and labor relations in the Japanese and American manufacturing sectors.
after completing their compulsory schooling entered the labor pool at the age of 12 (or, if they went on to higher elementary school [a two-year extension of ordinary elementary school considered part of primary education, but not compulsory, at a single-sex institution], age 14). However, the Act on the Minimum Age of Industrial Workers prohibited children under the age of 14 from engaging in actual work, which meant that children entering the labor force out of ordinary elementary school would spend some time helping around the house and doing other types of informal work before finding formal employment elsewhere at a legal age.

In 1940, 28% of all Japanese graduates of compulsory education (males and females combined) continued on to middle schools, girls’ high schools, vocational schools, and other forms of non-compulsory secondary schools. The vast majority of the youth in Japan, therefore, became members of the workforce after completing their compulsory studies. The percentage of middle school graduates electing to enter high school crept up to 43% (48% of boys and 37% of girls) in 1950, a few years after the war, and then proceeded to skyrocket amid Japan’s economic boom to 52% in 1955 (56% of boys and 47% of girls), 71% in 1965 (72% of boys and 70% of girls), and a whopping 92% in 1975 (91% of boys and 93% of girls). By the time the rapid-growth era came to a close in the mid-1970s, going to high school was essentially a given—and the advancement rate was essentially the same across gender lines (Sawai 2016, 166–167).

Since the prewar period, the prevailing understanding in Japan was that educational background determined job type. Those who had only completed their compulsory education became field workers or plant workers as a matter of course, basically; likewise, graduates of secondary or higher-education institutions would become white-collar employees. Those basic assumptions persisted in the postwar manufacturing industry, where middle school graduates would find themselves in the field or the plant and workers with high school diplomas or university degrees tended to land staffer positions. That fixed pattern began to change over time, however. In the 1960s, particularly the second half of the decade, companies began finding it increasingly difficult to recruit field workers with middle school diplomas. More and more firms eventually decided to start hiring field workers out of high school instead of searching through a dwindling pool of middle school graduates. In some ways, it was as if Japan was encountering a type of labor “inflation” as high school graduates basically diluted the market—and that demographic shift had an enormous impact on the order of company organizations. As the articles in this edition illustrate in revealing detail, the decision to hire high school graduates for work in the field would reshape entire in-house education frameworks.

1. An overview of vocational training and vocational education in postwar Japan

In 1966, the Ministry of Labour’s Women’s and Minors’ Bureau did an informative study of roughly 2,000 individuals who had graduated from middle school in March 1951. The
study examined how the members of that sample had developed their careers in the 15 years since their graduation. As Table 1 shows, 41.5% of the male respondents and 43.6% of their female counterparts had undergone some form of work-related education and training (at least one consecutive month and 30 days in total) in that 15-year span. Among “Workers & operators,” the occupational category that accounted for the largest number of individuals, 42.3% of men and 37.1% of women had done education and training of some kind.

Table 1: Percentages of workers of participating in educational training by vocation (1966)

| By vocation                | Male  | Female | Total | Male (%) | Female (%) | Total (%) |
|----------------------------|-------|--------|-------|----------|------------|----------|
| Professional & technical vocations | 47    | 14     | 61    | 61.7     | 85.7       | 67.2     |
| Managerial vocations       | 32    | 3      | 35    | 46.9     | 45.7       |          |
| Clerical works             | 93    | 37     | 130   | 75.3     | 43.2       | 66.2     |
| Sales                      | 208   | 23     | 231   | 35.1     | 47.8       | 36.4     |
| Agriculture & forestry     | 74    | 24     | 98    | 17.6     | 41.7       | 23.5     |
| Fishery                    | 27    | 27     | 54    | 22.2     | 22.2       |          |
| Transportation & telecommunication | 224   | 16     | 240   | 38.8     | 62.5       | 40.4     |
| Workers & operators        | 822   | 105    | 927   | 42.3     | 37.1       | 41.7     |
| Unskilled labor            | 49    | 8      | 57    | 28.6     |            | 31.6     |
| Services                   | 66    | 25     | 91    | 30.3     | 40.0       | 33.0     |
| None                       | 1     | 82     | 83    | 41.5     | 43.6       | 41.0     |
| Total                      | 1,643 | 337    | 1,980 | 41.5     | 43.6       | 41.8     |

Source: Ministry of Labour, Women’s and Minors’ Bureau, ed. (1968), 35.

Note: Educational training over 15 years of employment (at least one consecutive months and 30 days in total).

A look at how those numbers broke down by education and training shows considerable differences between males and females. In Table 2, one can see that part-time high schools accounted for the highest percentage of educational training for males at 44.7%. Other types of institutions playing notable roles in educational training for males included in-house vocational training at 23.6%, vocational schools at 12.0%, and public vocational training at just 4.6%. The vast majority of women, on the other hand, attended vocational schools (70.1%), with part-time high schools and in-house vocational training tied in a distant second (12.2%).

Table 2 also lists the figures for higher technical colleges (also called “colleges of technology”), which were educational institutions (mostly national) that served to mitigate the engineer shortage during Japan’s rapid-growth period by turning middle...
school graduates into capable engineers through intensive, five-year programs. The need for these types of institutions was pressing, as the initiative to establish schools suggests.

Table 2: Composition of educational training (1966) (People, %)

| Institutional category                      | Male | Female | Total |
|--------------------------------------------|------|--------|-------|
| Universities                               | 4.6  | 2.0    | 4.2   |
| Higher technical colleges                  | 0.6  | -      | 0.5   |
| High schools (full-time)                   | 0.9  | 0.7    | 0.8   |
| High schools (part-time)                   | 44.7 | 12.2   | 39.0  |
| High schools (correspondence)              | 4.5  | 2.0    | 4.1   |
| Special classes for young people           | 9.1  | 6.1    | 8.6   |
| Schools for working youths                 | 0.4  | 1.4    | 0.6   |
| Social correspondence education            | 2.0  | 0.7    | 1.8   |
| Public vocational training                 | 4.6  | 2.7    | 4.3   |
| In-house vocational training               | 23.6 | 12.2   | 21.6  |
| Farms for management training              | 0.9  | -      | 0.7   |
| Vocational schools                         | 12.0 | 70.1   | 22.2  |
| Others                                     | 13.6 | 21.8   | 15.0  |
| **Total**                                  | 121.5| 131.9  | 123.4 |

Source: Ministry of Labour, Women’s and Minors’ Bureau, ed. (1968), 35.

Note: Total exceeds 100% as respondents could select multiple answers.

In 1962, the government created twelve national colleges of technology in one fell swoop. That initial salvo gave way to a steady expansion, with roughly ten new colleges of technology opening every year thereafter until there was at least one such institution in virtually every prefecture. Colleges of technology proved to be extremely popular right out of the gate, with the ratios of applicants to available enrollment slots surpassing 10:1 in their first year of operation. The “boom” in college of technology enrollment began to subside in the 1970s, however, as increasing percentages of students opted to enter universities and people with degrees from colleges of technology found themselves essentially equivalent to junior college graduates in terms of treatment at work. In that context, a new type of institution—the “university of technology”—emerged. Allowing graduates of colleges of technology to transfer in as third-year students, universities of technology offered two-year graduate programs that thus gave college of technology graduates an integrated, four-year education at a single institution. In 1976, universities of technology opened in both Toyohashi and Nagaoka (Umezaki 2007, 478–479).

Schools for working youths established under the 1935 School for Working Youths Order provided social education and night schooling to ordinary and higher elementary school graduates who chose not to go on to secondary schools. That official
framework was short-lived, as the enactment of the School Education Act in April 1947 did away with schools for working youths altogether. Soon filling the void left by schools for working youths, however, was another new brand of educational institution: “special classes for young people,” autonomous, collaborative learning organizations that began to appear around 1947 when youths from farming communities in the Tohoku region formed their own frameworks for study. The phenomenon spread nationwide, spawning approximately 11,000 separate special classes with a total of around 1 million students by March 1953 (Hatakeyama 1955, 58–59) and prompting the creation of the Act for Promoting Special Classes for Young People that August. Key to expanding the special classes were the numerous youth-group activities and community-center activities that took off in the postwar environment (Michibata and Jinriki 1962, 103–106). The Ministry of Education officially recognized youth groups as “organizations related to social education” with the passing of the Social Education Act in June 1949. From that foundation, youth groups in Japan saw participation and engagement continue to grow until membership peaked in the first half of the 1950s.  

Another element of educational training was public vocational training, a type of vocational education provided through the Ministry of Labour under the Vocational Training Law (enacted in May 1958, revised in July 1969, and reconceived as the Human Resources Development Promotion Act in June 1985). Although the category’s quantitative weight in Table 2 may be small in comparison to the main forms of education, public vocational training still played an important role.

The aftermath of World War II also saw the establishment of the Employment Security Act in November 1947, a piece of legislation that put prefectural governments in charge of running vocational training programs in accordance with nationally integrated standards. As a result, all the existing vocational guidance and training facilities became “public vocational training centers.” The passage of the Vocational Training Act in July 1958 further modified the nomenclature, with the public vocational training centers becoming simply “vocational training centers.” As a whole, Japan’s framework for public vocational training comprised “general vocational training centers” (established and run by prefectural governments); “comprehensive vocational training centers” and “central vocational training centers” (established by the Labour Welfare Corporation, which was later succeeded by the Employment Promotion Corporation, created in July 1961), which focused on developing vocational-training instructors; and vocational training centers for the disabled (established and run by prefectural governments).

However, Japan’s sustained economic explosion in the postwar context gave rise to an increasingly sophisticated, diversifying industrial structure that necessitated a wider range of comprehensive vocational training for new graduates, current employees, and transfers alike—in other words, practical training for every stage of a technician’s work life. Aiming to address that growing need, lawmakers overhauled the Vocational Training

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2 For more on the activities of youth groups, see Sano 2017.
Act in July 1969 to create the “New Vocational Training Act.” However, public vocational training programs, which admitted new middle school graduates, soon met with a major dilemma as the proportions of middle school graduates going on to high school began to trend sharply upward. Fukuyama Comprehensive Higher Vocational Training School, an institution in Hiroshima Prefecture, offers a case in point: its enrollment rate (enrollees/enrollment slots) dropped from 91% in FY1967 to 51% in FY1968, went up to 73% in FY1969, and then proceeded to plummet from 56% in FY1970 to 52% in FY1971, 39% in FY1972, 36% in FY1973, and 27% in FY1974. The principal of the school lamented the developments, which he saw as leading society to “equate vocational training schools with welfare institutions [admitting students unconditionally just to secure enough enrollees, which in turn led to a drop in educational quality]” (Katō 1975, 8–9). Challenges continued to vex public vocational training facilities, which tried to keep providing new middle school and high school graduates with attractive training programs but also offer options for the segments of current employees and transfers where demand was growing.

The “in-house vocational training” category in Table 2 had two primary formats: in-house vocational training programs that major firms offered on a standalone basis and those that small and medium-sized enterprises organized on a joint, collaborative basis due to a lack of independent training facilities. Table 3 presents an illuminating glimpse of in-house training systems (of more than six months in duration), drawing on data from a 1965 Ministry of Labour study (of 3,164 establishments with 30 or more employees). According to the figures, the percentages of companies with any type of training system—be it standalone, joint, or outsourced—were 13.8% for those with between 30 and 99 employees, 14.9% of those with between 100 and 499 employees, and 26.8% of those with 500 or more employees. In-house training was most prevalent in the utilities sector (electricity, gas, and water), where 80.2% of companies operated programs, and no other industry even came close to that level. The next highest-ranking industries were construction (where 31.5% of companies had in-house training offerings), services (30.1%), real estate (17.6%), and manufacturing (13.6%). This edition of *Japanese Research in Business History* centers on in-house education in postwar Japan, but it merits mention that corporate education was by no means universal across the postwar landscape. The workers who could hone their skills in full-scale, effective apprentice systems at major firms—the structures that the following chapters examine—were extraordinarily lucky to have those opportunities. In the context of the entire working population, those who underwent in-house vocational training in some type of institutionalized fashion, whether it was standalone or collaborative, represented a small minority.

“Vocational schools” admitted middle and high school graduates for vocational instruction. The category originally applied to a broad swathe of institutions, but the 1975 amendments to the School Education Act introduced some differentiation by officially designating vocational schools that met certain conditions as “special vocational schools.” Vocational schools that admitted high school graduates and offered specialized programs could also identify their institutions as technical colleges. The student bodies at vocational
schools were predominantly female, although their percentages of the total did taper off slightly from 80% in 1955 to 75% in 1960, 73% in 1965, and 69% in 1970. Of the approximately 1.24 million students attending vocational schools in FY1960, 504,000 were learning Japanese and Western dressmaking, 133,000 were studying bookkeeping and abacus calculation, 83,000 were in preparatory courses, and 77,000 were there for instruction in knitting and handicrafts. The pronounced disparity toward female enrollment at vocational schools, as Table 2 clearly demonstrates, reflects the nature of the institutions’ most popular course offerings (Han 1996, 41–43).

Table 3: Percentages of companies with training systems by industry, scale, and training system (1965)

| Industry/scale          | Total with training system | Composition of implementation | No training system | Total |
|-------------------------|----------------------------|--------------------------------|--------------------|-------|
|                         | Total                      | Standalone | Attached training facilities (of those with standalone systems) | Joint | Outsourced | Unknown |                |       |
| Construction            | 31.5                       | 64.5       | 30.8 | 22.3 | 13.2 | -        | 68.5 | 100.0 |
| Manufacturing           | 13.6                       | 72.8       | 22.9 | 10.8 | 12.8 | 3.6      | 86.4 | 100.0 |
| Wholesale & retail      | 10.0                       | 81.5       | 20.3 | 10.3 | 8.2  | -        | 90.0 | 100.0 |
| Finance & insurance     | -                          | -          | -    | -    | -    | -        | 100.0| 100.0 |
| Real estate             | 17.6                       | 22.5       | -    | 75.2 | 2.3  | -        | 82.4 | 100.0 |
| Transportation & communications | 10.3          | 91.5       | 20.0 | 7.3  | -    | 1.2      | 89.7 | 100.0 |
| Electricity, gas, and water | 80.2               | 80.4       | 95.1 | 15.7 | -    | 3.9      | 19.8 | 100.0 |
| Services                | 30.1                       | 50.0       | 32.0 | 14.0 | 32.0 | 4.0      | 69.9 | 100.0 |
| Total                   | 14.7                       | 71.2       | 27.0 | 13.6 | 12.4 | 2.8      | 85.3 | 100.0 |
| 30-99 employees         | 13.8                       | 68.8       | 24.1 | 16.0 | 12.8 | 2.4      | 86.2 | 100.0 |
| 100-499 employees       | 14.9                       | 72.2       | 19.5 | 11.1 | 13.1 | 3.6      | 85.1 | 100.0 |
| 500+ employees          | 26.8                       | 85.1       | 72.1 | 6.7  | 6.0  | 2.2      | 73.2 | 100.0 |

Source: Ministry of Labour, Women’s and Minors’ Bureau, ed. (1967), 32.

Note: (1) “Attached training facilities (of those with standalone systems)” is a percentage relative to the number of companies with standalone systems.

(2) “Standalone”: implemented by a single establishment; “Joint”: implemented with other establishments; “Outsourced”: implemented under contract with a public training center, etc.
2. Skill formation at machi-kōba (small workshop factories)

As the above discussion suggested, middle school or high school graduates working at machi-kōba (small workshop factories) had no opportunities for in-house vocational training or systematic off-the-job training (off-JT) during Japan’s rapid-growth period. If one were to consider on-the-job training (OJT) a complementary piece to off-JT, they had no access to OJT in that sense, either. The only way these types of employees could train, then, was through the protracted, unorganized process of watching others do their work: what the Japanese call “miyō mimane,” or “learning through imitation.”

Koseki Tomohiro (born in 1933) graduated from the Technical High School Attached to Tokyo Metropolitan University in March 1951. He was a product of the school’s general course, which meant that he had not taken any technical or industrial classes during his time at the institution. One day, he saw a Kitamura Manufacturing recruitment poster at Kitabamba Station on the Keihin Kyūkō line. “Now hiring plant workers,” read the advertisement, handwritten in India ink. “Lathe operator and apprentice positions available. Bring resume and apply within.” Despite his lack of any academic experience along technical lines, he decided to pay Kitamura Manufacturing a visit. Koseki applied, got the job, and started work. He had to report to the plant at 7:30 every morning. Technically, his workday started at 8 a.m., but two senior workers would also be at their lathes right when the siren at another factory went off at 8. That meant that Koseki needed to get to work early to lubricate all the necessary parts—the main shaft, middle shaft (which had a power pulley and an idler pulley), and the bearings on the machinery’s power-transmission paths—in time. If he put too much lubrication on the counter above the machinery, others would toss sarcastic barbs his way. “Hey, kid,” they might say. “There must be a pack of rats in my counter or something—it’s like there’s piss all over the place, man.” The same sort of ribbing would happen if Koseki underfilled the counter. “The bearings on the ceiling are starvin’, kid. Can’t you hear ‘em cryin’?” It was all part of a learning experience, however. “I had to lubricate those machines day after day. As I did it, though, I started to figure things out,” Koseki remembered. “I learned how the power went from the motor to the machinery and what all the different parts of the machinery did” (Koseki 1981, 72–75, 77–79).

Koseki’s account paints a vivid picture of what it was like to work as an inexperienced underling at a machi-kōba. “Being an apprentice also meant doing your share of odd jobs,” he explained. “I had to boil the water for bentō [lunch] boxes when lunchtime rolled around, for example. In the evenings, too, I was the one who warmed up the water for people to wash their hands with. That wasn’t all. There was an employee named Utagawa-san who did rough cutting; it was specialty, more or less. I remember how the area around his lathe would fill up with scrap material in an hour’s time, and the apprentices got stuck with carrying all that scrap outside the workshop to a dumping heap. . . . After all the chores were done, I finally got to do some real apprenticing. I’d go back and forth countless times between Kishida-san’s lathe and Utagawa-san’s lathe, watching how their hands moved and memorizing the order that they did the machine operations in. I learned how to sharpen a blade edge from watching Kishida-san take a
grinder to a dull bit. I remember seeing Utagawa-san holding a pass between his lips and whipping it out like he was a ninja grabbing a *shuriken* [throwing star], and I just kept staring at his fingers as he put it against the inside of the flange” (Koseki 1981, 81–83).

Although the Kitamura Manufacturing *machi-kōba* offered nothing in the way of formal, systematic off-JT, Koseki learned the basics and gradually worked his way up to a broader range of tasks with higher levels of difficulty as he moved from station to station at the facility. That skill-formation process—a product of the *miyō mimane* style—allowed him to hone his trade and eventually become an NC lathe operator.

This edition’s feature articles explore the apprentice systems in place at major corporations, the impact of increasing high-school advancement rates on apprentice systems, and the roles of in-house, company education for engineers and administrative employees. Looking forward, it would also be worthwhile to delineate the relationships between the practices of skill formation for large numbers of laborers who had no access to systematic off-JT and the in-house education that went on at large-scale enterprises.

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