

status of the victim, (4) the extent of support given by groups to which the victim belongs, and (5) the degree of interest shown by the companies responsible for damage, administrative authorities, medical personnel, scholars, the general public, the media, etc. By studying the levels and extent of damage in various social disasters, one will discover that many circumstances resulting from damage have a certain common structure. This structure of damage gets progressively more serious, going from the destruction of life and limb and health to the destruction of the structure of livelihood and on to the collapse of the personality. In conclusion, Iijima says that the breaking of such a structure of damage depends on action taken by the victims themselves and their supporters.

In his concluding paper on the problem of pollution, Ui defines pollution as a "negative impact of technology." Furthermore, he says that in order to prevent and resolve pollution problems it is necessary that the victims speak out and participate in active movements to obtain redress and that their fellow citizens enhance their awareness of the importance of human rights and respect for human life. He goes on to point out that the hardest hit by pollution are the weak and the poor in society, and there is the possibility of creating a new poor because of pollution by taking away their means of livelihood. There is also the need to guarantee the freedom of speech of the victims and their continued participation in society by institutional means.

9. VOCATIONAL EDUCATION

1. Economic development and education: introduction -- Toshio Toyoda
2. A history of vocational education -- Mamoru Sato
3. The Sendai Vocational Apprentice School -- Mamoru Sato
4. The Hiroshima Worker Training School and the Minami-Tsuru Weaving School -- Johzen Takeuchi
5. The Seto Ceramics School -- Eiichi Yamashita
6. The Aizu Lacquerware Apprentice School -- Arata Haneda
7. The Anjo Agricultural and Forestry School -- Eiichi Yamashita
8. The Fukushima Commercial School -- Arata Haneda
9. The Miyakonojo Commercial School and the Beppu Technical Apprentice School -- Haruo Yamagishi
10. Development of vocational education -- Mamoru Sato
11. The growth of company personnel training in the industrialization process -- Ryoichi Iwauchi
12. Company personnel training in the small industry -- Akihisa Takaguchi
13. Japanese vocational education: past and present -- Toshio Toyoda

This study group has examined the formation and development of vocational education and training in Japan with concentration on Japan's "takeoff" period.

In his introduction, Toyoda discusses the need for and importance of education and particularly vocational education in connection with development.

Sato's first paper deals with the beginnings of vocational education in Japan and its subsequent development. According to Sato, apprentice schools were established throughout the country after standard regulations were drawn up for them in 1894, their purpose being that of replacing the traditional method of training of artisans, i.e., that of long years of resident apprenticeship service, by training in modern schools. This development was in response to the needs of the times for raising the technological level of traditional handicraft industry. Such schools met with many difficulties as a reflection of the circumstances of the period of transition in the country's industrial revolution. In the course of heavy industrialization, however, they gradually developed into schools that taught higher-level skills, and by 1920 they had risen to the status of technical schools on the intermediate educational level.

The purpose of vocational schools, which were established for working youths at about the same time as the technical apprentice schools, was that of supplementing the instruction provided by elementary schools, the attendance at which was still not very high. At the same time, they provided vocational training in agriculture, commerce, industry, and other fields so that they might fill the gap between elementary education and higher technical education, both of which had been introduced earlier. Since the later Meiji years vocational schools in Japan have steadily changed in terms of type, level, and role in correspondence to national economic development, the spread of general elementary schooling, and development of middle-level vocational education.

Next, case studies of nine vocational schools are given in the third through ninth papers. All of these case studies examine the purpose and circumstances of establishment of the school, its curricula and teaching methods, the family backgrounds and subsequent careers of the students, the roles of the teaching staff, particularly the principal, how the school related to the local community, and so on. Although such schools encountered many difficulties, they were successful in different ways thanks to active backing from the central government, including financial assistance, the enthusiasm of the teachers and particularly young principals, who had received the highest level of technical education then available, and the close co-operation between the schools and the communities in which they were located and particularly co-operation on the part of local leaders.

The next three papers are devoted to changes in vocational education and the development of company education and training programmes for their personnel. Sato's paper traces the process of development and transformation of technical apprentice schools into technical high schools in general terms. In the years from 1894 to 1907 many apprentice schools were closely related to local specialized industries, and although in most cases they were located in cities, some were also established in rural communities. After that and up to about 1920 there was further diversification of apprentice schools, and among the different types, the type best geared to the needs of modern industry (mostly located in the cities) was upgraded in quality and transformed to technical high schools.

In his paper, Iwauchi gives an overview of development of the system of company personnel training in connection with change that was undergone by the school education system. He first briefly describes the initial stage of development of programmes for training in skills and then analyses the change that such training underwent as it became increasingly prevalent.

Company personnel training in Japan was characterized in the initial stage by the fact, firstly, that it began as an appendage of introduction of technology from abroad and, secondly, that the investment in such training preceded the firm establishment of the industrial works in which the skills acquired were meant to be used. Large companies, both government-run and private, created organized systems of training programmes for the purpose of producing high-quality technicians, and those systems later diversified into individual systems best suited to the needs of particular companies. As for how such company personnel training related to the school education system, it was sometimes complementary (providing basic instruction to personnel who had not completed their schooling), sometimes consigned (with engagement of the services of public schools for training of personnel), sometimes supplementary (providing basic instruction to the children of employees in remote areas where there were no public schools), and sometimes substitutive (providing instruction that the schools were not capable of providing), to mention only some of the relationships that developed between the two.

As heavy industrialization progressed and the demand for middle-level skilled labour rose, large industrial firms established a variety of different training systems, including various types of "factory schools" to make up for the inadequacies of the formal education system. As public technical schools came to play a wider role, "factory schools" developed in two directions: some concentrating on training of workers in skills on a higher level than that offered by the public technical schools and others concentrating on putting out middle level skilled workers in large numbers, this latter orientation being the more important one in terms of quantity.

The Takaguchi paper is concerned with personnel training in small companies. Workers in small companies had to rely entirely on their own

work experience for acquisition of new or higher skills since such companies did not have personnel training programmes. Workers who were particularly keen on improving their skills made a point of frequently changing their place of work so as to benefit from wider experience. Such "drifting" was encouraged by the fact that while manual dexterity was particularly important in small companies, it was necessary to work at many different locations in order to acquire experience since those who had been with the company longer were reluctant to share their experience with newcomers. Another fact was that many young workers dreamed of eventually starting their own businesses and therefore chose employment in small companies to gain the necessary experience because it was easier to change jobs there than in large companies.

Toyoda's second paper makes the findings of the study group as a whole more readily comprehensible. He concisely outlines the history and present state of general education and technical education in Japan in connection with industrialization, making use of statistical data.

One might also note that the findings of this study group will no doubt be considered novel to Japanese scholars in view of the fact that very little historical research on vocational education has been done in this country to date, the findings of the group's first year of work, already published in book form in Japanese (Wagakuni ririkuki no jitsugyō kyōiku [A history of vocational education in Meiji Japan], ed. Toshio Toyoda, 1982), having in fact attracted considerable attention.

10. ECONOMIC POLICY

1. An overview of the fiscal and financial policy of the Meiji government -- Takafusa Nakamura
2. The policy of "fostering national wealth" -- Junji Banno
3. The initial stages of fiscal policy -- Mataji Umemura
4. The Okuma inflationist policy -- Yuzo Yamamoto
5. Debates on the land tax payment with rice -- Takenori Inoki
6. The mechanism of Matsukata fiscal policy -- Yoshimasa Muroyama
7. A macro-economic analysis of Matsukata deflation -- Juro Teranishi
8. The problem in early Meiji financial statistics -- Yuzo Yamamoto
9. Japanese economy and the international environment in the late nineteenth century -- Takafusa Nakamura
10. The industrial development policy under Matsukata deflation -- Mataji Umemura
11. The industrial development policy at the local level -- Osamu Saito
12. The indigenous textile industry in the early Meiji years -- Takeji Abe