
The Role of Education in Japan's Modernization**

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1. Introduction

Modern Japan was born two times under very similar circumstances. The first occasion was in 1853 when Commodore Perry of the United States Navy led his squadron into Tokyo Bay and demanded a treaty of commerce with Japan, which, at that time, was following a policy of strict seclusion. The second occasion was in 1945 when General MacArthur demanded the signature of the terms of surrender by representatives of the Japanese government on board the battleship "Missouri" in Tokyo Bay.

At the time of Perry's coming, Japan was facing a crisis caused by the aggression of the Western powers from outside at a time when the contradictions within her feudal society were developing into a situation leading toward a revolution within the country. The leaders of that time won a civil war and unified the country, establishing a modern state which ended interference in domestic affairs by the Western powers. At the same time, they took the initiative in adopting the most advanced features of the civilization of Western countries and thereby built up Japan's military and economic power as an independent nation. But even though Japan had rapidly restored her national power, she soon

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** Presented at Seminar on Modernization in Japan, Organized by Japanese Studies Center, Thammasat University, Bangkok, February 5, 1985.

found herself in confrontation with the Western Powers in their struggle for the Asian markets. Economic penetration into Asian markets was a necessary step for the survival of Japan which had just set out on the path towards becoming a modern industrial state without the benefit of many resources and with an excessive population crowded into a very small land area. However, Japanese penetration into China and Manchuria took place without the approval of either the Asian people themselves or the Western powers, and consequently Japan was criticized throughout the world as an invader. In this way, Japan became isolated in the world and soon afterwards she was faced with the tragedy of defeat. Thus, the first modern Japan disappeared as suddenly as she had appeared.

After the war, Japan was reborn a second time. She eliminated all factors which had led to her previous destruction, and was determined to take a fresh start as a peaceful and civilized state with a clear concept of democracy. Postwar Japan took the difficult course of reconstruction through the intelligence and hard work of the Japanese people. As a result, its national power was built up by steering a prudent course in a crisis-ridden world. Japan has achieved a high rate of economic growth since the 1960 and has developed its technology to the point of becoming a world leader in the field of science and technology. Thus, in terms of gross national product, Japan has become a major economic power comparable with the other advanced countries of the world.

Education can be distinguished as one of the driving forces which helped the growth of Japan at both these turning points of its recent history. At the same time, however, education cannot escape its responsibility for the defeat in war which led the people into tragedy nor for the increase in delinquency among the young people which has been much publicized in the newspapers recently.

2. Legacies from the Past

A modern school system was established in Japan in 1872 and by 1902 enrollment in compulsory education exceeded 90 percent. The proportion of children completing secondary education accounted for 42.4% of boys and 29.2% of girls, or an average 36.1% of the relevant age groups in 1930. Such a high rate of development in elementary and secondary education has been relatively rare in the history of world education. It took only 30 years to achieve this level of development in Japan while in Western countries the development took place gradually throughout the course of a century. In fact, the background to such a rapid development of modern education in Japan was that elementary and secondary education had already spread considerably in the course of the 19th century. The annual rate of opening of elementary schools doubled during the 19th century and increased sharply after the 1930s. Secondary education was offered at "Hanko" (clan schools) for members of the samurai class and at "Shijuku" (private schools) for both samurai and non-samurai, while "Goko" catered mainly to people not of samurai background. The "Hanko" developed rapidly from the end of the 18th century up to the middle of the 19th century and nearly 80 percent of all clans set up their own schools.

Researchers suggest that there were 1,066 private schools by 1853 and 1,528 in 1867. They also confirm that the sons of the leading non-samurai classes attended the "Goko." Although it is difficult to measure accurately the percentage of school attendance or ability in reading and writing as indicators of the spread of education, it seems probable that the percentage of school attendance reached almost 100% for members of the samurai class and about 40% for the remainder, while in the closing years of the Edo Period, the ability to read and write was almost 100% for samurai class and the leading classes in the remainder of society and between about 40% and 50% for other people.

As for the content of education, people in the upper class were taught Chinese classics and cultural knowledge based mainly upon Japanese history. The general public learned primarily reading, writing and accounting (the necessary skills for their daily life) as well as ethics and moral principles. Social education in Buddhism, Shintoism, practical ethics and vocational education such as the training of apprentices also greatly contributed to the education of the general public.

Education for women was less than that for men both amongst the samurai class and the general public. They generally received education at home based on the rules of good behaviour. Some girls of the non-samurai classes went to sewing schools. Since the upper class had studied Western sciences from Chinese books beginning from the end of the 18th century, they had a well-established foundation for adopting Western culture after about 1830. In the period of the establishment of the modern school system after the Meiji Restoration, the samurai class and the leading classes of the general population well understood the importance of education and the majority of them cooperated willingly with the government in establishing modern schools. This was the main reason for the success in setting up modern schools in Japan.

3. Adoption of Western Culture

The leaders who unified the country under the nationalistic slogan of "reverence for the Emperor and expulsion of the barbarians" and succeeded in establishing the modern state in Japan, followed an active policy of introducing advanced Western culture in order to enrich and strengthen the nation.

The Iwakura mission, which included many high officials, visited America and a number of European countries and made efforts to acquire advanced Western culture as well as to develop friendly external relations. The dispatch of this mission was of decisive importance in the modernization of Japan. The policy of adopting Western civilization proceeded by a combination of two methods: 1) Sending students abroad and translating and publishing foreign books; and 2) inviting teachers and engineers from abroad. The actual results of these methods are shown in the supplementary material in note (1). The Government spent large amounts from their limited budget in order to implement these policies. In adopting Western culture, the Government clearly divided it into two categories: 1) things which were of immediate use for establishing a modern state; and 2) things which

would be useful for the development of Japan in the future by educating the Japanese people. They pursued these two objectives simultaneously. Education mainly fell into the second category and was carried out on the basis of sending students abroad and employing foreign teachers in Japan. Thus, within a notably short period of time after her foundation as a modern state, Japan was able to develop the essential institutions of a modern state and succeeded in training the leaders who were to become the support and driving force of Japan in the future. The outstanding performance of the Government in the period of construction of the modern state was pursued and expanded at the national level by Government leaders who took account of the programmes for the political reform of individual clans, which were drawn up at the end of the feudal period.

Such a speedy adoption of Western culture finally started showing results in the 1890s. Its outcome was seen in this period as the completion of the establishment of a modern legal system, the capitalistic development of industry and the economy, and the creation of modern learning and culture by the Japanese people.

4. Government Policies for Education

In proceeding with this modernization, the Government stressed the importance of: 1) training leaders through the expansion of higher education; and 2) educating the general public through the diffusion of elementary education. To train the leaders, the Government sent students abroad and set up universities at home. At the same time, the Government instituted highly specialized types of education by setting up schools of university standard in each specialized field such as schools of law, schools of commerce, schools of engineering, the Sapporo Agricultural School, military schools, and teacher training schools. As for the education of the general public, a centralized modern educational system was created in 1872 and 53,760 primary schools were established throughout the country. The cost of elementary education had to be borne for the most part by local residents, especially by wealthy farmers and members of the establishment class in the areas where primary schools were set up. The development of state schools for secondary education had to wait until after 1900, but some private schools succeeded to the tradition of the clan schools and some girls' schools were run by missionaries in the cities.

In the process of establishing a modern legal system in the 1890s local autonomy was introduced. Accordingly, the administration of the schools below the secondary level came under the control of the local authority. The central government took direct control over the institutions of higher education and indirectly supervised secondary education through the personnel management of teachers and the system of school inspection. As for elementary education, the Government supervised the content of education by enacting school regulations, prescribing State textbooks and organizing school inspections. At the same time, the Government had teachers organize educational associations throughout the country and encouraged independent educational research by teachers.

5. Industrial and Economic Development and Education

The development of industry and the economy was the most important state policy since the opening of the country and utmost efforts were made to diffuse education for this purpose. The supplementary material in note (2) shows that the development of industry and the economy in modern Japan and the development of education were closely related to each other. In other words, the development of education encouraged the development of industry and the economy while education was developed in response to the development of industry and the economy. In the 1890s the industrial revolution of modern Japan took place based on light industries, centering primarily on textiles. Accordingly, vocational schools for industry, commerce and agriculture at the secondary level were established, and, at the same time, a Law for Subsidies for Vocational Training was promulgated in 1894. This state subsidy for vocational educations was introduced at quite an early stage in Japan compared with other countries. This showed the Government's enthusiasm for the promotion of vocational education and contributed greatly to the subsequent development of industry and the economy. In the 1900s, the heavy industries such as metals, machinery and chemicals also showed remarkable growth. The education system coped with this development by establishing specialized schools at a higher educational level for advanced training of engineers in 1903.

The First World War offered Japan an opportunity for rapid economic and industrial progress. Because it became an urgent task to provide many leaders and experts for the industrial and economic world, an Extraordinary Education Conference was held in 1917 and agreement was reached on a six-year plan for the expansion of higher education. The contents of this plan included an increase in the limit of enrollments for state institutions of higher education from 13,300 to 20,000. The Government also aimed at increasing and enlarging the number of subjects and departments in the five state universities, and at establishing single-department colleges and 29 new high schools and professional schools. This plan was successfully carried out and the manpower trained in these schools played an important role in the reconstruction of Japanese industries and the economy after the Pacific War.

Japanese industry and the economy were brought to the verge of collapse, and educational facilities destroyed by the Pacific War. After the defeat, Japan had to start everything literally from nothing. From the 1960s, Japanese industry and the economy entered into a period of "take-off" towards rapid economic growth and the "6-3-3 Education System" established in 1947 achieved equal opportunity for education and opened its doors to the general public by increasing the number of institutions of higher education. At a result, the proportion of those entering higher education increased rapidly together with the rapid economic growth of the 1960s. In 1981, the proportion of those attending school accounted for 99.9 percent in elementary education, 95.5 percent in secondary education, and 33.3 percent in higher education.

Finally, I would like to discuss how Japan, influenced for over a thousand years by Buddhism and Confucianism as a part of the Oriental sphere, dealt with the difficulties related to moral education which accompanied the assimilation of Western scientific and technological culture. Japan unified the contradictory elements of science and technology and morality, imported culture and traditional culture, in the following manner.

1) Western science and technology was assimilated in accordance with the practical criteria of national prosperity and military strength, taking the Japanese spiritual tradition as the foundation of moral education. The assimilation was carried out only to that extent. In other words, they adopted the dualism of Oriental spirituality and Western science and technology, as expressed in the words, "Japanese spirit and Western learning," of Oriental morality and Western arts. This became the underlying philosophy of Japan's modernization efforts. However, while this way of thought, along with the ensuing assimilation of science and technology, brought about the rapid development of industry and the economy, many problems remain to this day in the areas of learning and technological creativity. This is an extremely serious problem for Japan of the present, which no longer has the example of a developed nation to follow.

However, Japanese leaders in the area of ideas in the late 19th century had the courage and thoughtful sincerity to challenge such difficult tasks. Furthermore, there were outstanding people who were somehow successful at the individual level as well. People fervent with patriotism and who were virtuous men of character in the Asian sense of the word were especially cultivated in the educational circles. Moreover, they were men who understood science and technology with open minds on an international scale. They can be said to have been the ideal modern Japanese. These included Yukichi Fukuzawa, founder of Keio University; Jo NiiJima, founder of Doshisha University; and Harugoro Kano, President of Tokyo Teacher's College, present day Tsukuba University, founder of Japanese Judo, and the first Asian member of the IOC.

The Japanese ideal of modern education was truly embodied in such men. This is also revealed in the fact that while present-day Japanese society appears at first glance to have been Westernized, in reality it harbors a great deal of the special Asian and Japanese characteristics.

2) At the initial stages of modern education in Japan, specified religion was excluded from public education, and a method of moral instruction based on The authority of the Emperor embodying the common national morals was adopted in the schools. In other words, religion was left to personal belief, and national morals were taught as moral education in the schools. In this manner, public education was freed from the complex problems of religion, making rapid progress possible.

However, this became a weakness in the personal morals of the people, and is one of the problem areas in post-war Japan.

3) The dominance of the practical value of science and technology over the moral value of traditional culture accompanying the advance of modernization (from the 1910s) gave rise to the distortion of neglect of moral education in Japanese education which was

built on a balance of the two elements. From the 1920s, the gap between the two elements advanced to a point of social class antagonism between the intelligentsia and the masses. This was one of the factors which contributed to Japan's headlong rush into the tragedy of war.

Nevertheless, this unbalance between the two elements continued into post-war Japan, and the contradiction became particularly actualized in the 1960s during the period of high-level industrial and economic growth. Yesterday, the Thai delegate reported on their aim of achieving humanistic science and technology. Japan, carried away with assimilating Western science and technology, has in the past neglected assigning it its proper place from the viewpoint of value. This is the most important aspect of education. As a result, parents and teachers have been zealous in their enthusiasm for cramming knowledge, and have committed the mistake of losing sight of the element of human emotions. This has rebounded in the shameful reality of moral corruption among today's youth.

The task confronting present-day Japanese education is the proper positioning of morality and science and technology by once again paying attention to traditional Japanese culture which has imparted deep wisdom concerning man. In this process, a philosopher has said that a man should be the end in itself, and not treated as a means to an end. This is likewise consistent with the teachings of Buddhism and Confucianism, must be understood clearly.

In reviewing the past 100 years of education in Japan, the rise and fall of the nation is related to the rise and fall of education. And while such phenomena as improvement of facilities, equipment and enrollment rates cannot be denied, I feel that the rise and fall of education is above all related to the rise and fall of a stable national spirit in a sound nation. Taking a leadership role in the fostering of this national spirit is our primary duty as educationalists.



SUPPLEMENTARY MATERIAL

Note (1)

Table 1. Number of Students Sent Abroad by the Ministry of Education during The Meiji Period. (to America and Europe only)

| | | | | | | | | | | | | | |
|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|
| year | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| person | 11 | 10 | 0 | 0 | 7 | 5 | 8 | 7 | 4 | 4 | 5 | 4 | 6 |
| year | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
| person | 5 | 4 | 6 | 8 | 5 | 1 | 7 | 11 | 20 | 26 | 14 | 57 | 40 |
| year | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | | | | |
| person | 42 | 46 | 35 | 12 | 15 | 19 | 1 | 1 | | | | | |

- Note :**
- (1) Ministry of Education List of Students Sent Abroad as at the End of September 1897
 - (2) Ministry of Education List of Students Sent Abroad as at the End of June 1909
 - (3) Ministry of Education (Educational Affairs Section) List of Former Students Sent Abroad by the Ministry of Education
 - (4) 50-year history of Tokyo Imperial University I & II

Table 2. List of Fields of Study in the Above-mentioned Figure

| Year | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Humanities | | | | | | | | | 1 | | | | 1 | | 1 | 1 | | |
| Social Sciences | 4 | 3 | | | 1 | 1 | 3 | | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 3 | 2 |
| Natural Sciences | 6 | 7 | | | 6 | 4 | 5 | 5 | 2 | 2 | 3 | 2 | 3 | 2 | 1 | 3 | 5 | 3 |
| Arts | | | | | | | | | | | | | | | 1 | | | |
| Others | 1 | | | | | | | 2 | | | | | | | | | | |
| Total | 11 | 10 | | | 7 | 5 | 8 | 7 | 4 | 4 | 5 | 4 | 6 | 5 | 4 | 6 | 8 | 5 |

| Year | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | Total |
|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|
| Humanities | | | | | 2 | 2 | 6 | 6 | 6 | 5 | 6 | | 1 | 3 | | 1 | 42 |
| Social Sciences | 1 | 1 | | 8 | 9 | 4 | 16 | 6 | 8 | 9 | 6 | 6 | 5 | 3 | | | 114 |
| Natural Sciences | | 6 | 10 | 12 | 14 | 7 | 31 | 23 | 22 | 29 | 20 | 6 | 8 | 11 | 1 | | 259 |
| Arts | | | 1 | | 1 | | 3 | 3 | 2 | 2 | 1 | | | 1 | | | 15 |
| Others | | | | | | | | 2 | 2 | 1 | | | 1 | | | | 9 |
| Total | 1 | 7 | 11 | 20 | 26 | 13 | 56 | 40 | 40 | 46 | 33 | 12 | 15 | 18 | 1 | 1 | 439 |

Table 4. List of Foreign Teachers by Subject and Nationality

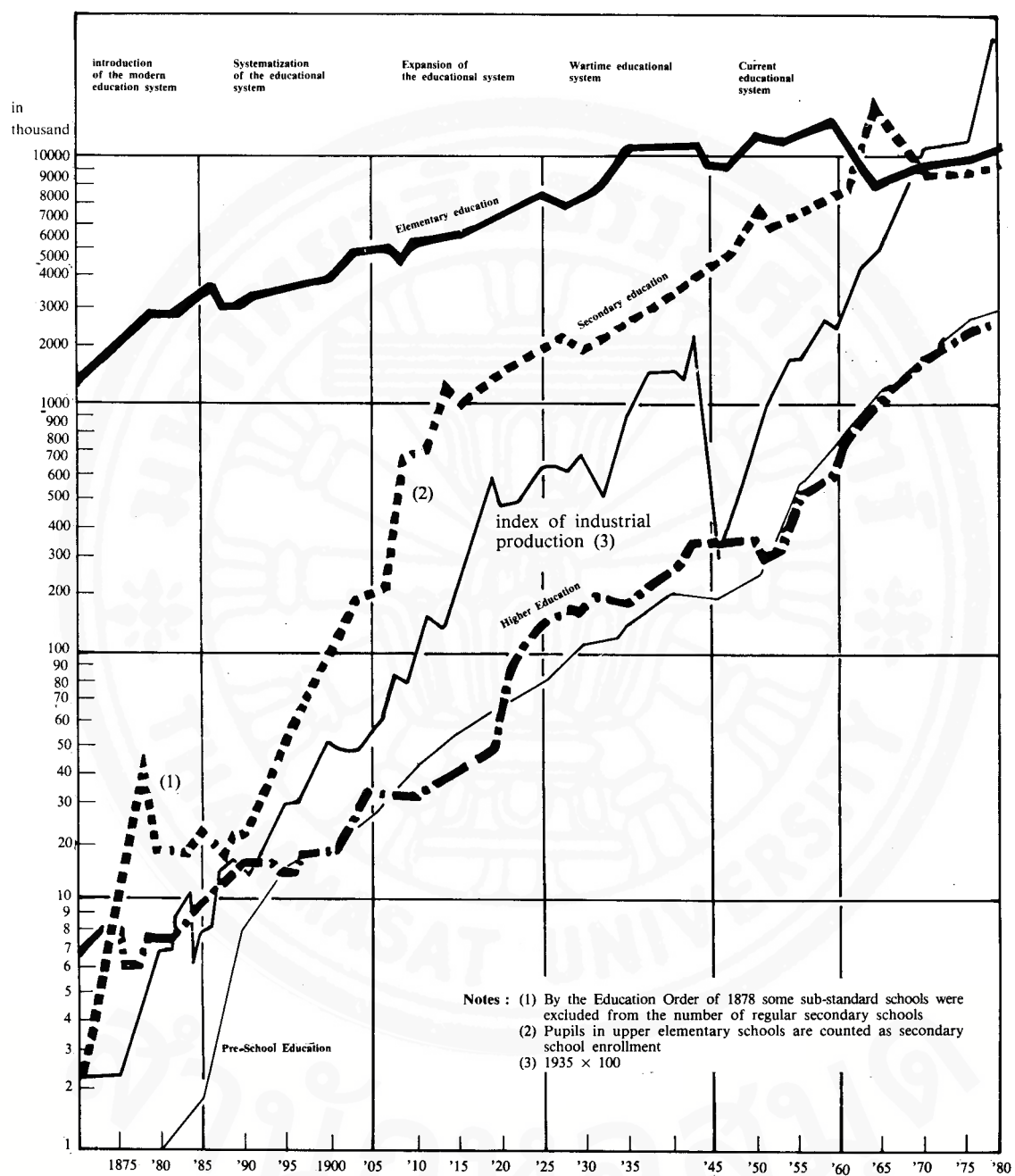
| Subject \ Nationality | | | | | | | | | | | | | Total |
|-----------------------|---------|---------|---------|--------|-------------|---------|---------|-------|-------------|--------|---------|--------|-------|
| | Germany | England | America | France | Switzerland | Austria | Denmark | Italy | Netherlands | Canada | Belgium | Russia | |
| Humanities | 17 | 20 | 15 | 10 | 2 | 1 | 1 | 1 | | | | 1 | 68 |
| Social Sciences | 7 | 3 | 6 | 4 | 1 | | | | | | 1 | | 22 |
| Natural Sciences | 39 | 15 | 13 | 9 | | 1 | | | 1 | 1 | | | 79 |
| Total | 63 | 38 | 34 | 23 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 169 |
| Percentage (8) | 37.2 | 22.5 | 20.1 | 13.6 | 1.8 | 1.2 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 100 |

The historical trend in the percentage of the appropriate age groups enrolled in each school level

| | 1875 | 1885 | 1895 | 1905 | 1915 | 1925 | 1935 | 1947 | 1955 | 1965 | 1970 | 1975 | 1980 | 1981 |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Elementary Education | 35.2 | 49.6 | 61.2 | 95.6 | 98.5 | 99.4 | 99.6 | 99.8 | 99.8 | 99.8 | 99.8 | 99.9 | 99.9 | 99.9 |
| Secondary Education | 0.7 | 0.8 | 1.1 | 4.3 | 19.9 | 32.3 | 39.7 | 61.7 | 78.0 | 83.8 | 89.2 | 95.9 | 96.5 | 96.5 |
| Higher Education | 0.4 | 0.4 | 0.3 | 0.9 | 2.0 | 2.5 | 3.0 | 5.8 | 8.8 | 14.6 | 18.7 | 30.3 | 33.5 | 33.3 |

Note (2)

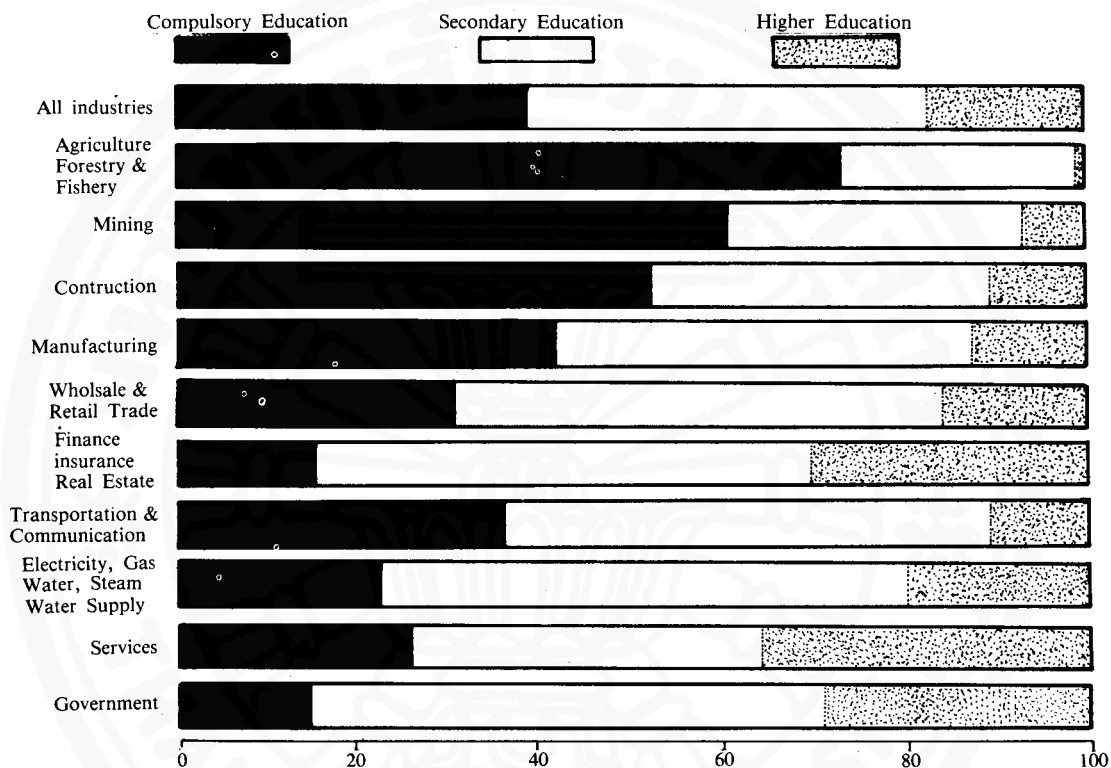
Figure 1 Historical Trends in Enrollment



References

Educational Standard of the People

A. Percentage Distribution of the Employed Persons in Each Industry, by Level of Education Completed 1979



(Note) Compulsory education includes those who had not completed compulsory educations

B. Percentage Distribution of Active Population, by Level of Education Completed, 1890 to 1980.

