

Chinese Medical Students in Japan and the Transformation of Medical Science in Modern China: a Study Focusing on Six Japanese Imperial Universities

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Abstract

At the end of the Qing Dynasty, a great number of Chinese students travelled to Japan to learn modern medicine with the dream of expediting China's development, marking the end of an era in which China only passively received Western medical knowledge. Although the Japanese medical system in this period was less sophisticated than those in the West, the number of medical students from China studying in Japan was by far the most numerous. This sizable group soon became China's medical professionals and greatly contributed to the country's adaptation to Western scientific methodology.

Through examining a large number of first-hand historical sources from China and Japan, which include enrolment brochures, student rosters and curriculum content of six Japanese Imperial Universities, this paper presents the profile of Chinese students studying at Japan's top universities from the 1920s to the 1940s. By doing so, it argues that, over time, the quantity of medical students from China studying in Japan changed dramatically, and that there were profound historical reasons for these changes. Using newspapers and magazines founded by the medical students, this paper strives to construct a real portrait of this group after they came back to China in order to illuminate the far-reaching influence they had on the process of modernizing China's medical and health systems.

Keywords: Chinese medical students; Japanese Imperial Universities; Western medicine; transformation; modernization

1.The Rise and Development of Medical Learning in Japan

In 1895, after China was defeated in the Sino-Japanese War, an outcome which shocked the nation, the Qing Dynasty began to face up to the rise of Japan and to consider copying Japan's educational model. In 1896, 13 students were sent to Japan by the Qing government; they were the prelude of Chinese students going to study abroad. Since then, the Qing government sent a large number of Chinese students to Japan, trying to use Japan as a bridge for learning about Western civilization.

In earlier days, fewer Chinese students studied in Japan compared to European and American countries, and they mostly focused on the liberal arts. Subjects like agriculture, industry, science and medicine were generally underrepresented. The difference in enrolment numbers was nearly tenfold.¹ Until 1902, the group of students studying medicine in Japan totalled three, one in Chiba Medical School and two in Kumamoto Medical School.² In 1904, according to Li Xisuo's book *International Students of Modern China*, the number of Chinese medical students increased to twenty three.³ Since 1905, however, Japan replaced Britain and the United States to become the first choice for Chinese students. The number of medical students greatly increased and peaked in 1907. According to a survey conducted by the Chinese Medical Association, an organisation created by Chinese medical students, in 1907 the total number of Chinese medical and pharmaceutical students was ninety five.⁴ Although affected by the Sino-Japanese War, the number of medical students was still large. According to the

¹ *A hundred years of history of Chinese people studying in Japan*, ed. by Shen Diancheng (Shenyang: Liaoning Education Press, 1997), p. 13.

² *China's modern education history compilation*, ed. by Chen Xuexun, Tian Zhengping (Shanghai: Shanghai Education Press, 1991), p. 373.

³ *International Students of Modern China*, ed. by Li Xisuo (Beijing: People's Publishing House, 1987), p. 150.

⁴ Institute of Medicine: "Chinese medical students' name investigation", *Journal of Medicine*, No.6 (1907)

statistics of 1930, there were 1106 medical students.⁵ Most of these Chinese students left home with a dream of saving China, so that after studying modern Western medicine in Japan, they could return to convey contemporary medical concepts in various ways and become the primary force of building China's medical system.

Japanese medical schools of the time can be divided into three categories: comprehensive universities that include Imperial universities and private universities; medical universities and, finally, medical and pharmaceutical schools. These three types of institutions enrolled Chinese medical students. Among them, there were nine Imperial universities that were considered most prominent in Japan: Tokyo Imperial University, Kyoto Imperial University, Tohoku Imperial University, Kyushu Imperial University, Hokkaido Imperial University, Osaka Imperial University, Nagoya Empire University, Keijo Imperial University and Taipei Imperial University. Out of these, Tokyo, Kyoto, Tohoku, Kyushu, Hokkaido and Osaka Imperial University's medical departments recruited Chinese students. Although scholars have done a lot of research on modern Chinese medical students, the results are limited to the late Qing Dynasty and the beginning of the Republic of China, or to single-school and single-person case studies. Moreover, these studies merely discuss historical facts. Lacking in-depth analysis, the existing scholarship has not outlined the characteristics of Japanese medical students, nor grasped the historical transformation of the modern Chinese medical system.⁶

This report will focus on the six Imperial universities mentioned above to provide an

⁵ Tongren published: "Chinese medical practitioners list", (Tongren Committee, September 1930) pp. 815-817.

⁶ For example: Yahua Niu: *Chinese Medical Students who Studied in Japan during the Late Qing Dynasty and Contributions to Chinese Modern Medicine*; Zihua Chi: *The Treatment of Chinese Medical Students in the Xinhai Revolution*; Ronghua Pan, Fang Yang: *The Activities of Spreading Western Medicine by Chinese Medical Students Studied in Japan during the Late Qing Dynasty and Early Republic of China*; For Japanese scholars studying the subject confer: Yichuan Zhou: *Three Private Schools for Recruiting Chinese Women Students: Focusing on the Early Republic of China*; Kenjo Teiji: *Activities of Returned Students in Japan Before Returning to China and Evaluation of Modern China*.

overview of the life of Chinese medical students from 1927 to 1944. On this basis, by making use of the magazines they founded and the papers they composed, I will attempt to reconstruct the distinct nature of their medical activities. In order to accurately grasp the general situation of this group, this report has collected a wide range of *Chinese student lists* (a total of 17) from 1927 to 1944, edited and published by the Sino-Japanese Communion, and the *Century History* of six Imperial universities, along with other first-hand historical data. The *Chinese student lists* mainly record the students' name, age, place of origin, grade, the school they graduated from as well as other information. By analyzing the data available for imperial university students, we can outline the age structure, sex ratio, geographical distribution and educational background of this group. Each of the Imperial universities' *Century History* is a collection of the medical department history and their curricula, which help us understand their medical practices and professional standards. As for their activities back in China, the analysis is based on the collections of various types of medical journals from the Chinese National Library, which give us a glimpse of their far-reaching impact on the modernization of the Chinese medical system.

2. Imperial Universities and the Medical Education of Chinese Students

2.1 The establishment of Imperial universities and their medical departments

The founding of Japan's modern education system began with Gakusei (the Education System Order) issued on September 5th, 1872. The Order divided the whole country into eight university districts. Each university district was to set up a university and 32 secondary school districts. Each secondary school was further divided into 210 primary school districts, with a total of 53,760 primary schools planned across the country. According to the decree, in April 1877, the Meiji government merged Tokyo Medical

School and Tokyo Kaisei School into Tokyo University, which administrated departments of law, science, medicine and literature. It became Japan's first modern university. In 1886 the Meiji government promulgated the Imperial University Order, which stipulated the composition of the Imperial University: it was to be made of graduate schools and branch universities. The branch universities were divided into law, literature, medicine and science branches and Tokyo University was granted the title of an Imperial University. Since then, the Japanese education system expanded further, adding to it Kyoto Imperial University (1897), Tohoku Imperial University (1907), Kyushu Imperial University (1911), Hokkaido Imperial University (1918) and Osaka Imperial University (1931). The original Imperial University was subsequently renamed Tokyo Imperial University. In fact, not only were the imperial universities established differently, so were their medical departments.

The Medical Department of Tokyo Imperial University was first established on May 7th 1858 and was set up as Shutosho (the vaccination institute). Subsequently, the Shutosho was restructured several times until, on August 3rd 1872, the Ministry of Education created the school district system and renamed it the First University District Medical School. On April 12th 1877, as Tokyo Kaisei School merged with the Tokyo University, the clinic became the Department of Medicine. On March 1st 1886, the Imperial University Order converted it to the Medical School of the Imperial University and set up the postgraduate department. On February 6th 1919, when the Ministry of Education issued the Correction of the Imperial University Order, Tokyo Imperial University had seven departments and the medical department was one of them.⁷

Founded in 1897, Kyoto Imperial University was established as the second imperial university. The Medical Department was established two years later in September 1899.

⁷ *The Centennial History of the University of Tokyo "ministry history (2)*, ed. by The University of Tokyo Centennial History Committee (University of Tokyo, 1984), pp. 3-24.

The department had seven majors and an enrolment of 10 students when it was created. In December 1899, the affiliated Medical College Hospital and Nursing Department were established. The first graduation ceremony was held in 1903. In 1919 it became a subordinate branch of the University of Medicine, a part of Kyoto Imperial University after the Imperial University Order was announced. In 1923, a special leprosy laboratory was established within the affiliated hospital, later renamed the Dermatological Laboratory. In 1939 the Department of Medical Pharmacy and a temporary medical department were set up.⁸

By comparison, the medical education of Tohoku Imperial University, Kyushu Imperial University, and Hokkaido Imperial University also have a long history. Tohoku Imperial University was founded in 1907, the third imperial university established in Japan. Its medical department originated from Sendai Medical University. Its history can be traced back to 1887, to the Medical Department of the Second High School. In April 1901, its medical and pharmaceutical department changed its name to Sendai Medical College, and became independent from the Second High School. In 1904, the Chinese student Zhou Shuren (Lu Xun) enrolled into this school. Since then, Sendai Medical College recruited a large number of students from China. On September 1st 1907, the Sapporo Agricultural University and Sendai Science University co-founded a comprehensive University, the Tohoku Imperial University, while Sendai Medical College became an affiliated school of the university. On April 1st 1912, it was transformed into the Medical Department of Tohoku Imperial University. On July 14th 1915, it became a medical college, and a hospital affiliated to the medical college was set up. On April 1st 1919, it officially became the Medical Department of Tohoku Imperial University.⁹

⁸ *Kyoto University century history, ministry history (1)*, ed. by Kyoto University Centennial History Committee (Kyoto University Students Club, 1997), p. 676

⁹ *Tohoku University centennial history, general history (1)*, ed. by Tohoku University Centennial History Compilation Committee (Sendai: the Revitalization of Education Studies at the Northeastern University, 2003), pp. 553-570.

Kyushu Imperial University was established through the merger of the University of Engineering, Kyoto Imperial University and Fukuoka Medical University. Its medical college originated from the Fukuoka County Hospital which was founded in 1877. On July 1st 1879, Fukuoka Medical School was established. It was then abolished in August 1887 until April 1st 1888, when the Fukuoka Hospital was set up. Because of the increasing number of secondary schools in Japan, the number of middle school students increased, which inevitably led to an increase in the number of higher education institutions. However, Japan only had two imperial universities, Tokyo and Kyoto, and the two were unable to meet the needs of students. Thus, in 1902, Fukuoka Medical University was established. In 1911, Fukuoka Medical University and Kyushu Imperial University merged to set up Kyushu Imperial University. In 1919, after the Imperial University Order, the sub-university changed its name into the Department of Medicine and the Department of Engineering and the Kyushu Imperial University Department of Medicine was finally established.¹⁰

Hokkaido Imperial University was founded in 1918 as one of the six imperial universities mentioned. It was Japan's fourth imperial university. Its medical department originated in 1868 and became a medical school in 1873, but was only maintained for a year. Later, local residents and physicians were eager to rebuild the medical school. In 1912, a physician of Sapporo District convened a meeting in Hokkaido and decided to establish Hokkaido Medical College. On April 1st 1919, following the Imperial University Order, they set up a medical university, with internal medicine, surgery, anatomy, physiology, medical chemistry, pathology and other subjects. In 1921, an affiliated hospital was established.¹¹

¹⁰ *Kyushu University seventy-five year history: historical data volume*, ed. by Kyushu University seventy-five years History Compilation Committee (Fukuoka: Kyushu University press, 1989), pp. 3-12.

¹¹ *Hokkaido University History: medical department*, ed. by Hokkaido University (Tokyo: Gyosei, 1980), pp. 529-538.

Among the six imperial universities, the Osaka Imperial University was the last one to be founded. The school was built in 1931 in order to comply with the Comprehensive University to Osaka Advocate. During this time, there was no comprehensive university in Osaka, so many people wanted to build a university there. The medical department originated from the Osaka Hospital, which the Ministry of Education built on February 2nd 1869. In 1870 the Ministry of Education transferred the management of the "hospital" to Osaka Prefecture. In 1872, Japan began reforming schools and closed the hospital in January 1888 with the establishment of Osaka Medical School and its affiliated hospitals. In October 1903, Osaka Medical School was renamed the Osaka Prefectural Higher Medical School, and it set up undergraduate degrees and two kinds of courses. On October 28th 1915, Osaka Prefectural Higher Medical School was officially renamed Osaka Medical University. In 1919, Japan implemented the Imperial University Order, and Osaka Medical University was established by merging with several specialised hospitals. Its affiliated university hospital was also set up around this time. The hospital was renamed the Osaka Medical University Hospital five years later. On May 1st 1931, Osaka Imperial University was founded and the Medical University was thenceforth known as the Medical Department.¹²

From the development of the medical departments of these six imperial universities, it is easy to see that the schools were changed and restructured in line with the reform of the Japanese education system. The original medical schools and medical universities were gradually transformed into the medical departments of imperial universities and finally became the institutions offering the highest level of medical education in Japan.

¹² *Osaka University: Twenty-Five Years*, ed. by Osaka University (Osaka: Tengyosha, 1955), pp. 225-231.

2.2 Statistics and group characteristics of Chinese students

In the early years of the Republic of China, the requirements for Chinese students studying abroad were very strict. The rules of selecting students to study abroad were announced by the Ministry of Education in 1916. First of all, in order to be selected in China, the applicant needed to meet one of the following conditions:

1. They must be a national university professor or associate professor for more than two years.
2. They must have served as a national specialised-school or high-school professor for more than two years.
3. They must have graduated from a specialised or standard high school abroad.
4. They must be a national college graduate.
5. They must have graduated from a specialised school or high school.

If the professors or students met the above terms, they also needed to participate in two examinations held by the Ministry of Education of the Province and the National Ministry of Education. Only if they met one of the first three qualifications, could they be exempted from the first examination or all examinations. The first examination evaluated Chinese and foreign-language levels. Successful applicants then went on to take the second examination. The second examination was held by the Ministry of Education, and it included Chinese and foreign-language oral examinations. Domestic and foreign language tests depended on the country and the subject. The test results depended on the academic performance in the past years.¹³ Once they passed all the examinations, the candidates were eligible for admission to the school.

The selection process of the imperial universities was also rigorous in Japan. Let us consider the admission rules of Kyoto Imperial University for example. Kyoto Imperial

¹³ Compare: *China's modern education history compilation*, p. 400

University admitted students once a year. High school or university preparatory graduates could enter their favourite affiliated university to study; the enrolment number was determined based on the sub-disciplines. When the number of applicants exceeded the required number of students, only temporary enrolment was allowed based on a selection test. Students were enrolled according to the score. Students who had already taken the test previously no longer needed to take the entrance examination. Students who did not pass the examination but had the qualifications could participate in the selection exam ahead of time in next year's admission, but they still had to meet the requirements of the examination. Students who wished to take the entrance exam would submit their application before June 15th, although some of them would be able to apply after June 15th. Candidates were required to submit a copy of their household registration to prove their personal status and swear an oath after admission.¹⁴ After passing the examination, students would be eligible for admission to an imperial university.

From the analysis of *Chinese student lists* between 1927 and 1944, it follows that the six imperial universities enrolled a total of 318 Chinese students in medicine. Among them, Tokyo Imperial University accepted the largest number, a total of 170 students, accounting for more than half of the total number. The number in other schools was significantly lower, 51 students at Kyoto Imperial University, 16 at Tohoku Imperial University, 69 at the Kyushu Imperial University, 10 at Osaka Imperial University, and, finally, Hokkaido Imperial College, where only 2 Chinese students were enrolled. Because of the contemporary gender bias against women, imperial universities were not open to women until 1913.¹⁵ According to the gender indicated in the list, the number of women was small, a total of 25 students, only 7.8% of the total number. Accurate age

¹⁴ Compare: *Kyushu University seventy-five year history*, pp. 225-226.

¹⁵ In 1913, the Science University of the Tohoku Imperial University recruited three female students. They became the first female students in Japan to attend an imperial university.

data cannot be gathered, because not every edition of the list of students indicated the age of the students. According to the available statistics, the age of Chinese students ranged from 20 to 40 years of age, of which 20-year-old students accounted for the majority, but there were also a few 40-year-old students.

In addition, in terms of the place of origin, all the 318 students came from various regions of China, and the geographic distribution was wide. The following table is a summary of the distribution of the birthplace of Chinese students in the medical departments of six imperial universities.

Zhejiang	63	Guangdong	53	Jiangsu	36
Hebei	34	Fujian	31	Shandong	18
Jiangxi	15	Fengtian	11	Shanxi	9
Hubei	8	Henan	7	Anhui	5
Shanxi	5	Yunnan	5	Hunan	5
Guangxi	3	Sichuan	3	Kanto	2
Jilin	2	Liaoning	1	Zhili	1

From the above table, it is not difficult to see that the majority of students came from the southeast coastal areas of China, of which Zhejiang, Guangdong and Jiangsu have the largest number of students, almost half of the total number, 152, accounting for 47.6% of the total. The number of students from the inland areas was relatively small, and most of the distribution was in the Central Plains region or the northeast region, with no student from the northwest region. This situation seems to be due to the early development of south-eastern coastal areas and the openness of their society, along with higher levels of education. At the end of the Qing Dynasty, successive defeat in a series of wars led to a number of unequal treaties between China and the Western powers, and China was forced to set up treaty ports along coastal areas. Western powers

used these port cities to exploit China economically and to establish churches and new schools. The spread of Christianity and Western civilization to a certain extent promoted the development of modern education in China. After the Sino-Japanese War, China was forced to open up more cities from the coastal areas to the inland and southwest border areas. However, due to poor transportation in the southwest, the spread of western learning and social development was slow, so the number of students was also relatively small.

Regarding the educational background of the students, we can observe that 92 students graduated from Japan's schools, accounting for 28.9% of the total number. The following table is a statistical representation of the educational background of the students.

School / Department	Japanese graduation	(Percentage)	Chinese graduation	(Percentage)
Department of Medicine, Tokyo Imperial University	23	12.9%	147	87.1%
Department of Medicine, Kyoto Imperial University	38	72.5%	13	27.5%
Department of Medicine, Tohoku Imperial University	5	31.25%	11	68.75%
Department of Medicine, Kyushu Imperial University	19	26.1%	50	73.9%
Department of Medicine, Hokkaido Imperial University	2	100%	0	0%
Department of Medicine, Osaka Imperial University	5	50%	5	50%
Total	92	28.9%	226	71.1%

According to the statistical data, Kyoto Imperial University and Osaka Imperial University had most students with a Japanese educational background. Most of them came from the First High School and Second High School – a total of 66 students accounting for 75.9% of the total, and most of them graduated from the First High School. The majority of these students passed the selection process to become undergraduate

students of the imperial universities and their tuition fees were subsidized. Moreover, among the six imperial universities, there were 28 students who won a national scholarship, out of which 15 students graduated from a Japanese high school. Other students graduated from various medical schools in Japan. These students already had a medical foundation and were afterwards admitted to imperial universities. They continued their study for a postgraduate degree.

Out of the students who came directly from China, most graduated from the local medical school or the medical department of a comprehensive university. Among these students, the largest number entered a specialised department. After studying a professional subject they would return. In this group, self-funding was common and only a small number received official scholarships or subsidies. Most of the students on national or provincial scholarships graduated from Peking University.

2.3 Course settings and subject content

The medical departments of imperial universities underwent more than 100 years of development, their medical teaching system was mature, and the curriculum was also very comprehensive. Kyoto Imperial University and Kyushu Imperial University left the most detailed course information. From the sources, we can accurately determine the amount of lessons per school year and then analyse and compare the data. As the medical department of Kyushu Imperial University was formerly Fukuoka Medical University, and Fukuoka Medical University was a division of Kyoto Imperial University, the school curriculum of these two schools is basically the same. I will therefore take the curriculum of Kyoto Imperial University as the main reference.¹⁶

The curriculum of the Medical Department at Kyoto Imperial University (This

¹⁶ Compare: *Kyoto University century history*, pp. 481-482.

curriculum was made in 1904 for undergraduate students):

	First academic year			Second academic year			Third academic year			Fourth academic year		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Anatomy	13	10	10									
Anatomy practice		12		12								
Histology		2	2									
Organizational practice			6									
Regional anatomy					2	2						
Physiology	4	5	5									
Medical chemistry	3	3	3									
Medical chemistry practice			6									
Viviparity		1	1	2								
Pharmacology				3	3	3						
Pharmacy practice					(6)							
Prescription					1	1						
General pathology				6								
Pathological theory					4	4						
Pathological anatomy practice						6	2					
Pathology practice					4	4						
Diagnostics				2	2	2						
Diagnostic practice							(6)	(6)	(6)			
General surgery					6	6						
Internal medicine theory				4	4	4	4	4	4			
Bandaging practice					2	2						
Clinical medicine							4	4	4	4	4	4
Surgical theory							2	2	2			
Surgical clinical notes							6	6	6	6	6	6
Gynaecology							1	1	1			
Obstetrics							2	2	2			

Obstetrical model exercise								2	2					
Hygiene							3	2						
Microbiology practice								4	4					
Psychiatry and clinical notes										2	2	2		
Paediatric science and clinical notes										2	2	2		
Otolaryngology and clinical notes										2	2	2		
Dermatology: clinical and scientific lectures										2	2	2		
Clinical obstetrics and Gynaecology										2	2	2		
Clinical ophthalmology										2	2	2		
Ophthalmology							2	2	2					
Machine usage and ophthalmoscope examination method								2						
Forensic medicine										2	2	2		
The practice of vaccination										1	1	1		
Surgical practice											2	2		
Clinical notes on external patients	Internal medicine						(6)	(6)	(6)	(6)	(6)	(6)	(6)	
	Surgery						(6)	(6)	(6)	(6)	(6)	(6)	(6)	
	Obstetrics Gynaecology									(6)	(6)	(6)	(6)	
	Department of Paediatrics									(6)	(6)	(6)	(6)	
	E.N.T. Department									(6)	(6)	(6)	(6)	
	Skin toxicity										(6)	(6)	(6)	(6)
	Ophthalmology Department										(6)	(6)	(6)	(6)
Total	19	33	33	29	34	34	44	49	45	67	69	69		

Kyoto Imperial University Medical Department mandates four years of study, with each

school year divided into three semesters. The first semester lasts from September till December, the second semester from January till March and the third semester from April till July. From the content, we can see that the medical curriculum is very comprehensive and wide-ranging, encompassing both basic medical theory and specialized theory as well as clinical practice. The total number of hours at the Department of Medicine is 525, of which 217 are devoted to the internship course, accounting for 41.4% of the total hours.

The first term of the Faculty of Medicine offers a fundamental medical course, which includes subjects such as anatomy, medical chemistry and physiology, spanning a total of 19 hours. Anatomy is assigned the largest number of hours, a total of 13. The workload in the second and third semesters increases significantly, with six courses, 33 hours, and more internships than in the first semester. In the second year, the course is based on specialised lectures, such as pathological anatomy, general medicine, general surgery and other subjects, which are more professional than in the first year.

Kyoto Imperial University enjoys a major advantage due to its affiliated hospitals, so it could set up many internships in the third and fourth years. During internships, students were divided into groups to implement a group learning system. The curriculum for the third year mainly included lectures and internship courses, such as those on internal medicine, surgery, gynaecology or ophthalmology. The design attached great importance to the combination of theory and practice, so that students would apply their knowledge. The number of courses in the school year increased to 12-14, mainly because there were more internship subjects. In the fourth year, there were external clinical studies to enable students to gain clinical practice and hands-on experience as early as possible. The fourth year was the most demanding, with a total of 16-17 courses, most of which were held in outpatient clinics.

Chinese students went through a strict selection process and only those with the

best results were sent to Japan. They attended the imperial universities in Japan to receive advanced medical education and learn about new medical concepts. During the time they spent there, they witnessed the profound changes brought about by Western ideas and the advancement accomplished by Western science and technology. They became aware of certain disadvantages of the medical methods in their motherland. For this reason, most of them chose to return after graduation. They believed that the transmission of modern knowledge and the dissemination of progressive ideas were the only way to change the feudal system of China.

3. The Communication of Western Medicine

After returning, Chinese medical students mostly took up jobs related to cultural and educational activities, and they made great contributions to the modernization of the Chinese medical system. Upon their arrival, most of them chose to set up medical magazines, write professional articles in order to propagate Western medical concepts, establish hospitals and manage them in novel ways, or to work for government agencies to reform local health systems.

3.1 The translation and publication of medical articles

At the beginning of the 20th century, there was a climax in the translation of Japanese books, most of which were translated by students who studied in Japan. They hoped this would be a means to circulate what they perceived as a more advanced culture. In line with this, the first translation group, the Translation Compilation Agency, claimed: "It is the duty of our colleagues who went to other countries to advance civilization." This group of Japanese medical students translated a number of Japanese books, which were responsible for the introduction of Western medical technology.

Liu Maochun (1901-1980) was born in Shangrao County, Jiangxi Province. In 1915,

he moved to Japan with his brother and studied there. During the summer vacation, he went back to visit their relatives. During their stay in Nanjing, his brother fell ill and the Japanese doctor refused to treat him, which resulted in the brother's death. Lio Maochun then determined to study medicine in order to change the circumstances in China. In August 1919, he entered the Sixth High School in Okayama. In 1922 he was admitted to Tokyo Imperial College, Department of Medicine. He entered the graduate school in 1929 and trained at the Department of Dermatology and the affiliated hospital. In addition, he also translated many medical books that were published in domestic medical journals.¹⁷ In *Tongren Medical Journal* he translated and published a large number of articles by Japanese scholars. *Tongren Medical Journal* was a medical magazine of the Tongren Association. It was set up in 1906 and stopped coming out in 1944. Examples of its publications include:

Chinese Title	English Title	Original writer	Volume
《乳头状及溃疡状慢性脓皮症》 (临床讲义)	Papillary and ulcerous chronic pyoderma (clinical handouts)	Tooyama Ikuzou Nagashima Tuguo	Vol. 2, No. 7, 1929
《昆虫刺伤症》 (临床讲义)	Insect stabs (clinical handouts)	Asahi Kenkichi Kimura Kenji	Vol. 3, No. 11, 1930
《软性下疳与沃度仿姆》	Soft ulcers, moles and iodoform	Kurita Tokuzo	Vol. 3, No. 11, 1930
《安知必林疹》	Antipyrine Exantheme	Dohi Shouji Kawara Yohei	Vol. 3, No. 11, 1930
《丹毒之硫苦注射疗法》	Euphorbia sulphur injection	Sameshima Ryusui	Vol. 3, No. 12, 1930
《用规那为阵痛推进剂》	The use of quinine as labour propellant	Kato Denzaburo	Vol. 3, No. 12, 1930

In the following year's *Tongren Medicine* magazine, Liu Maochun once again translated a large number of articles. The titles included:

¹⁷ *Shangrao District Health and the tenth series: medical figures*, ed. by Xu Maoliang (Hefei: Huangshan Press, 1994), pp.367-368.

Chinese Title	English Title	Original writer	Volume
《Thromburin 对于肺出血之应用》	Application of thromburin for pulmonary haemorrhage	Nagai Shuta	Vol. 4, 1931
《躁郁病顿挫疗法之复试》	Re-testing of the treatment for manic-depressive psychosis	Obata Hiroshi	Vol. 4, 1931
《肝脏内胆石》	Liver gallstones	Matsuo Iwao Hirakawa Kimiyuki	Vol. 4, 1931
《猩红热自家血液注射疗法》	Blood in scarlet fever injection therapy	Tashiro Shigeru	Vol. 4, 1931
《慢性吗啡中毒症之胃肠障碍》	Gastrointestinal disorders in chronic morphine poisoning	Morinaka Kiyoshi	Vol. 4, 1931
《皮肤色素异常》	Skin pigment abnormality	Okamura Tatsuhiko	Vol. 4, 1931
《肝静脉血栓》 (临床讲义)	Hepatic venous thrombosis (clinical handouts)	Iwai Joshiro	Vol. 4, 1931
《巴毕那儿中毒之疗法》	The cure for pavinal poisoning	Oda Shunzo	Vol. 4, 1931

Liu Maochun also translated *Pharmacology* written by the Japanese medical professor Hayashi Haruo, making important contributions to the development of China's medical industry. During the Sino-Japanese war, he came back to China, and worked in Jiangxi Provincial Hospital as its director. He also taught in Jiangxi Medical School. During this time, he wrote "The Division of Dermatology", which became the first paper in this field. After the war, he set up the first department of dermatology and urology in China and invented a new way to cure dermatological conditions. In 1951, Liu Maochun wrote *Clinical Dermatology*, a rare and precious monograph in Chinese dermatology.

Huang Bingding (1901-1938), was born in Fujian province. In 1930, he studied at Tohoku Imperial University, Department of Medicine, and he returned to China in 1933. In 1928, Huang Bingding published an article about mycology in the *Medical Journal of the Republic of China*. In 1931 he investigated patients with scald head in Xiamen, Fujian and other places, and published articles in Japanese and European journals, which was the earliest research of this disease in China. From 1932 to 1933, horse baldness was

found in Japan Sendai area. Huang Bingding joined the investigation and conducted the study. His article "About the Epidemic of White Ringworm in the North-Eastern Region" was published in Japanese academic circles, causing a huge response as it was considered the newest discovery in Japan.

In addition, Lin Rongnian and Zhuang Zhaoxiang published a large number of medical articles. Lin Rongnian had studied at Tohoku Imperial University and worked in the affiliated hospital. He translated and published the many articles in the *Tongren Medical Journal*. Between 1931 and 1934, he published articles about Kang's syphilis subsidence and erythema lupus, which featured innovative findings in dermatology. Graduated from Kyushu Empire University, Zhuang Zhaoxiang wrote the Chinese medical masterpiece "Comments on *Compendium of Materia Medica*".¹⁸ Zhuang Zhaoxiang made great contributions to the development of Chinese medicine.

3.2 Join a new school, join the medical education

For the development of modern medical education in China the translation of books was an important way to communicate. However, in order to cultivate and educate the younger generation so that they could understand and master Western medicine, more students needed to pursue formal medical education. Only in this manner was it possible to promote medical knowledge and to enable more people to take advantage of the new medical methods.

In the Chinese medical system, Chinese medicine naturally dominated, so that most Western medical schools in China were created after the Revolution of 1911. The first one was founded on June 1st 1911 and named the Zhejiang Provincial Medical College.

¹⁸ *The development of overseas Chinese doctors and the development of Chinese medicine in Hong Kong*, ed. by Yu Yangchuan, Liu Xiaobin (Sixth Medical Literature Society of Chinese Society of Medicine and the Xin'an Medical Forum, August 2014), pp. 54-56 .

Its main founders were returning scholars from Japan. According to the statistics of April 1935, the school had a total of 24 professors, out of which nine graduated from the Imperial University.¹⁹ On October 26th 1912, for the first time the National Government relied on its own resources to create a school of Western medicine – Beijing Medical College. The faculty of the school contained a large number of medical students who had studied in Japan. The headmaster of this school, Erhe Tang, graduated from Japan and was a great authority in Chinese medical education. According to the record of Nagaisen in August 1936, the school had a total of 20 professors, including four Kyushu Imperial University graduates and one graduate from Kyoto Imperial University.²⁰

In 1931, Liu Maochun decided to return home to work in Jiangxi Provincial Medical College as a teacher. Jiangxi Provincial Medical College was established in 1921. Its founder He Huankui was also a medical student who had studied in Japan. After the victory of the Anti-Japanese War, he stayed in Jiangxi Medical College and served as vice president of the college.

Chen Lijie (1906-1984) was born in Hubei province. He was sent to Japan to study at an early age. In December 1926 he studied at the First High School in Japan. In 1931, he entered Kyoto Imperial University to study medicine and worked in the affiliated hospital. He returned in December 1937. During the Anti-Japanese War, he travelled all over China and taught at the North-Western University and Fujian Medical College. Chen Lijie has a strong language foundation and professional medical knowledge. He not only taught and educated people, but was also an innovative medical practitioner. He used his medical experience to write handouts and personally helped students to learn. In July 1946, he was invited to Taiwan and taught at Taiwan University.

¹⁹ Ministry of Foreign Affairs Diplomatic Historical Materials Collection: "Report on the Staff and Workers of Zhejiang Provincial Medical College", *Oriental Culture Business Reference Miscellaneous School and Student Relations*, Vol. 5, pp. 303-306.

²⁰ Nagaisen: "Republic of China Medical Sector Interview", *Tongren*, October 1936, p. 102.

3.3 The creation of new hospitals, the reform of the medical system

The main reason for the rise of Western medicine in China was the establishment of a medical system in agreement with the demands of Western medicine, which included the cultivation of medical talents, the establishment of medical and health administration and modern hospitals. The modern hospital was perhaps the most important accomplishment: when people benefitted from Western medicine, they eventually accepted it and started believing in it. This trust in Western medicine finally allowed it to establish a firm foothold in China.

On the eve of the victory of the Anti-Japanese War, Chen Lijie went to Hangzhou with his wife, where he became the president of Hangzhou Hospital and professor of Zhejiang Provincial Medical College. During the 1950s, Chen served as the director of Hangzhou Municipal Health Bureau. During the war he went to the front to resist US aggression and to aid Korea, saving many lives as a volunteer. In 1955, Chen Lijie was elected vice mayor of Hangzhou, in charge of culture, education and health. During this year, the outbreak of infectious diseases decreased significantly. Around the same time, Hangzhou was proclaimed a national model city in terms of health.

Similarly, in 1933, Huang Bingding returned home to establish a clinic in Fujian. He was a noble doctor with professional medical skills and often treated poor patients for free, alleviating the pain of countless people. In 1935 the Fujian businessman Hu Wenhu made a donation to the Fujian government and designated it specifically for the establishment of hospitals. The Fujian government appointed Huang Bingding to preside over this matter. Huang Bingding worked carefully, meticulously and honestly, and, in 1937, he finally completed his project and served as the first president of the hospital.²¹

You Xianhang (1900 - 1995) was born in Shanxi province. In 1930, he graduated

²¹ Lin Yuanzhu: "30 years of outstanding talent in dermatology – Dr. Huang Bing Ding", *Chinese lepers skin disease magazine*, No. 25, Volume 2 (2009).

from the National Peking University and was committed to the study of infectious diseases. In 1931 and 1932, cholera and plague broke out in northern Shanxi region. You Xianhang joined the medical team and went to the infected area, taking measures to fight the disaster. Between 1933 and 1937, he entered the Tokyo Imperial University with government funding, which enabled him to receive a doctoral degree in medicine. After returning, he worked in Shanxi Provincial Department of Infectious Diseases and was committed to improving the health status of Shanxi, thereby reducing the frequency and intensity of infectious disease outbreaks. In 1941 he set up the Hong Chi Clinic, which continued to promote his noble medical ethics and professional medical skills. In 1946 he returned to his hometown and continued to practice medicine there.

In 1930 Lin Rongnian worked in Hangzhou Hospital and served as the director of dermatology. Subsequently, he became the director of dermatology in Fujian, Xiamen, Hangzhou. In 1956, he worked as the director of Xiamen City Hospital. Wang Bojun was born in 1903 and graduated from Henan University School of Medicine in 1935. He entered the Kyushu Imperial University School of Medicine. Guo Moruo is an alumni who specialized in abdominal surgery. He later entered the Department of Medicine to teach undergraduate students. After the war, he served as the dean of Hebei Provincial Hospital.

4. Conclusion

Most of the students in this study were worried about medical conditions in China during the late Qing Dynasty, the chaos in the Republic of China, and the subsequent war of resistance against Japan. For this reason, they chose to go abroad to study medicine with the dream of trying to improve China's medical institutions. They returned to become the leading group of Western medical professionals. Their efforts included the translation and publication of expert medical books that promoted modern theories as well as the

foundation of medical schools where new subjects were created. They used their experience to write lectures and promote medical education; or they became government officials who implemented new policies and regulations to improve the health environment in cities. The activities of these students played a major role in the popularization of Western medicine, rapidly improving China's level of medical service.

In short, Chinese medical students in the first half of the twentieth century often went abroad to study Western medicine in Japan. After returning home, they worked hard to improve medical assessment in China. This group of professionals disseminated recent medical findings and played a great role in the establishment of modern Chinese medicine. Their efforts proved to be of inestimable significance in inspiring and modernizing the Chinese society.

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