

Chinese Military Students at the Training School of the Japanese Land Survey Department, 1904-1911

Shigeru Kobayashi (Osaka University)

Rie Watanabe (Yamagata University)

It has been pointed out that modern cartographical technology was transferred between Japan and China from the middle of the 19th century to the beginning of the 20th Century. In the latter half of the 19th century, Japanese surveyors learned modern cartography not only from Western engineers but also from the Chinese versions of surveying books (Takagi 1940, Fujii 1964)¹. At the beginning of the 20th century, Chinese military students were admitted at the Training School (修技所) of the Japanese Land Survey Department (陸地測量部) and studied cartographical technology. At the same time, Japanese surveyors were invited to China for the instructions on map making technology and trained Chinese youth at military schools (《中国測繪史》編輯委員會編 2002: 522-524, Watanabe and Kobayashi 2004). The purpose of this paper is to make a summarized report of the

education of Chinese military students and their career after leaving the Training School of the Japanese Land Survey Department. It is noteworthy that from the graduates of this school, leaders of the Chinese Revolution of 1911 appeared besides leading cartographers in new Chinese army.

1. The Training School of the Japanese Land Survey Department

The Japanese Land Survey Department was established in 1888 as an independent department under the General Staff Office of Japanese Army after the repeated reorganization. Its task was the preparation of maps for military use concerning Japan and neighboring countries. However the maps of the interior except strategic zones were opened for civilian use since 1887. The Training School of the department was established formally in 1889 and the first students completed the course in 1890.

Under the influence of the Westernization Movement (洋務運動), Chinese students increased in Japan after the Sino-Japanese War (1894-1895). They were admitted not only in universities and technical schools but also in schools such as military academy and the Training School of the Japanese Land Survey Department. For the students to be admitted in military schools, a preparatory school called Shinbu Gakko (振武学校) was established in 1903 under the agreement between Chinese envoy and Japanese government. For the admission of this

¹ They are translations of the Chinese translations of the English originals. The original of Kogun Sokukai (行軍測繪) and Kogun Sokuzu (行軍測圖) is the Chinese version of Lendy's *A Practical Course of Military Surveying including the Principles Topographical Drawing* (1864) prepared by John Fryer (傅蘭雅, 1839-1928) and 趙元益 (1840-1902) at the Jiangnan Arsenal (江南製造局) in 1973. That of Sokuchi Ezu (測地繪圖) is the translation of Frome's *Outline of the Method of Conducting a Trigonometrical Survey for the Formation of Geographical and Topographical Maps and Plans* (1862) prepared by Fryer and Xu Shou (徐壽, 1818-1884) at the same institution. The translation of Chinese versions was easier for Japanese surveyors than direct translation of English originals in this period (Kobayashi and Watanabe 2008).

school, students were required to submit letters of recommendation in order to prevent the entrance of youth who participated in revolutionary movements.

Only the graduates of the Shinbu Gakko were admitted to the Training School. The requests for admission of Chinese students were submitted from Chinese envoy to Japanese Army through the Ministry of Foreign Affairs. The authors compiled the list of students from the rolls of names of applicants with their native places attached to these documents in the Diplomatic Record Office, Japanese Ministry of Foreign Affairs and the list of

graduates of the Training School. Souvenir photographs of the students in the possession of Osaka University were also referred (Watanabe and Kobayashi 2007). 126 students were admitted from 1904 to 1909 (Table 1).

In the Training School, students admitted chose one of three courses: the Trigonometric Survey (三角科), the Landform Survey (地形科), or the Drafting and Printing (製図科). Fundamental subjects of cartography such as geometry (幾何学) and Trigonometry (三角法) were included as common subjects (Table 2).

Table 1: The list of Chinese Students at the Training School

1 期	氏名	氏名	担当	省別	氏名	担当	身地(派遣省)	氏名	出身地
	林調元				蘇振中	三角科	奉天	張履乾	河南
	游壽宸				解德鄰	三角科	直隸(幾輔)	師端章	河南
	氏名	貫籍	費別		高鐘清	三角科	奉天	陳樹棠	河南
	林肇民	福建	私		劉楷	三角科	奉天	張彥臣	山東
	王凱成	浙江	浙江官		孫廣庭	地形科	奉天	趙慶瀛	直隸
	陳之驥	直隸	私		王瀛蛟	地形科	河南	王廣言	江西
	石鐸	浙江	浙江官		張瑞麟	地形科	安徽(湖南)	崔振基	直隸
	高兆奎	湖南	湖南官		憑舜生	地形科	奉天	何厚偉	山東
	鍾體乾	四川	四川官		和順	地形科	奉天	文錫宸○	—
	鄒致權	四川	私		雷龍錫	地形科	湖北(奉天)	陳珽	湖南
	譚學夔	廣東	廣東官		毛鐘成	地形科	奉天	張宗福○	—
	汪鎬基	浙江	私		劉器鈞	三角科	湖北高等科へ進学	普治	北京
	陳毅	浙江	私		曾昭文	地形科	陸軍部	李濟川	直隸
	張炳燦	湖北	湖北官		潘耀珠	地形科	雲南	鐘毓靈	江西
	殷承燾	雲南	雲南官		趙熬△	地形科	雲南	王耀光	直隸
	葉秉甲	湖北	湖北官		德楞園	地形科	陸軍部	王峯	江西
	袁宗翰	湖南	湖南官		黃鄂	地形科	湖南	歐陽權	湖南
	王文鄉	湖北	湖北官		張裕文	地形科	湖南	董漢川	直隸
	舒和鈞	湖南	湖南官		井介福	地形科	奉天	韓復達	直隸
	涂永	四川	四川官		興宗	地形科	山西	訥全	北京
	吳和詔	安徽	南洋官		章煥琪	製図科	南洋	增榮○	—
	王孝鎮	福建	私		憑家驄	地形科	山西	盛業	盛京(=現:奉天)
	齋琳	湖南	湖南官		郭延	地形科	山西	劉錫田	直隸
	黃瑞蘭	湖北	湖北官		邱丕振○		退学	任天錫	直隸
	袁華選	湖南	私		陳陸章	製図科	陸軍部	張泰昌	直隸
	姜登選	直隸	私		文蔚齋	地形科	陸軍部	岳亮	北京
	陳錦章	湖北	湖北官		唐凱	地形科	奉天	文中	北京
	陳其美○	浙江	浙江官		文奎	製図科	陸軍部	張穆駿	直隸
	黃篤謐	湖南	湖南官		李向榮	地形科	奉天		
	何鴻翼○	四川	雲南官		李偉旆	製図科	山西		
	張■○	貴州	私		張武	製図科	湖南		
	吳廣仁	四川	雲南官		李兆綸	三角科	陸軍部		
	李正鈺	湖北	私		王炳潜	三角科	湖南		
	楊振鴻○	雲南	雲南官		彭程萬	三角科	陸軍部		
					俞應麓	地形科	湖南		
					陳嘉榮	製図科	奉天		
					史瓏臣	地形科	湖南		
					霍色哩○		退学		
					郭延康	三角科	山西		

○は、以下の東洋文庫蔵の資料には記載がなく、渡辺、小林(2004)で利用した外務省資料にのみ記載がある人名を示す。△は、以下の東洋文庫蔵の資料にのみ記載がある人名を示す。陸地測量部『測量部修技所清国学生関係書類』陸地測量部、1905-1909。東洋文庫所蔵：請求記号 6938。

Table 2: The curriculum of the Training School

三角科	地形科	製圖學
	算術	
	初等幾何學	
	平面幾何學	
	立體幾何學	
	平面三角法	
	球面三角法	
	高等代數學	
	圖畫學	
	製圖學	
	圖繪學	
解析幾何學	解析幾何學	物理學
微分積分學	最小方數法	化學
最小方數法	三角測量學	三角測量學
地形測圖學	地形學	地形測圖學
量地學	地形測圖學	彫刻學
三等三角測量	地形圖根測量	印刷學
二等水準測量	5000分 1 地形測圖	印刷術
二等三角測量	10000分 1 地形測圖	寫真學
一等水準測量	20000分 1 地形測圖	寫真術

資料：明治42年測量部修技所清國學生關係書類「第4期清國學生日課表」清國學生監理委員作製 東洋文庫No.6938。



Fig. 1: Field trip in Suwa, Nagano Prefecture in 1909



Fig. 2: The souvenir photo of the graduation of students in 1910

Besides, field trips were organized for training. Fig. 1 is a souvenir photo of five students (陳嘉樂 [奉天省] · 李偉旆 [山西省] · 章煥琪 [南洋] · 陳陸章 [陸軍部] · 張武 [湖南省]) admitted in 1907. All of them studied in the course of drafting and printing.

Another souvenir photo was taken at the graduation of students in 1910 (Fig. 2). At the center in the front row, the head of the Land Survey Department, the major General Okubo is found. Two men with Chinese cloths beside Okubo are the supervisors of Chinese students (陸軍學生監督: 姜思治; 盧紹鴻). The other men with swords in the front row are executive army officers of the Department.

Technical experts of the Department are found behind them. Two ranks among experts are observed: the surveying engineers (測量師) and the surveyor registered (測量手). Young men with school cap are the Chinese students. The students seen in Fig. 1 are found owing to the memo written on the back of the photo (Fig.3).

The education of Chinese students at the Training School of the Japanese Land Survey Department came to an end after the beginning of the Chinese Revolution in 1911, because the students hoped to return to China and to participate in political and military activities.

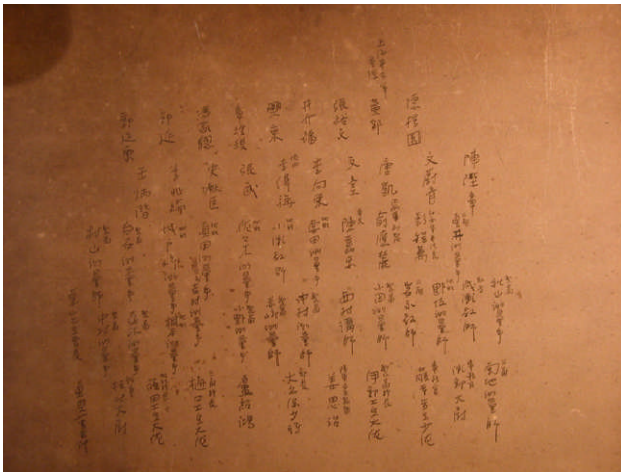


Fig. 3: The back of the souvenir photo of the graduation of students in 1910

2. The Career of Students after Leaving the Training School

Concerning the career of Chinese students after leaving the Training School, the record on the back of souvenir photos (Fig. 3) deserve to be scrutinized. On the right of the names of some students, their positions in the revolutionary army in 1911 are written. In the case of Huang Hu (黄郛, 1880-1936), the note ‘上海革命軍參謀’ is observed. He played an important role to organize young Chinese students at the Shinbu Gakko. At the time of the Chinese Revolution in 1911, he was the chief of the staff in the troops of Chen Qimei (陳其美) in Shanghai. It is well known that Huang Fu was actively involved in the political arena of the Republican China subsequently (Boorman et al. ed. 1968: 187-192). . On 彭程萬 (1877-?), the note is ‘江西軍參謀長’. He was appointed as the governor of Jiangxi Province by Sun Yixian (孫逸仙) (徐主編, 1991: 1092). Concerning 俞應麓 (1878-1925), the comment is ‘江西軍都督’. He also took a part in military affairs in the Jiangxi Province. Similarly, in the souvenir photo of the graduate in 1909, the note on 曾昭(紹)文 (1883-1913) is ‘黃興ノ(之)副官’. He was a senior adjutant of the Huang Xing (1874-1916) in Wuhan.

These notes seem to have been written by a

Japanese staff of the Land Survey Department and are not always correct. However they suggest that Japanese staffs were interested in the careers of Chinese graduates in relation to the Chinese Revolution in 1911.

Concerning the political activity of Chinese students, it should be noted that the name of Chen Qimei (陳其美) is found in the list of the students admitted in 1905. On his stay in Japan, it is said that he studied police law and enrolled in a military school (東斌学校) since 1906 (Boorman et al. ed. 1967: 163-165, 徐主編, 1991: 1029). Taking this fact into consideration, his activity in Japan in those days will be another topic of research.

The careers of Chinese students after leaving the Training School in map making are traced in Table 3. They seem to have had been appointed as the teacher of the surveyors’ school and surveying institutions of their home provinces soon after returning China.

In addition to the students’ activities in cartography, their position in the Land Survey Commission (經界評議委員會) after 1915 should be mentioned. The government in Beijing organized this Commission in order to establish modern land ownership and to prepare cadastres and cadastral maps. In that commission, six graduates of the training school (陳錦章[參謀部測量局長], 陳嘉樂[參謀部製図局長], 劉器鈞[參謀部第六局第一科長], 李正鈺[參謀部第六局第二科長], 潘協同[參謀部第六局第三科長], 李蕃[陸軍測量學校長]) were appointed among 30 members. Although the plan of the commission was failed soon after the start of the experimental trial, these cartographers seems to have had been expected to play an important role in the cartographic works of land survey (Sasagawa 2002: 23-32).

The transfer of map making technology between Japan and China by the Chinese students visited Japan and the Japanese surveyors dispatched to

China looks like an ephemeral episode because of its short-lived nature. However the technology transferred ingrained in China. Comparing the

topographical maps made in the Republic of China with those of contemporary Japan, we have found similarity in several important points.

Table 3: The careers of Chinese students after leaving the Training School

氏名	担当	年次	中国帰還後の動向
李 蕃	三角科	3期生	中央陸軍測量学校校長
劉 器鈞	三角科	3期生	中央陸軍測量学校教育長(1931年~32年・1940年~42年) 中央陸地測量学校(前中央陸軍測量学校)校長(1932年)
黄 榮綬	製図科	3期生	広東測繪学堂(1909年)
王 慶舛	製図科	3期生	北京測繪学堂(1909年)
李 沛	地形科	3期生	清国陸軍部(1909年)
焦 埴	製図科	3期生	奉天測繪学堂(1909年)
黄 鄂	地形科	4期生	軍諮府測量部地形科科員
井 介福	地形科	4期生	山西陸軍(地)測量局局長(1921年)
彭 程舊	三角科	4期生	江西省測量局三角科科長・測繪学堂教職
俞 應籟	地形科	4期生	江西省測繪学堂学監
張 瑞麟	地形科	5期生	安徽陸軍(地)測量局局長(1913年)
楊 丙	(除名)	5期生	陸軍測量局(後に參謀本部第六局)局長(1912年)
憑 舜生	地形科	5期生	東三省陸軍測量局局長(1923年)・黒龍江分局局長(1924年)
雷 龍錫	地形科	5期生	陝西陸軍測量局局長(1913年)
師 端章		6期生	河南陸軍測量局局長(1912年)
張 彦臣		6期生	山東陸軍測量局局長・山東陸軍測量学校校長(1911年)

資料:《当代中国》双書編輯部『当代中国的測繪事業』中国社会科学出版社, 1987, 11-17頁。

中国測繪史編輯委員會編『中国測繪史』中国測繪出版社, 1995, 233~246頁。

陸地測量部『測量部修技所清国学生関係書類』陸地測量部, 1905-1909. 東洋文庫所蔵: 請求記号 6938。

Bibliography

- 《中国測繪史》編輯委員會編 2002.『中国測繪史(The History of Chinese Surveying and Mapping)』北京: 測繪出版社.
- 徐友春主編 1991『民国人物大辞典』石家莊: 河北人民出版社.
- Boorman, H.L. and Howard, R.C. (ed.) (1967) *Biographical Dictionary of Republican China, Volume 1*. Columbia University Press.
- Boorman, H.L. and Howard R.C. (ed.) (1968) *Biographical Dictionary of Republican China, Volume 2*. Columbia University Press.
- Fujii, Y. 1964. Trigonometric survey of the Ministry of Interior. *Japanese Studies in the History of Science*, 70: 72-83 (in Japanese).
- Kobayashi, S. and Watanabe, R. 2008. The transfer of cartographic technology in modern East Asia: A perspective from Japan. In Senda, M. (ed.) *The Geography in the Age of Asia: Tradition and Change*. Kokon Shoin, 145-458. (in Japanese)

- Sasagawa H. 2002. *A Study of the History of the Land Administration in Rural Area of Republican China*. Tokyo: Kyuko Shoin. (in Japanese)
- Takagi, K. 1940. An outline of the history of cartography in China. *Journal of Geography* (Tokyo Geographical Society), 622: 577-588. (in Japanese)
- Watanabe, R. and Kobayashi, S. 2004. A review on some source materials concerning the transfer of map making technology between Japan and China in the beginning of the 20th century. *Journal of the Japan Cartographers Association*, 42-3: 13-28. (in Japanese with English abstract)
- Watanabe, R. and Kobayashi, S. 2007. A note on the list of the Chinese students studied at the Training School of the Japanese Land Survey Department. *Comparative Study of Cadastral Survey in Modern East Asia, News Letter* (Graduate School of Letters, Osaka University), 2: 102-109. (in Japanese)