

Patterns of Internationalising Higher Education and the Flows of Education Resources during the Late Qing Dynasty of China

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Abstract: During late Qing, neocolonialism was a serious phenomenon situated in the higher education, forcing universities to globalise and adopt foreign education patterns. Furthermore, there are also some outward flows of education resources, although there were more tints of inward flows of education resources. This paper aims to address two research questions: What are the patterns of internationalization in higher education institutions during the Late Qing Dynasty? To what extent, the higher education resources flow inbound and outbound during the Late Qing Dynasty? Based on the telephone interview with six professors of education history in China, it is found that as impacted by Western colonialism, Chinese universities showed a strong signal of globalisation in the late Qing. Meanwhile, some traditional teaching patterns and textbooks with Chinese characteristics were also used to stir the learning enthusiasm of local students. In the late Qing, inward/inbound flows of education resources were more evidenced than outward/outbound flows. This could be exemplified by some major sources of the textbooks used at universities. Specifically, the first source was the western teachers, who bought textbooks from the mother countries. The second source was many Chinese ambassadors to France and Britain, who sent back to China the original western textbooks. It is hoped that future study will focus on the patterns of internationalizing higher education and flows of education resources during Modern China.

Keywords: Higher Education Internationalisation; Globalise and Localise; The Flows of Education Resources.

1. Introduction: Research Background and the Significance of this Research

In the views of Xu (2021), since the late Qing dynasty, Western knowledge has been assumed as an important way to save China and make the country strong again. The higher education of China is hugely impacted and reformed by higher education practices in the United States, Germany, the Soviet Union. Particularly in 1840, the First Opium War occurred, because Japanese and Western imperial powers invaded China territories. Influenced by the education patterns of foreign countries, the ancient system of Keju was terminated by the Qing government during 1905. Therefore, Chen (2021) revealed that traditional institutions of higher education have “lost their viability and legitimacy. Chen (2024) and McKay (2024) agreed that for the purpose of national salvation, western knowledge has been delivered by newly built higher education institutions. Resulting from “self-strengthening movement” during the period of 1861–1895, the central government established the School of Combined Learning [Tongwen Guan] to provide education in specific domains to tackle the Western incursion. At the same time, classical academies that stayed for more than 1,000 years were transformed into colleges. In the 1890s, with the mindset of “keeping Chinese characteristics and adopting useful Western patterns [zhong ti xi yong],” provincial gentry and scholar-officials established the predecessors of modern institutions, such as Wuhan University, Peiyang University, and Shanghai Jiao Tong University. Judging from above discussion, both globalisation and localisation were adopted as the patterns of internationalising higher education in the

late Qing.

Implied by above studies, neocolonialism was a serious phenomenon situated in the higher education during the late Qing dynasty. As described by Schneider (2023), neocolonialism can be interpreted as a planned agenda of advanced countries to maintain their impacts on developing countries. In the domain of education, multiple practices would be implemented to achieve neocolonialism: use the foreign patterns of administrative structures to implement the management of a school; adopt the pedagogy and curriculum of Western countries; adopt English or other languages of previous colonial power as the tool of classroom instruction; and/or seek aid and technical assistance from foreign countries (Schneider, 2023). Although equity and diversity deserve to be pursued in global contexts, it is unlikely to achieve success by blindly importing Western administrative structures and pedagogies (Liu, 2020). Furthermore, duplicating Western education may impose a very negative influence on the host country, as its cultural influence and research capacity could be weakened by some of the imported norms and values. Therefore, there are also some outward flows of education resources, although there were more hints of inward flows of education resources.

Although previous literature has provided some insights into the late Qing, their findings are mostly concerned with higher education internationalisation in a broad sense. Moreover, there are still some information that is not included in online documents. Therefore, this research can create value by letting human participants tell whatever they know, for example, share the knowledge they get from offline sources. In addition, the research findings about the late Qing can

provide some inspirations for Chinese universities to internationalise their education practices. The positive practices of the late Qing can be maintained, while the negative aspects shall be avoided.

2. The Existing Relevant Literature

2.1. Strategic Values of Internationalisation

Laundon et al. (2023) argued that internationalisation refers to any systematic endeavours of responding to globalisation requirements and challenges in economic and social domains. Internationalisation is intended for enhancing the international profile of a higher education institution. It represents a process of incorporating global and intercultural aspects into higher education, regarding teaching, service and research functions of the institution. Driven by growing pressures, higher education internationalisation has become a large tendency. Internationalisation plays a crucial role in higher education because global labour markets, societies and economies have an increasing demand for graduates with employability skills. Tian et al. (2020) stated that there are a wide range of employability skills: multilingualism, communication, academic and professional knowledge, problem solving and professional research skills. It is essential to renovate education systems, because universities and colleges face many pressures to prepare skilled graduates required by international labour market. These institutions must adopt internationalisation concept in their missions of enhancing education quality. New strategies, policies and procedures need to be implemented for mobilising any efforts and actions towards the objectives.

2.2. The Patterns of Internationalisation

According to Liu (2020), Localisation represents the endeavours to implement higher education practices with Chinese characteristics, while globalisation means to assimilate, adapt and become inclusive, identifying and integrating the advantages of other countries. Past experience demonstrates that the higher education of China has faced many problems and obstacles during the process of "westernization". It is obvious that some western models cannot adapt to Chinese realities or contexts. For example, introducing and promoting the University District System turned out a failure. China is expected to develop dialogue with the outside world, and the outside world shall also respect China, regardless of the education history or the present. Internationalising education means to face, understand and integrate various countries, cultures, characteristics and systems. Extending the views of Liu (2020), Xu (2021) explained that a diversified trend shall also be exhibited by the development model of higher education. In any period, choices can be made among several routes: quit oneself and become another; maintain oneself and reject another identity; create a new scenario by integrating oneself and another. China is expected to create a brand of Chinese higher education on the path of internationalising, with a clear awareness about the external contexts. When interacting with the world, it is reasonable to establish an education system that is easy to be understood by the world. Based on equal negotiation, an open mindset can be held to adopt different internationalisation strategies, including inclusiveness, assimilation, adaptation. The advantages of other nations shall be absorbed and incorporated while carving out a new road that reflects both globalised trend and the distinctive

characteristics of itself (Xu, 2021). However, Woldegiorgis (2023) reminded that caution shall be taken to deal with the localization and globalisation of higher education. On one hand, localising cannot replace globalisation or serve as an excuse for being trapped in a backward system and refusing advanced education systems. On the other hand, globalisation should not exclude national characteristics or reject localization. A balanced development of higher education must be sought by negotiating the boundary between globalisation and localisation during the process of internationalising.

Starting from a different angle, Wu (2020) believed integration as another core pattern of higher education internationalisation. Integration is significant because a key goal of higher education is integrating all international students and scholars into the environments of campus living and learning. Thus, Mohanu et al. (2020) stated that internationalising higher education not only concerns with achieving compositional diversity of staff and students, but also concerns with enhancing their research and learning experience. Integration has multifaceted values for an individual, the institution, the nation and global community. Since increasingly more countries are making internationalisation an important objective for higher education and research development, it is necessary to evaluate the approaches to integrate international students.

In addition, Wu (2020) has developed a contrast between academic and social integration to define them as formal and informal integration. Regarding formal academic integration, the contacts concentrate on academic learning and the institute itself. In contrast, informal academic integration focuses on the interactions between teachers and students outside the boundary or context of formal learning. Nonetheless, integration concept should be expanded to include adaptation process, in which institutions make certain changes to accommodate students from diverse backgrounds. In the views of Ciubăncan et al. (2021), adjusting to new learning patterns, staying in a different social environment and developing a new relationship network would be a pressuring or stressful experience for international students. Lonely or isolated feelings are reported by many of them because their relationship network changes, and because they leave the familiar and comfortable cultural and linguistic environment. Therefore, it is especially important to create stronger bonds between international and local students.

Among these debates, some scholars (Laundon et al., 2023) discuss the patterns of internationalisation in a broad context, rather than focusing on how Chinese higher education internationalises. Some others, for example Liu (2020), were restricted to theory discussion, whose arguments lack evidence from practitioners involved in Chinese higher education.

2.3. Outward and Inward

Based on Laundon et al. (2023), the interactions in higher education system would be divided into "inward-oriented" or "outward-oriented", as far as higher education internationalization is concerned. "Inward-oriented" refers to the process of learning from foreign models of higher education, knowledge, culture, and norms. "Outward-oriented" represents the process of exporting domestic models of higher education, knowledge, culture, and norms across the world.

Yousaf et al. (2020) claimed that two major types of diffusion are contained during the processes of inward or

outward flows of higher education resources: “expansion diffusion” and “relocation diffusion”. Concerning “expansion diffusion”, innovation diffusion does not depend on the material process of higher education internationalisation (e.g. the international mobilities of people and education resource suppliers). According to Sun & Shen (2020), Hysa & Footage (2022) and Ismail Ngao (2023), the tendency and direction of diffusing innovations are determined by whether the innovations are attractive and useful. A periphery education system might assimilate foreign knowledge and cultures because of their attractiveness or build higher education capacities based on foreign HE norms and models (Yousaf et al., 2020). By contrast, “relocation diffusion” depends highly on the material process of higher education internationalisation. The source system of higher education might promote and export its programs, and implement cultural diplomacy to enhance the soft power and global presence. A recipient system of higher education might recruit foreign scholars, absorb foreign HE programs or send their own students to learning innovations from foreign universities (Yousaf et al., 2020).

As emphasised by Wu & Gong (2021), the flows of education resources can be further understood by referring to the centre-periphery model (Wu, 2020). To certain extent, academic world can be divided into “centre” and “periphery”. Knowledge production and dissemination are dominated by Centre countries and their HE systems, while peripheries stay in a disadvantaged position. Centre countries, including the UK and the U.S., have the most remarkable resources such as funds, research facilities and human capital. Hence their higher education systems are attractive for the most capable students across the globe. Likewise, some students have to leave periphery countries and learn abroad, because of political instability, poor research infrastructure and or lack of academic freedom. It is noted that “centre” and “periphery” have received attention for a longer history than higher education internationalisation. Furthermore, centres exist within both centre and periphery nations, while centres of periphery countries assume the responsibility or role of contacting with centre countries (Wu & Gong, 2021). Following this logic, Hysa & Footage (2022) and Ismail Ngao (2023) reached the consensus that centre academic institutions exist in both centre and periphery nations, while periphery institutions also exist in both centre and periphery nations. Nowadays, similar characteristics are still shown by HE development in latecomer nations and emerging economies. Centre institutions from non-Western countries possess many resources and interact with centre nations and their higher education systems. Therefore, they become a symbol for the frontier of HE internationalisation, while playing crucial roles in the recruitment and education of international students.

Implied by above discussion, some of previous researches including Wu and Gong (2021) and Laundon et al. (2023) are concerned with introducing the theories about inward and outward flows of higher education resources. Their focus is put on higher education in general, rather than digging into the particular context of Chinese higher education. Although some others reveal certain messages about how Chinese higher education institutions manage education resources, their discussion is based on the pure description of past events. Hence this research can bring fresh perspectives based on the intertwining of interview data and documentary information.

Revealed by the theoretical discussion, internationalisation

plays a crucial role in higher education because global labour markets, societies and economies have an increasing demand for graduates with employability skills. Regarding the patterns of higher education internationalisation, localisation represents the endeavours to implement higher education practices with Chinese characteristics, while globalisation means to assimilate, adapt and become inclusive, identifying and integrating the advantages of other countries. Concerning the flows of education resources, “Inward-oriented” refers to the process of learning from foreign models of higher education, knowledge, culture, and norms. “Outward-oriented” represents the process of exporting domestic models of higher education, knowledge, culture, and norms across the world.

3. Research Questions

What are the **patterns of internationalization** in higher education institutions during the Late Qing Dynasty?

To what extent, **the higher education resources flow** inbound and outbound during the Late Qing Dynasty?

4. Methodology

Judging from the literature review, the patterns of higher education internationalisation and the flows of education resources are complex issues that are not easy to quantify. Furthermore, with the identity of a university student, it is difficult to access a large pool of samples that have deep understanding about the history of higher education internationalisation in the late Qing. Therefore, a qualitative study is initiated.

As for data collection, this research intends to collect data through in-depth interview. Since this research intends to obtain information about the specific conditions of higher education internationalization in the late Qing of China, a suitable way is letting education history professors deliver diverse information. Six professors of education history located in China are invited to telephone interview for seeking evidence about the late Qing, being coded Participant G, Participant H, Participant I, Participant J, Participant K and Participant L.

Regarding sample selection, potential participants are accessed through convenience sampling. In this research, the six professors of education history were accessed by sending invitation to their Tiktok accounts or contacting with their universities.

Documentary information will be gathered to enrich the findings about higher education internationalisation in late Qing Dynasty. Resources of documentation can be Google Scholar, news media, Authorised research agencies. Examples of sources include Liu (2020). There are a wide range of existing studies or evidence related to higher education internationalisation in the late Qing Dynasty. The synthesis of secondary data sources can provide comprehensive understanding about the research topic.

5. Results and Discussion

5.1. Globalisation & Localisation of Higher Education Institutions during the Late Qing Dynasty

Appendix 2 shows the interview data of PG, PH, PI, PJ, PK and PL related to globalisation and localisation of higher education in the late Qing dynasty. Regarding globalisation,

PG indicates that "some top universities were forced to globalise because western countries desired to show their colonial power. These universities use some foreign teachers and textbooks." It implies that colonialism is a core reason that pushed universities to globalise. PJ also believes that western power is a forcing factor in that era. In addition, PH explains "The inadequate communication tools, I think. In the late Qing, telegraphing was a main way to contact with people in other countries. This brought some difficulties of learning from universities across the globe." Therefore, PH believed that the globalisation level was rather limited. PK also sees that the inadequate communication tools prevented the globalisation of higher education in that era. Furthermore, PI explains that "The conflicting ideas among university staff. For example, some teachers were reluctant to make extra efforts for using new textbooks from foreign countries, because repeating the content of previous year saved much energy. However, the director of the university needed to fulfill the government expectation of globalising, so they would find it not easy to motivate teachers to make additional efforts." Therefore, PI provides specific evidence about the conflicting ideas among university staff that impeded the globalisation process of the universities in the late Qing. Consistently, PL also reports the existence of conflicting interests.

Concerning the localisation of higher education in the late Qing dynasty, PG indicates that "As far as I know, higher education institutions attached great importance to localisation. They hired a great number of local teachers and used local textbooks to deliver knowledge to the extensive students." It indicates that local teachers and textbooks have a strong presence in the late Qing. PJ also believes that localised education is a widespread fact in that era. In addition, PH explains "In the late Qing dynasty, higher education institutions were still at its early period of development. Therefore, most of the textbooks, teaching methods and the staff had local characteristics." Therefore, PH believed that the localisation level is rather high because they still followed the long-lasting traditions. PK also believes that universities stuck to traditional teaching patterns in that era. Furthermore, PI explains that "Some universities tended to keep the local traditions of providing higher education, particularly for women schools." Therefore, PI provides specific evidence about women universities' localised education. Similarly, PL also confirms the localised education of women schools.

5.2. Outwards Flows & Inward Flows of Education Resources during the Late Qing Dynasty

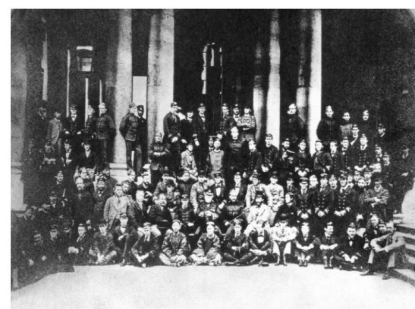
Regarding the outward flows of education resources in the late Qing dynasty, PG indicates that "In that times, higher education institutions of the late Qing would send some children of affluent families to foreign universities. The chances of exchange learning symbolised their social status. Children from poor families were less likely to have this opportunity, because the students needed to pay all of the fees for studying abroad." It implies that the universities would send wealthy students to foreign universities as exchange learning. PJ also believes that assigning wealthy students abroad was a program of universities in that times. In addition, PH explains "A very few teachers would be assigned to foreign universities, based on some types of agreements." Therefore, PH believed that the outward flows were also displayed by the foreign assignment of Chinese teachers. PK

also believes that some universities would let their teachers work abroad for a short period. Furthermore, PI explains that "Capable teachers could apply for a short period of working in foreign universities, before returning to China. They would also carry some domestic textbooks and teaching methods abroad. There were also some students sent for overseas learning, although the program often lasted for no more than one year." Therefore, PI finds that teachers and students were both assigned to foreign universities. Similarly, PL also confirms above facts of outward flows.

Outward flow could be well exemplified by the overseas students within Europe. In the memorial of Shen Baozhen dated 7 Dec., 1873, Shen elucidated the very importance and significance of sending Fujian Naval College's excellent graduates for overseas study.

Figure 1 below provides an example of sending students abroad, as a signal of outward flows:

The pictures related to students' overseas study in the Royal Naval College



The Chinese overseas students from Fujian Navy College took pictures with western teachers at the Royal Navy College in Greenwich.

(Source: The Special Collection of Archives in China Chuanzheng Culture Museum)

Figure 1. An example of sending students abroad

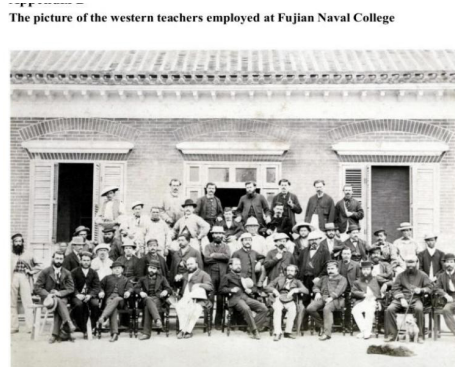
As for the inward flows of education resources, PG states that "Higher education institutions accepted some foreign teachers with strong certificates. They were also expected to purchase textbooks and equipment produced by foreign countries, although this behaviour was passive." It implies that the universities would welcome foreign teachers and enrich their education system. PJ also believes that buying foreign textbooks and equipment served as a symbol of inward flows. In addition, PH explains "higher education institutions of the late Qing were included for adopting some textbooks brought by foreign teachers or required by the governments. The late Qing governments lacked the ability to fight against the invasion of other powerful countries." Therefore, PH believed that the invasions of foreign countries were a reason for the inward flows of education resources. PK also believes that some universities had to use foreign textbooks because of colonial power. Furthermore, PI explains that "However, there was little evidence of enrolling foreign students during the late Qing." Therefore, PI finds little evidence of international students in the late Qing. Similarly, PL also confirms that international students were rarely seen in that era.

In the late Qing, the staff team of a university comprised: 1) French and British teachers; 2) overseas Chinese teachers speaking Chinese Mandarin, Cantonese, English, and the local dialects; and 3) local teachers speaking Chinese, the local dialects, and English (Ma and Liao, 2017).

The western teachers mainly took charge of the western content subjects such as geometry and mechanics. To hire the

qualified teachers from France and Britain, before being deployed to China's northwest, Zuo Zongtang planned to hire Paul Alexandre D'Aiguebelle as the deputy headmaster of the Fujian Naval College and Prosper Marie Giquel as the headmaster. Zuo empowered these 2 headmasters to hire other western teachers as well as take charge of all educational activities that were related to the western knowledge at the Fujian Naval College.

Figure 2 displays the evidence of hiring western teachers, which signifies inward flows.



(Source: The Special Collection of Archives in China Chuanzheng Culture Museum)

Figure 2. The evidence of Chinese universities hiring western teachers

Furthermore, proper teaching materials and textbooks for the western content subjects in specific are highly essential in the practice of bilingual education. With China lagging far behind the western powers in navigation and shipbuilding, most of the textbooks at the College were the original ones that were utilised within the comparable western naval colleges (Shi, 2018).

There were several major sources of the textbooks that were utilised at the College. Specifically, McKay (2024) found that the first source was the western teachers, who bought textbooks from the mother countries. Lots of textbooks were the teaching materials utilised by the students at the world-famous naval colleges such as Cherbourg Shipbuilding & Engineering College in France and Greenwich Royal Naval College in Britain.

In the views of Chen (2023), the second source was many Chinese ambassadors to France and Britain, who sent back to China the original western textbooks. The textbooks at the College and found that Chinese ambassadors bought 5 physics textbooks in Europe and Britain and sent them to the College, alleviating the shortage of textbook of physics in the late imperial China. The textbook was also translated to Chinese language so that students understand them easily.

5.3. Summary of Results

The data results of PG, PH, PI, PJ, PK and PL revealed that universities in the late Qing were forced to globalise, because of Western colonialism. Meanwhile, the higher education institutions in China insist on incorporating some local characteristics. Neocolonialism was a serious phenomenon situated in the higher education during the late Qing dynasty. Neocolonialism can be interpreted as a planned agenda of advanced countries to maintain their impacts on developing countries. In the domain of education, multiple practices would be implemented to achieve neocolonialism: use the foreign pattern of administrative structures to implement the

management of a school; adopt the pedagogy and curriculum of Western countries; adopt English or other languages of previous colonial power as the tool of classroom instruction; and/or seek aid and technical assistance from foreign countries. Above discussion echoes with some of previous studies: Chen (2024) argued that for the purpose of national salvation, western knowledge has been delivered by newly built higher education institutions. Above analysis results are similar to the arguments of Liu (2020): neocolonialism can be interpreted as a planned agenda of advanced countries to maintain their impacts on developing countries. In the domain of education, multiple practices would be implemented to achieve neocolonialism: use the foreign pattern of administrative structures to implement the management of a school; adopt the pedagogy and curriculum of Western countries; adopt English or other languages of previous colonial power as the tool of classroom instruction; and/or seek aid and technical assistance from foreign countries. Although equity and diversity deserve to be pursued in global contexts, it is unlikely to achieve success by blindly importing Western administrative structures and pedagogies. The research conclusions are also consistent with the views of Schneider (2023) and Woldegiorgis (2023): duplicating Western education may impose a very negative influence on the host country, as its cultural influence and research capacity could be weakened by some of the imported norms and values. However, the interview data of PG, PH, PI, PJ and PK reminds that the conflicting ideas or interests among university staff that impeded the globalisation process of the universities in the late Qing. Some teachers were reluctant to make extra efforts for using new textbooks from foreign countries, because repeating the content of previous year saved much energy. In addition, the director of the university needed to fulfill the government expectation of globalising, so they would find it not easy to motivate teachers to make additional efforts.

In the late Qing, PG, PH, PI, PJ, PK and PL reached the consensus that the tints of inward flows were much stronger than outward flows. For example, there were several major sources of the textbooks that were utilised at the universities. Specifically, the first source was the western teachers, who bought textbooks from the mother countries. For example, documentary analysis revealed that Fujian Naval College hired western teachers during the late Qing. The second source was many Chinese ambassadors to France and Britain, who sent back to China the original western textbooks. Nonetheless, outward flows of education resources were also a matter of fact in that era. However, PL confirmed that Chinese universities in the late Qing rarely have international students. PK revealed that outward flow could be well exemplified by sending students abroad. In the memorial of Shen Baozhen dated 7 Dec., 1873, Shen elucidated the very importance and significance of sending Fujian Naval College's excellent graduates for overseas study. Above discussion echoes with previous literature including Yousaf et al. (2020): two major types of diffusion are contained during the processes of inward or outward flows of higher education resources: "expansion diffusion" and "relocation diffusion" (Yousaf et al., 2020). Concerning "expansion diffusion", innovation diffusion does not depend on the material process of higher education internationalisation (e.g. the international mobilities of people and education resource suppliers). The research conclusions also support Sun & Shen (2020) arguing that the tendency and direction of diffusing innovations are

determined by whether the innovations are attractive and useful. A periphery education system might assimilate foreign knowledge and cultures because of their attractiveness or build higher education capacities based on foreign HE norms and models (Yousaf et al., 2020). By contrast, “relocation diffusion” depends highly on the material process of higher education internationalisation. The data results are also parallel to the views of Ismail Ngao (2023): The source system of higher education might promote and export its programs, and implement cultural diplomacy to enhance the soft power and global presence. A recipient system of higher education might recruit foreign scholars, absorb foreign HE programs or send their own students to learning innovations from foreign universities. The discussion also supports McKay (2024) that foreign textbooks are a main resource that flowed into Chinese universities in the late Qing.

6. Conclusion and Implications

6.1. Conclusion

Research conclusions will be explained as follows: Higher education institutions in the late Qing were forced to globalise, because Western colonialism influenced the management of universities. This reflected the intricate connections of education and politics. However, the globalising of university education was impeded by the inadequate communication tools and the conflicting interests of the stakeholders. Meanwhile, the universities also kept some traditional teaching patterns and textbooks with Chinese characteristics. In the late Qing, the tints of inward flows were much stronger than outward flows. For example, there were several major sources of the textbooks used at universities. Specifically, the first source was the western teachers, who bought textbooks from the mother countries. The second source was many Chinese ambassadors to France and Britain, who sent back to China the original western textbooks. Taking Fujian Naval College as example, Chinese ambassadors bought 5 physics textbooks in Europe and Britain and sent them to the College in 1869, alleviating the shortage of textbook of physics in the late imperial China. On the other hand, some excellent students were sent abroad, based on exchange learning programmes.

It is hoped that future research shall put attention to the patterns of internationalizing higher education and flows of education resources in Modern China. Several individuals can be invited to interview. Meanwhile, questionnaire survey may also be used to enrich the data results.

6.2. Implications

The government and education ministry would benefit from the research conclusions, because they can gain deeper insights into higher education internationalisation during the late Qing. They can avoid the excessive adoption of foreign education patterns as done in that era. Moreover, above conclusions have some practical benefits for universities. The universities in modern China shall continue introducing some valuable talents and textbooks from foreign countries. However, Chinese universities need to diversify their education programmes to increase the reputation in the international community, so that more foreign universities would perceive the education resources of China as attractive. Moreover, the exchange learning programmes shall engage excellent students from both wealthy and poor families, rather than being accessible for rich students only.

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Appendix 1: Interview Questions

How did higher education institutions tackle the localisation and globalisation during the late Qing dynasty?

Are there any challenges when they leverage the localisation and globalisation of higher education? Please explain some details.

How did higher education institutions of the late Qing absorb the resources of foreign countries?

Have higher education institutions of the late Qing exported any resources abroad? Please provide some details.

Appendix 2: Interview Transcripts

Interviewee G

How did higher education institutions tackle the localisation and globalisation during the late Qing dynasty?

As far as I know, higher education institutions attached great importance to localisation. They hired a great number of local teachers and used local textbooks to deliver knowledge to the extensive students. Meanwhile, some top universities were forced to globalise because western countries desired to show their colonial power. These universities use some foreign teachers and textbooks.

Are there any challenges when they leverage the localisation and globalisation of higher education? Please explain some details.

Just as I said, the colonial power of other countries could be regarded as a challenge for leveraging the localisation and globalisation of higher education. Politics have impact on education, so some universities did not have the freedom about determining how to internationalise.

How did higher education institutions of the late Qing absorb the resources of foreign countries?

Higher education institutions accepted some foreign teachers with strong certificates. They were also expected to purchase textbooks and equipment produced by foreign countries, although this behaviour was passive. For example, some equipment of playing films for art students derived from western countries.

Have higher education institutions of the late Qing exported any resources abroad? Please provide some details.

Sure. In that times, higher education institutions of the late Qing would send some children of affluent families to foreign universities. The chances of exchange learning symbolised their social status. Children from poor families were less likely to have this opportunity, because the students needed to pay all of the fees for studying abroad. In contrast, few of domestic teaching materials flowed to foreign universities, as the late Qing was too weak to influence other countries.

Interviewee H

How do you think about the role of China governments in the higher education internationalisation during the late Qing dynasty?

China governments intervened seriously with the higher education internationalisation during the late Qing dynasty. A reason was that there were only a few universities in each region of China, while many of them were funded solely by the government. Although some rich merchants invested in some schools, they did not make management decisions but merely got financial gains. In other words, the universities of the late Qing rarely developed their own routes of internationalising independently.

How did Chinese universities respond to the

government interventions during the late Qing dynasty?

Many universities took such government interventions for granted, because schools had been ruled by government authorities before the late Qing. This was a kind of social customs or long-lasting perspective. However, there were still a few university members who held frustrations towards the strict control by governments. They thought education internationalisation should be realised in diverse forms, based on the creativities of different universities.

How did higher education institutions tackle the localisation and globalisation during the late Qing dynasty?

In the late Qing dynasty, higher education institutions were still at its early period of development. Therefore, most of the textbooks, teaching methods and the staff had local characteristics. However, there were a few foreign teachers assigned by their countries or themselves. Some foreign universities also sought to develop collaborative programs with Chinese universities.

Are there any challenges when they leverage the localisation and globalisation of higher education? Please explain some details.

The inadequate communication tools, I think. In the late Qing, telegraphing was a main way to contact with people in other countries. This brought some difficulties of learning from universities across the globe.

How did higher education institutions of the late Qing absorb the resources of foreign countries?

As explained above, higher education institutions of the late Qing were included for adopting some textbooks brought by foreign teachers or required by the governments. The late Qing governments lacked the ability to fight against the invasion of other powerful countries.

Have higher education institutions of the late Qing exported any resources abroad? Please provide some details.

A very few teachers would be assigned to foreign universities, based on some types of agreements. Some students could also get the chance of learning in foreign universities for a short period, if their parents or relatives had strong backgrounds to influence the management of the universities.

Interviewee I

How did higher education institutions tackle the localisation and globalisation during the late Qing dynasty?

Some universities tended to keep the local traditions of providing higher education, particularly for women schools. Some other universities would read the reports or documents about foreign countries and learn new teaching methods. The learning from foreign universities was advocates by some universities that was produced by merging two schools.

Are there any challenges when they leverage the localisation and globalisation of higher education? Please explain some details.

The conflicting ideas among university staff. For example, some teachers were reluctant to make extra efforts for using new textbooks from foreign countries, because repeating the content of previous year saved much energy. However, the director of the university needed to fulfill the government expectation of globalising, so they would find it not easy to motivate teachers to make additional efforts.

How did higher education institutions of the late Qing absorb the resources of foreign countries?

A few universities let education teams travel to foreign universities and learn their teaching methods. Some

universities also invited foreign teachers to live and work in China. However, there was little evidence of enrolling foreign students during the late Qing.

Have higher education institutions of the late Qing exported any resources abroad? Please provide some details.

Yes. Capable teachers could apply for a short period of working in foreign universities, before returning to China. They would also carry some domestic textbooks and teaching methods abroad. There were also some students sent for overseas learning, although the program often lasted for no more than one year.

Interviewee J

How did higher education institutions tackle the localisation and globalisation during the late Qing dynasty?

To my best knowledge, the higher education institutions took localisation very seriously. The higher education institutions employed a large number of local teachers and utilised the local teaching materials to impart knowledge to a wide range of students. At the same time, many top universities were also forced to go global as the Western countries looked to flex their colonial might. These top universities utilise some foreign teachers as well as foreign teaching materials.

Are there any challenges when they leverage the localisation and globalisation of higher education? Please explain some details.

As I just mentioned, other countries' colonial power can be seen as a severe challenge to take advantage of the globalisation as well as localisation of the higher education. Politics influence education, so that some universities had no freedom to decide the way of internationalisation.

How did higher education institutions of the late Qing absorb the resources of foreign countries?

The institutions of higher education recruited a number of foreign teachers that had very strong credentials. The higher education institutions were as well required to buy foreign-produced equipment and textbooks, albeit passively. For instance, some devices that show movies for the art students came from the Western countries.

Have higher education institutions of the late Qing exported any resources abroad? Please provide some details.

Top students in the French-medium College should be sent to France to learn shipbuilding theories and skills while top students in the English-medium College should be sent to Britain to further their study in navigation and naval training. It will take at least three years but not more than five years for those students to return to China and make contributions to the advancement of the shipbuilding industry and the development of modern navy in China.

Interviewee K

How did higher education institutions tackle the localisation and globalisation during the late Qing dynasty?

During the late Qing, the higher education still was in the very early stages of development. As a result, most of the teaching materials, teaching personnel and methods showed certain local characteristics. But there were also some foreign teachers who were appointed by themselves or by the countries. Certain foreign universities as well sought to develop projects in cooperation with the Chinese universities.

Are there any challenges when they leverage the localisation and globalisation of higher education? Please explain some details.

I don't think the tools for communication are enough. During the late Qing Dynasty, the telegraph was the main means of communication for the peoples of various countries. This has resulted in certain difficulties in studying at universities worldwide.

How did higher education institutions of the late Qing absorb the resources of foreign countries?

As above mentioned, the higher education institutions in the late Qing Dynasty were included because of the adoption of some teaching materials that were brought by the foreign teachers or were required by government. The late Qing government had no ability to resist invasions by other great powers.

Have higher education institutions of the late Qing exported any resources abroad? Please provide some details.

The plan to send the students to further their study within Europe was specifically approved by Empress Dowager Cixi within the year 1874. The "Study Abroad" Project soon was implemented within the year 1877 after 3-year preparation. During 1877-1905, a total of 111 students in specific were selected for the overseas study in French or British shipyard or technical colleges like the National Institute of Mining of Paris, Toulon Naval Shipyard, and Royal Naval College. In the overseas study within Europe, these students were requested by the government to send back the textbooks they utilised or considered valuable.

Interviewee L

How did higher education institutions tackle the localisation and globalisation during the late Qing dynasty?

Certain universities were likely to preserve the local tradition of providing the higher education, especially the girls' schools. Other universities read documents or reports about the foreign countries and then learn many new methods for teaching. Some universities advocated learning from the foreign universities, which was formed by the merger of schools.

Are there any challenges when they leverage the localisation and globalisation of higher education? Please explain some details.

Conflicting ideas amongst the university faculty and staff. For instance, certain teachers were rather reluctant to put extra effort into utilising new foreign teaching materials, as repeating the previous year's content could save a lot of effort. But university presidents needed to meet governmental expectations for globalisation, so that the university presidents would find it difficult to motivate the faculty to go the extra mile.

How did higher education institutions of the late Qing absorb the resources of foreign countries?

Some universities allowed the education teams to travel to the foreign universities to learn the teaching methods from the foreign universities. Certain universities as well invited some foreign teachers to live as well as work in China. But there was very little evidence that foreign students were recruited in the late Qing Dynasty.

Have higher education institutions of the late Qing exported any resources abroad? Please provide some details.

Yeh. For competent teachers, they can apply for short-term employment at a foreign university before returning home. The competent teachers would as well bring some domestic teaching materials and methods abroad. Also, there were students who were sent to study overseas, though the programme usually only lasted no more than a year.