Toward a Chinese model: De-Sovietization reforms of China’s higher education in the 1980s and 1990s

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Abstract
The reform and success of China’s higher education since 1978 has attracted much attention in recent years. This article attempts to understand the nature of this reform from the perspective of de-Sovietization, outside the mainstream neoliberal and internationalization narratives. In the 1950s, China’s higher education was completely reformed by the Soviet Model with features of separating teaching and research, excessive specialization in undergraduate education, and high centralization. Moreover, Chinese institutions were increasingly disconnected from the international academic community. During the 1980s and 1990s, China started de-Sovietization reform and took measures to strengthen general education, develop comprehensive universities, integrate teaching and scientific research, and expand the autonomy of colleges and universities. De-Sovietization reform was also a process of relearning from Western countries, of which learning from the American experience was prominent. In this process, Chinese universities resumed ties with the international academic community. De-Sovietization reform has left an important impact on the development of contemporary universities in China.

Keywords
Higher education, soviet model, de-Sovietization reform, international cooperation

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Since China’s reform and opening up in 1978, the gradual rise of Chinese universities has become a phenomenon of global attention. Naturally, the macro reform of Chinese higher education since 1978 has attracted a lot of attention. Some scholars believe that the main theme of this history is the entry of neoliberal principles into the Chinese higher education system, manifested in marketization, decentralization, etc. (Mok & Lo, 2007). Marginson (2018) argues that a major mechanism for the success of Chinese higher education since 1978 is the National/global synergy. This paper argues that, in addition to the above two narratives, de-Sovietization (Oleksiyenko et al., 2018) is an important perspective for understanding the reform of higher education in China since 1978.

After the second half of the 19th century and since the start of modern higher education, China has always been deeply influenced by foreign education models, borrowing or imitating the education models of Japan, Germany, France, and the United States. Since the late 1920s, China had established its own education system according to the American model. Then, after the founding of the People’s Republic of China, with the close relationship between China and the Soviet Union, China’s education quickly turned to the Soviet Model, and a large number of Soviet experts came to China. The subjects, disciplines, and textbooks of the Soviet Union began to prevail in China, and China’s higher education started the process of “Learning the Soviet Union Entirely.” However, in the learning process, a misunderstanding of the Soviet Model emerged, that is, to “apply the Soviet Model indiscriminately and mechanically” (Editorial Department of China Education Yearbook, 1984). After the reform, China’s higher education was characterized by a high degree of specialization, a narrow scope of talent cultivation, the separation of teaching and scientific research, and the lack of autonomy. In terms of international academic cooperation, influenced by the international political situation, China’s academic ally was mainly the Soviet Union, who was gradually veering away from the European and American academic community.

In the late 1970s, similar to the reform and opening up process in the field of economics, China’s higher education also began to reform. A lot of research has been conducted on the reform and development of higher education in China toward this historical experience. However, few attempts have been made to explain why and how it occurred from the theoretical perspective, among which is using the concept of “de-Sovietization” reform. As early as 1982, American scholar Suzanne Ogden observed that China’s higher education system seemed to be shifting from the Soviet Model (and certainly from the Maoist revolution model) to the Western model (Ogden, 1982). Postiglione and Chen also pointed out in a short article that Chinese universities had gone through a de-Sovietization reform through a series of steps and transformed to the mainstream model of research universities (Postiglione & Chen, 2016). This paper believes that surpassing the Soviet Model and learning from the West was indeed a major cornerstone of China’s higher education reform in the 1980s and 1990s. After the reform and opening up, China’s most urgent mission was to make up quickly for the knowledge gap in the fields of natural science and engineering science between China and Western countries, from detaching from the international academic community to resuming communication and cooperation (Shen, 2020). Hence, China’s higher education community was eager to learn about the experience of universities in Western developed countries and how to carry out scientific research. At the same time, the Chinese academic community began to re-scan the disadvantages of the Soviet Model and initiated de-Sovietization reform. With the appeal of scholars who had once studied in Europe and America, the reform of the Soviet Model and the learning from the European and the United States occurred almost simultaneously. Based on oral interviews, archives and secondary data, this paper analyzes the de-Sovietization reform of China’s higher education in the 1980s and 1990s from four aspects: teaching reform, university organizational transformation, teaching-research relationship, and internationalization. Comprehensive analysis of the above materials leads to the conclusion that both the de-Sovietization reforms and learning from the West shaped today’s Chinese higher education.
Transplantation and reflection of the Soviet Model: “History leaves a heavy burden on us”

Transplantation and impact of the Soviet Model in China: 1952–1957

After the founding of the People’s Republic of China in 1949, Chinese society underwent a profound historical transformation. The education system also experienced institutional adjustment by learning from the Soviet Model for years, throughout which the model substantially reshaped the form and direction of Chinese education. After the department and discipline’s adjustment (Yuanxi Tiaozheng), China’s higher education presented a series of characteristics similar to Soviet education, including the scientific research system dominated by The Chinese Academy of Sciences (hereafter referred to as CAS), the higher education system dominated by technical and industrial universities, the institutionalized separation of higher education and scientific research, the training mode dominated by specialized education, and so forth.

At the beginning of the founding of the People’s Republic of China, based on the experience of the Soviet Union, the function of the scientific research of universities was mainly transferred to the huge system of CAS. In the early years, the Soviet system of higher education consisted of three types, the comprehensive universities, the specialized institutions, and the pedagogical institutions, among which the comprehensive universities accounted for a very small proportion (Huisman et al., 2018). The pattern of higher education in the Soviet Union directly influenced China’s higher education reforms. During the department adjustment in 1952, the government changed all private universities into public universities and revoked all church universities (Ma, 1954). Then, according to the framework of the Soviet Union, universities were divided into three types: comprehensive universities, industrial universities, and specialized colleges. Some of the original comprehensive universities were reorganized into industrial universities (such as Tsinghua University and Zhejiang University). In addition, the system of all kinds of specialized universities under the leadership of various ministries and commissions was also adopted, so that the Ministry of Agriculture, the Ministry of Health, the Ministry of Finance, and other ministries had their own subordinate universities. In 1955–1956, China had 194 universities in total, including 14 comprehensive universities, 42 industrial universities, and 138 various specialized colleges (Ministry of Higher Education, 1956). Ma Xulin, then the minister of higher education, said: “This department adjustment was based on the Soviet higher institution system… and according to the needs of cultivating various professionals of national construction… fundamentally changed the chaos of the old institutions of higher learning” (Zhang, 1992).

The higher education model of the Republic of China was mainly generalist education, which had only departments but no majors. After the founding of the People’s Republic of China, the previous “general education” was considered “adversely affected by Europe and the United States” (Zeng, 1953). Moreover, it could not meet the real needs of nation building. In the adjustment of departments, China comprehensively learned from the Soviet Union and established a highly specialized education model. Soviet higher education also emphasized a high degree of planning, organizing around majors, cultivating talents according to industrial needs, and achieving a match between college students and industries through a mandatory work distribution system. The “professional system” was combined closely with the planned economy of the Soviet Union. In the 1950s, the Soviet Union had more than 660 majors, which were later merged into more than 300 majors (Gao, 1984). In the 1950s, China followed the Soviet Model and set up majors in various schools (Zeng, 1954). Therefore, the original European and American generalist education was completely changed into Soviet-style specialized education. After the introduction of the professional system, teaching plans were established. Each major had a teaching plan and teaching syllabus, and the whole country had a unified standard formulated by the Ministry of
Education. Planning was another characteristic of the specialized system, the plan has a certain goal, which was to match the college graduates and the jobs, and it was planned by the Ministry of Education. The jobs people pursued and how many people pursued them were auxiliary to the national plan were both determined by the Ministry of Education (Wang, 2017). The teaching and research groups replaced the department as the key organization in teaching, scientific research, teacher management, and other aspects. After this reform, a highly specialized higher education system was established. It was believed that specific majors in undergraduate education was one of the most significant legacies of the Soviet Model, which “played almost a decisive role in our engineering education to a certain extent” (Zhu, 1986).

The separation of higher education and scientific research has always been considered a prominent feature of the Soviet Model. In the Soviet Union, basic research was mainly conducted by the Soviet Academy of Sciences, and the vast majority of universities were only engaged in teaching rather than doing research (Froumin & Leshukov, 2016). This characteristic has also affected Chinese higher education reform. In the 1950s’ higher education reforms, the mission of scientific research was positioned as a function of the newly established system of CAS. This practice of forming a substantive Academy of Sciences was copied from the Soviet Union. CAS was not only a national scientific research center but also a national scientific research management and decision-making institution. The government invested a large amount of scientific research funds into the Academy of Sciences system rather than the higher education system, thus resulting in the separation of the higher education system and scientific research (Suttmeier, 1985). Teaching and scientific research in colleges and universities were also decisively separated, which was contrary to the development trend of modern science development. In March 1954, the CPC Central Committee approved The Report on the Basic Situation of the Current Work of CAS and its Future Works to the Central Committee, submitted by the CAS, which stated the necessity to continue learning from the Soviet Union, designating the Academy of Sciences as the center of national scientific research, and coordinating scientific research in all aspects. However, lots of leading scientists worked in the universities. Due to the shortage of scientific research talent in China from 1956 to 1957, CAS mobilized a large number of top scholars from universities, which caused strong dissatisfaction among universities (Zhang, 2015). Even so, the universities and the Academy of Sciences at the time were very closely connected. For example, many professors at Peking University also worked at CAS. Compared with the universities, the Academy of Sciences had more well-respected experts. Thus, it was more attractive to scholars (Wang, 2017).

Through the above series of policy reforms, the Soviet-style education system was established in China and was maintained for a very long time. Although China has made efforts to break away from the Soviet Model after the collapse of the relationship between China and the Soviet Union, it had not been fundamentally changed. The Soviet Model has had a long-term and profound impact on Chinese education and academia (Wang, 2017).

**Systematic reflection of the Chinese education community on the Soviet Model: 1978~1989**

The development of higher education in China has for a long time been closely influenced by China’s national conditions and China-Soviet relations (Zubok, 2017). After the collapse of bilateral relations in 1958, the Soviet Union successively withdrew all its experts in China, and all Chinese students studying in the Soviet Union returned to China (Herbert, 1993). In the early 1980s, the leaders of Soviet Union and China began to consider the normalization of China-Soviet relations. Educational exchanges between China and the Soviet Union gradually resumed. Many officials and scholars visited the Soviet Union and published a series of research reports or papers.
Overall, the main trend of China’s education reform is to eliminate the bad effects of the Soviet Model. From the late 1970s to the 1980s, Chinese scholars continued to reflect systematically on the influence of the Soviet Model on Chinese scientific research and education. In different levels of discussions, many voices have asked to get rid of the Soviet Model. In 1984, the Ministry of Education commissioned Beijing, Shanghai, Dalian, Jiangsu, and Liaoning higher education bureaus to hold college teacher management seminars. Participants pointed out that “the separation of teaching and research system” was the product of “learning the Soviet Union” and had not fully adapted to “rebuild the two centers of teaching and research”. Hence, changes had to be made (Sun & Wang, 1984). In 1985, Zhu Jiusi, then the president of the Huazhong Institute of Technology, and one of the pioneers of China’s Higher Education Reform, said in a national symposium that the Soviet Model was “a heavy burden left to us by history” (Zhu, 1986). Hou Shichang and Wu Youshou, two professors from Tsinghua University, pointed out that the negative impact of copying the Soviet Model was mainly manifested as “the rigidity of the education model.” Moreover, they stated that “the division of majors is too narrow and rigid… and the dull and rigid system is not conductive to innovation” (Hou & Wu, 1984).

During this period, many pioneer scholars came back from the Soviet Union and were also reflecting on the Soviet education model. Professor Gu Mingyuan, the chairman of the National Association for Comparative Education Research, studied in the Soviet Union from 1951 to 1956. In May 1984, he went to the Soviet Union again. He found that although some specific practices of Soviet higher education had improved, the teaching goal still had not changed. The system had many problems, such as the unified teaching plan and syllabus, lack of flexibility for schools and teachers, a heavy amount of schoolwork, and universities struggling to foster students’ interests (Gu, 1984). Professor Zhou Qu, who had studied in Moscow in the 1950s, also wrote in 1984 that higher education in the United States and the Soviet Union were two different higher education systems. The United States mainly implemented generalist education, while the Soviet Union paid more attention to specialized education. In addition, China’s previous Sovietized education experience partially met some needs. However, in terms of long-term development, many problems persisted, such as the excessive separation of disciplines, the weak adaptability of the specialized-trained students as well as the outdated teaching methods. Furthermore, the cancellation of English courses adversely affected the absorption of Western scientific and cultural achievements (Zhou, 1984).

At the same time, many Chinese scientists actively called for reflection on the Soviet Model while introducing Western experiences either from Europe or the United States. Among them, Yang Chen-Ning, Tian Changlin, Qian Zhirong, and other influential figures have had great influence, while some other Chinese scientists continued to call for the introduction of the education experience of the United States. Their opinions were highly valued by Chinese leaders. For instance, Tian Changlin, then vice president of Berkeley, University of California, was invited to meet with Deng Xiaoping and other leaders several times. Pu Muming, a professor from Yale School of Medicine, was appointed as the Dean of the Department of Biology at Tsinghua University from 1984 to 1986, whose many insights were widely appreciated (Pu, 1985).

At the same time, under the context of reform and opening up, China’s higher education gradually resumed contact with Europe and the United States, organizing large-scale delegations to visit, and initiating exchange and study programs in Europe and the United States. Throughout the 1980s, the reform of Chinese universities and learning from the Western experience went hand in hand.
Change from emphasizing specialization to broadening basic qualities and general education

Reform of the specialized education model in 1980s

In the 1980s, China began to reform the specialized education model systematically while re-learning Western general education. During this period, the development of higher education in China was undoubtedly most influenced by the United States. After the establishment of diplomatic relationships between China and the United States in 1979, China also embarked on the process of reform and opening up, normalizing relations between China and the United States, and gradually starting exchanges and cooperation in politics, economy, education, science, technology, and culture. With the normalization of China-US relations, the United States soon became China’s largest country in foreign educational exchanges and cooperation. From 1978 to 1984, China sent 26,800 students and scholars to study abroad, including 12,000 to the United States. The number of graduate students in the United States was large, and 64% of graduate students went to the United States. Educational visits between Chinese and US experts and scholars were becoming increasingly frequent.

In the early 1980s, the institutional disadvantages of the over-division of majors was growing increasingly prominent, which seriously affected the quality of talent training and could not meet the rapid development of the modernization process (Gao and Xie, 1986). China had to reform its highly specialized education system that had been established for a long time. Compared with the Soviet Model of specialized education, Western universities, especially American universities, put more emphasis on general education. In the process of exchanges between China and the United States, the Chinese representatives recognized the advantages of the general education model, which emphasized the integration of liberal arts and sciences. It inspired the Chinese higher education community to reflect on the problem of excessive specialization and started China down the road of building general education at home.

Inspiration from visiting America: 1978~early 1980s

In 1978, the leaders of CAS led seven delegations to visit the United States, Britain, West Germany, Japan, France, and other countries to investigate the scientific research management and policies of these countries (The Foreign Affairs Bureau, 1979). Yu Wen, the then Secretary General of CAS, led a team to visit the United States for one month to visit the White House Office of Science and Technology Policy, Department of Energy, NASA, Department of Agriculture, National Science Foundation, and other government departments, as well as eight national laboratories and research centers and 12 universities. After returning to China, they submitted a report to Deng Xiaoping and the Vice Premier Fang Yi, in which they attributed the over-division of majors to the Soviet Model. The report pointed out that interdisciplinary integration was an important trend in the development of contemporary science and technology. The American scholars of Chinese descent believed that the disciplines in China were too fragmented, and the framework was deeply influenced by the Soviet scientific research system (Yu & Zhang, 1979).

From November to December 1978, Lin Jinming, the dean of Huazhong Institute of Technology, attended the Delegation of Chinese university presidents to the United States and visited more than a dozen universities in the U.S. He noted the diversity of the higher education system in the United States and divided American universities into three categories. Type I consisted of comprehensive universities, where teaching and research were equally important. He observed that American universities integrated technology and science and emphasized the role of basic science in the training of engineers. In addition, he noticed that engineering students also needed
to take some courses in humanities and social sciences. (Lin, 1980). In addition, Chinese scientists also introduced the model of general education from the United States to China. Yang Chen-Ning mentioned the relationship between “general” and “special” in a lecture at the University of Science and Technology of China in 1978. In his opinion, one of the problems in American higher education was its overemphasis on the generalized aspects, while the problem of Chinese university education was the opposite: Chinese universities paid less attention to the general learning and focused on specialization. In almost all universities, students were constrained within a certain major when they entered university. This limitation greatly affected the university’s first responsibility, which was to cultivate talents with the ability to think independently. He also mentioned that a growing trend in science nowadays was the increasing emphasis on the connections between various disciplines, and much of the scientific progress was the result of interdisciplinary collaboration. Thus, he suggested that Chinese universities should at least focus on the “major divide” but pay more attention to adding more courses from which students could choose (Yang, 1978).

In addition, some scholars who visited the United States in the early 1980s paid attention to the curriculum and undergraduate training mode in the United States. Zhang Guangdou, vice president of Tsinghua University, was invited to visit the United States in 1979. He pointed out universities of science and technology in the United States attached great importance to the humanities and social sciences, which were beneficial to fostering college students’ cultural literacy, expanding their knowledge and understanding civilization and society (Zhang, 1980).

Peking University carried out the teaching reform in the 1980s. In 1988, on the basis of investigation and research, Peking University clearly put forward the policy of “strengthening the foundation, deemphasize majors, teaching students in accordance with their aptitude, and diverting training.” In Chinese characters, this statement has 16 words. Thus, it has been well known as the 16 Principles, which is still often quoted by education reformers. In 1986, the State Education Commission issued a new Catalogue of Engineering Undergraduate Majors, and the number of majors was greatly reduced.

Overall, by the late 1970s and early 1980s, through various channels, Chinese academic circles had begun to systematically understand the broad-based undergraduate talent training model in the United States, reflecting on the previous Soviet specialized training model, and begin the exploration of broad-based undergraduate education (Shen, 2018).

Transformation of industrial universities and specialized colleges into comprehensive Universities in 1980s and 1990s

Controversy towards the too narrow disciplines in universities : 1984~1985

In the 1950s, the vigorous development of Chinese industrial universities and specialized colleges showed an overwhelming advantage. The negative impact of this pattern was also gradually highlighted. Especially after the reform and opening up, the Chinese government and academic circles often evaluated the negative impact of the system of industrial universities and specialized colleges.

In 1984, Mu Guoguang, the president of Nankai University, pointed out that “China’s current higher education system and structure were basically established with reference to the model of the Soviet Union when adjusting colleges and departments in 1952.” (Mu, 1986) In 1985, at the first Sino-American Dean’s Forum, An Min, the vice president of Beijing Agricultural University, almost completely denied the achievement of adjustment of colleges and departments in 1952. As he pointed out, “The adjustment of colleges and departments in the early 1950s… did more harm than good, or did no good. Almost all universities in the world first established professional
schools and vocational colleges and then developed comprehensive universities. Instead, we demolished the existing, well-established and good comprehensive universities.” Some colleges and universities whose interests had been damaged in the adjustment of colleges and departments also held a completely negative attitude toward this policy. For example, Lu Weixue, the vice president of Zhejiang University, pointed out, “We think the adjustment of colleges and departments is good for nothing.” (Qian and An, 1986) Xie Xide, the president of Fudan University, also believed that the adjustment of colleges and departments “separated liberal arts and science from engineering, medicine, and agriculture, which is very unfavorable to disciplinary exchange. Even in comprehensive universities, the distribution of disciplines is very uneven, the attention to humanities and social sciences is not enough, and there is no interdisciplinary training of talents.” (Qian and An, 1986).

Rebuilding of the comprehensive colleges and universities: 1980∼1985

After the reform and opening up, Chinese higher education structure began to be fundamentally adjusted and transformed into a comprehensive university. In the late 1970s and early 1980s, some scholars began to advocate the transformation from traditional engineering colleges to comprehensive universities. Professor Cai Keyong of Huazhong University of Science and Technology pointed out in 1980, “Since the 1950s, modern science and technology have developed very rapidly. All developed countries are adjusting the structure of higher education. The overall trend is the combination of science, engineering and humanities, which is the common feature of famous universities in developed countries” (Cai, 1980).

At the 1985 “Sino-American University presidents’ Forum”, the Chinese president believed that the adjustment of colleges and departments in 1952 weakened the strength of some famous comprehensive universities, and the practice of establishing a large number of specialized colleges and universities affected the infiltration and development of subjects, which was unfavorable to the quality of talent training. Presidents of American universities also agreed that transforming specialized colleges and universities into comprehensive universities should be advantageous. They suggested a fundamental adjustment of Chinese higher education structure and even suggested the merger of Nanjing University and Nanjing Institute of Technology (Qian and An, 1986).

Since the 1980s, China had developed comprehensive colleges and universities. The first step out of the Soviet model was the transformation of engineering universities to science and technology universities. In this transformation process, MIT in the United States was regarded as a model of learning. In China, a successful example of the transformation from an engineering college to a comprehensive university is Huazhong University of Science and Technology. This university implemented this transformation under the leadership of Zhu Jiusi, who visited University of California, Berkeley in 1979 and met with Tian Changlin. In 1981, Zhu Jiusi hired Tian as an honorary professor of the university (Zhu, 1986). The American experience played an important role in Zhu Jiusi’s reform. After that, other engineering universities also carried out reforms. Tsinghua University gradually established departments of mathematics, physics, chemistry, biology, economics, and management engineering in the early 1980s (Gao and Xie, 1986). In addition, traditional liberal arts and science universities learned from the American model and included engineering, medicine, and other disciplines. In January 1984, with the approval of the Ministry of Education, Fudan University established the School of Technical Sciences. Subsequently, the university also set up a number of other departments. In addition to developing new disciplines in the university, another way to develop a comprehensive university was through the merger of colleges and universities. For example, Zhejiang University put
forward the idea of merging Hangzhou University, Zhejiang Agricultural University, and Zhejiang Medical University in 1985 (Zhu, 1986).

Reducing the number of universities affiliated to administrative departments from mid-1980s to 1990s

In 1985, in the process of drafting the decision of the CPC Central Committee on the reform of the educational system, Chinese American scholar Tian Changlin, as a consulting expert, suggested that all “specialized universities affiliated to various administrative departments” should be abolished. The opinions of Tian Changlin and others were valued and adopted by relevant parties. Unfortunately, they were not fully accepted in the end (Tian, 1986a). By 1990, 354 of the 1075 colleges and universities in China were still directly under the central departments, including 36 under the State Education Commission. In 1998, the State Council promulgated a decree to adjust the governance systems of 211 colleges and universities affiliated to 9 central departments. Except for a small number of colleges and universities, most colleges and universities were jointly managed by the central government and the local government after the decree was promulgated. These colleges and universities eventually broke away from their affiliation with the central departments.

Strengthening the scientific research function of the university and establishing the connection between the university and the Academy of Sciences

Reexamining the relationship between teaching and scientific research in Soviet system: 1950s

To some extent, the separation of teaching and scientific research was a misreading of the Soviet Model of higher education by China. The colleges and universities in the Soviet Union were divided into three types: comprehensive universities, industrial universities, and specialized colleges, which were influenced by the continental model. The comprehensive universities had a very close relationship with the Academy of Sciences. Each professor in the comprehensive universities engaged in scientific research; some of them were academicians, while many researchers in the Academy of Sciences were also university teachers. Overall, most of the higher education institutions didn’t conduct scientific research directly. While since 1956, the Soviet Union gradually strengthened the scientific research of universities, and the research funds of universities increased steadily and abundantly. In the late 1970s, the research funds of universities were equivalent to those of the Academy of Sciences (Zhang, 1988). Scientific research became one of the tasks of Soviet universities. Some universities established special institutions and research centers. The state and enterprises also entrusted a large number of scientific projects to universities. These measures promoted the development of scientific research of Soviet universities.

In the 1950s, in accordance to the transformation of the Soviet Union’s higher education system, some Chinese scholars realized and emphasized the importance of scientific research of universities when they investigated Soviet higher education. However, these voices did not receive the attention they deserved—much less produce tangible results. When he introduced Soviet higher education in 1951, Cheng Jinwu pointed out that “the scientific research is one of the tasks of Soviet universities. Each professor is a researcher at the same time... some universities set research institutions, and some experts and scholars are not engaged in teaching but in scientific research.” (Cheng, 1951) In 1952, Fu Ke wrote that “Soviet universities attach importance to
scientific research.” (Fu, 1952) From September 10 to 23 in 1953, the Ministry of Higher Education held a national conference on Comprehensive Universities in Beijing. This conference emphasized that the teaching plans of various majors in comprehensive universities “should be formulated according to the advanced experience of the Soviet Union and combined with the China’s conditions”, and comprehensive universities “should carry out scientific research step by step in a planned way to combine research and teaching closely.” (Anonymous, 1953) At the end of 1957, Guo Moruo, the president of CAS, led a delegation to visit the Soviet Union and indicated in the report that the combination of teaching and scientific research was a principle of Soviet universities. (Guo, 1958) When China realized that the Soviet Union had changed its previous practice of separating teaching and scientific research, it promoted the reform of strengthening scientific research in universities as well. However, the function of scientific research was not given attention during the adjustment of China’s higher education in the early 1950s. Until 1980, many people still insisted that universities should only serve as teaching centers.

The concept of ‘Dual centers’ in late 1970s and 1980s

In the 1970s, the scale of scientific research in Chinese universities was still very small. In 1977, CAS accounted for 42.9% of the SCI papers published in the Chinese mainland. Also in 1977, after Deng Xiaoping returned to work and took charge of education, science, and technology, the problem of the relationship between teaching and scientific research in universities was solved (Qian, 1985a). Deng Xiaoping put forward that “key universities are not only the center of teaching, but also the center of research. The scientific research of universities should be included in the national plan.” Since then, the stakeholders discussed how to build universities into “two centers.”

The most important aspect of the reforms of Chinese universities in the 1980s was the restoration of the research function of universities and the establishment of the connection with the research system. In 1984, Tian Changlin, a Chinese American scientist and the then vice Chancellor of the UC Berkeley, pointed out in his speech that the university should be built as a center of teaching and scientific research. He proposed that “the economy of the Soviet Union has been stagnant recently...even the true level of research in the national defense industry is not particularly high. Most of the reason is that their scientific research and education system are not perfect. The complete separation of teaching and scientific research is the system’s Achilles heel. Universities focus on teaching rather than scientific research, and the research works are undertaken by the Academy of Sciences. We have learned from the Soviet Union in the 1950s and suffered a great loss. Now, research and teaching must supplement each other, and the two centers must also supplement each other in the higher education system.” (Cong, 1984) In 1985, Qian Weichang wrote that “China’s higher education in the new era should develop into a center with the combination of teaching and scientific research...two centers and one team. This is the practice of many universities in the United States and Western Europe...it should also be the direction of the further development of China’s higher education.” (Qian, 1985b) Also in 1985, the first conference of presidents of Chinese and American universities was held. The relationship between teaching and scientific research in universities was an important issue at the meeting. Qu Qinyue, the president of Nanjing University, advocated that CAS and the universities “gradually become one from two.” (Anonymous, 1986) Gao Jingde, the president of Tsinghua University proposed in his speech that “We hope to gradually build our universities into schools which combined teaching and scientific research...called ‘research universities’.” (Gao and Xie, 1986) In 1986, Tian Changlin indicated that Chinese universities were strengthening scientific research, which was the right way to get rid of the Soviet Model. He said, “What makes me happy is that the research team of universities has been established in the two years since I came back. In the past, the Soviet
Union had a terrible practice of completely separating research from teaching. Until now, the Soviet Union has suffered huge losses...The teaching center and scientific research center of universities are completely necessary. The research team must be established in the higher education system.” (Tian, 1986b).

National Science Foundations to support research activities in universities: late 1980s

In 1986, inspired by the American model, China established the National Natural Science Foundation and the National Social Science Foundation (Shan, 1988). The establishment of these two research councils enabled university teachers to obtain research funds by applying for projects, which greatly promoted the development of university scientific research. In the same year, the National Natural Science Foundation of China received 11,842 applications and finally approved 3432 funded projects. In addition, 2218 projects were granted to universities, accounting for 64.6% (Yang et al., 1987). Also in 1986, Tang Aoqing, the director of the National Natural Science Foundation of China and the vice president of the Chinese society of higher education, pointed out that teachers in universities “must engage in both teaching and scientific research...teaching cannot be done well without research.” As for how to improve the separation between teaching and scientific research, Tang suggested that “combining teaching and scientific research requires the personnel of universities and the Academies of Sciences to work part-time with each other.” (Huang & Zhao, 1986).

In 1987, Zhang Youshui, deputy director of the Science and Technology Department of the Ministry of Education, put forward that “we should get rid of disadvantages and gradually create conditions for the healthy development of scientific research in universities. Universities should actively carry out scientific research at different levels and with emphasis, coordinate research and teaching, and set appropriate research goals.” (Zhang, 1987) In April 1987, the Science and Technology Department of the Ministry of Education held a conference of scientific research directors of some universities. One of the participants proposed that universities had evident advantages in scientific research because they had complete disciplines. The close combination of research and teaching was conducive to cultivating talents and developing science, technology, and culture, which was the reason why the basic research of countries all over the world mainly depended on universities (Wang, 1987).

Driven by the development of science and technology and after a series of debates, a growing number of people realized the necessity of combining teaching and scientific research. Better research conditions and a positive research atmosphere have gradually formed in universities, and scientific research has become one of the key contents of teacher assessment.

Embracing internationalization: From “learning from the Soviet Union” to “learning from foreign countries”

During the Republic of China (1912–1949), China had actively participated in the development of global science and technology. Until the early 1950s, China remained an active member of the World Federation of Scientific Workers (WFSW). In April 1956, the WFSW “16th Executive Council and 10th Anniversary Meeting” was held at the Fragrant Hills Hotel in Beijing. More than 1400 scientists from 17 member states outside the United States participated in the meeting (Zhao, 1956). However, during this period, China mainly maintained academic contacts with other communist countries and African countries and had very limited exchanges with Western academic communities. After Sino-Soviet relations broke down, China began to refocus on scientific research in Western countries. In the mid-1960s, China began to exchange scientific and technological documents with the United States and other Western countries (Dean & Macioti, 1973).
In 1965, China requested and obtained several papers on atmospheric physics from the MIT library. China also hosted a few international conferences, such as the Beijing Science Symposium in 1964 (Orleans, 1967). After 1966, China cut off educational and academic exchanges with the outside world. For several years, China’s international academic exchanges were disconnected, and international publications were halted.

After 1978, in the de-Sovietization of China’s technology and education, how to restore exchanges with the Western world became a key concern. Chinese scholars were increasingly participating in international conferences. From 1979 to 1981, Chinese university teachers went abroad to attend international academic conferences 370 times (Hu, 1982). In 1985, Chinese universities submitted 5793 papers to international academic conferences. At the same time, Chinese universities began to hold international conferences. A total of 159 international conferences were held between 1978 and 1987 (Gong & Zhao, 1988). Educational exchanges between China and other countries also began to go on the right track. Of course, the university faculty members who participated in international conferences were still in the minority at that time. For example, in 1981, Huazhong Institute of Technology sent 14 teachers to participate in 12 international academic conferences (Wang, 1981). In 1984, 17 teachers from Zhejiang University participated in an international conference. In addition, university-level exchanges between Chinese universities and foreign universities were gradually being institutionalized. In 1982 alone, 106 higher education institutions in China and 151 corresponding institutions abroad established various forms of international collaborations (Hu, 1982). One of the main functions of establishing these connections was to send university teachers for research visits abroad. They were called visiting scholars. However, only a few Chinese scholars who visited the United States in the 1980s established international research cooperation relationships with their host professors because most of them could not enter the world academic frontier within a short period.

In general, in China’s de-Sovietization reforms, learning from western countries, especially from the United States, played an important role. In 1981, the National Education Commission proposed to hold the “Sino-American University Presidents Conference.” After four years of preparation, this vision became a reality. In July 1985, Nanjing University hosted the first Sino-US University Presidents Conference. More than 20 presidents of top universities from China and the United States attended the meeting to discuss the challenges faced by higher education in the two countries, including the relationship between teaching and scientific research, the disciplinary structure of Chinese universities, and the exchange and cooperation between Chinese and American universities (Gong, 1986). Wan Li, then Vice Premier of the State Council, met with the presidents of American universities who attended the meeting. He pointed out that China’s higher education reforms in the past few years adopted the opinions of many American experts (Wan, 1986).

Giving more autonomy to universities was also based on the experience of American universities. After the reform and opening up, one of the biggest institutional obstacles faced by universities was the lack of autonomy, which hampered the cultivation of innovative talents and the development of research. After the 1980s, education began to implement the decentralization reforms gradually. The university gradually implemented a system of governance at the central and provincial levels. In 1993, the central government directly managed 358 colleges and universities, which decreased to 116 by 2000. During the same period, the number of institutions of higher learning managed by the provincial government increased from 704 to 925 (Chen, 2003). Increased university autonomy was also seen as one of the manifestations of clearing the influence of the Soviet Model (Orleans, 1987).

In the de-Sovietization reforms, in addition to the structural reform, the more profound reform took place in the level of knowledge and scientific research, that is, abandoning the previous binary division of capitalist academic/socialist scholarship, to learn the Western academic
paradigm more comprehensively. This change was prominent in the fields of statistics, economics, sociology, education, political science, genetics, etc. Taking statistics as an example, even in the 1950s, Chinese scholars refused to divide the West from the non-West (or North from the South) but instead sought “multi-directional influences and channels.” Chinese scholars resumed contact with American and Japanese academic circles in 1979 and 1980, respectively. Among the humanities and social sciences, economics might be the most radical to break free from the influence of the Soviet Model and embrace the Western academic paradigm. At the invitation of the Chinese government, Lawrence Klein held a summer workshop in 1980 to provide training in econometrics to Chinese government officials and scholars. After that, the Chinese Academy of Social Sciences established the Institute of Econometrics (Gewirtz, 2017).

Conclusion

Since the reform and opening up, China has made great progress in economy, education, culture, and other fields. The history of reforms and opening of higher education itself is also an important part of the history of China’s reform and opening up policy. However, no systematic analysis has been conducted for this phenomenon. Hence, this article attempts to provide a historical interpretation of the reforms of Chinese universities in the 1980s and 1990s from the dual perspectives of de-Sovietization reforms and learning from the West.

After the disintegration of the Soviet Union, the former Soviet Union countries also began to reflect upon and reform the Soviet higher education model (Huisman et al, 2018). In contrast, China’s de-Sovietization reforms started earlier. Since the late 1970s, China’s university system has undergone another transformation; while affirming the significance of learning from the Soviet Union in the 1950s, China has gradually reflected on and eliminated the adverse effects of this model. Furthermore, it has learned from the United States, Britain, and other Western countries. The reforms of higher education since the late 1970s was in many ways a reaction to the model of learning from the Soviet Union in the 1950s, which was reflected in different aspects, such as the emphasis on the scientific research function of the university, the introduction of general education in undergraduate education, the internationalization of scientific research, emphasis on university autonomy, etc.

These transformations were attempting to diminish the influence of the traditional Soviet Model, reflecting the characteristics of de-Sovietization. In this process, learning from Western countries was the key. In other words, de-Sovietization and learning from the West went hand in hand. China has absorbed the experience of Western countries, especially American higher education, through various means, such as educational inspections, exchange of international students, the Sino-US University Presidents Forum, and international seminars. Compared with the characteristics of the Soviet Model of centralized management and highly specialized talent training mode, American higher education emphasizes more on the autonomy of the university and general education, for it will better promote the all-round development of talents. Notably, the de-Sovietization reforms of China’s higher education was carried out gradually, not in one step, and the process of reforms is also affected by geopolitical factors, especially the relationship among China, the United States, and the Soviet Union. The higher education reforms are integrated parts of political and economic reform, but the entire reform process is not completely dominated by the government. In the process of reforming the undergraduate education curriculum, the autonomy of colleges and universities has played a very important role.

Along with the great social changes in China, higher education has also undergone in-depth market-oriented reforms and has constantly explored its own development path, thus seeking to form a Chinese model of higher education (Zha & Hayhoe, 2014). From the end of the 1970s to the 1990s, after more than 20 years of transformation, Chinese universities gradually broke free from
the shackles of the Soviet Model, learned the higher education model of the United States and Europe, and re-integrated into the international mainstream academic circle centered on the United States and Europe. In this process, Chinese universities followed academic logic, expanded university autonomy, and established an open and competitive academic market. This process, in a sense, aims to throw away the burden of historical heritage and re-engineer the higher education system to realize its autonomy.

However, the legacy of the Soviet educational model has not completely disappeared. After decades of reforms, the DNA of the Soviet Model remains in China’s higher education system. First, from the perspective of the types of higher education institutions, a large number of specialized universities are still dominant in some disciplines (such as medicine, agronomy, and foreign language). Second, the planned economy mentality in higher education still survives and thrives in the Chinese higher education system. In China, the government still wants to take full control of the higher education system, and the number of students enrolled in colleges and universities is still determined by the government. Just as the internationalization process of Russian universities was influenced by its legacy, the imprint of the Soviet Model in China will continue to have a lasting impact on the development of Chinese universities.

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