

Seeking Excellence in the Move to a Mass System: Institutional Responses of Key Chinese Comprehensive Universities

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Abstract Since the late 1990s the Chinese government has implemented two key policies for the development of higher education. The first was launching Project 985, with the purpose of seeking excellence through creating internationally competitive universities. The second was a radical move to a mass system of higher education. In this context, China's top universities have faced dual missions, each with their challenges: playing key roles in the revolutionary expansion process on the one hand and closing the gap between them and top universities around the world through the implementation of Project 985, on the other. It is thus important to know about how these institutions have transformed themselves for excellence through the implementation of these policies. With the three cases of Peking, Nanjing and Xiamen Universities, this paper aims to examine each institutional response and the broad changes that have come about in these top Chinese comprehensive universities. It looks especially at the divergent trajectories these institutions have followed in balancing their elite and mass education functions, their global, regional, national and local missions, the pursuit of excellence alongside of a commitment to equity, efforts at curricular comprehensivization while preserving unique historical strengths, and finally globalization and localization. From two higher education frameworks, one based on epistemological considerations and the other on political philosophy, that are equally important in light of China's traditions, the paper concludes that Chinese universities will continuously but selectively respond to the national expansion policy with various institutional models of seeking excellence that enable them to contribute to Chinese society and the global community in the future.

Keywords world-class universities, implementation, higher education expansion, China

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Introduction

In the mid-1990s, Hayhoe (1995) anticipated the need for China's move to a mass system of higher education, in her widely cited paper, "An Asian Multiversity: Comparative Reflections on the Transition to Mass Higher Education in East Asia." Before the revolutionary expansion policy was officially adopted in 1999, many scholars in China's mainland and policymakers also debated the need for speeding up the transformation of Chinese higher education from an elite to a mass system (Li & Lin, 2008). These debates were very complex, in terms of the pace, scale, quality, quantity, structure and efficiency of higher education development. Three major points of view emerged from them: "controlled development with a stable scale," "accelerated development with radical expansion," or "limited development with appropriate expansion" (Zhou, 1997; Jiang, 1998; He & Lan, 1998; Liu, 1998; Tang & Zuo, 1999). During that time, the Chinese government was very cautious about the possibility of radical expansion, and held to a policy of stable development with a focus on "internal development" (Zhou, 1998; Ji, 1999). There were two historical reasons that could explain the adoption of this conservative approach. On the one hand, the painful lessons of the Great Leap Forward in the late 1950s remained in the minds of policymakers, as well as the problems of an over-enthusiastic imitation of foreign models in the late 1970s. They were thus very doubtful about a rapid expansion. On the other hand, many were also committed to the centrally planned traditional approach to handling student recruitment and job assignment.

In the late 1990s, the Chinese government made two significant strategic decisions. The first was the establishment of Project 985. Jiang Zemin, the then General Secretary of the Central Committee of the Chinese Communist Party (CPC) and President, declared that "for modernization, China must have several world-class universities" (Ministry of Education, 1998, p. 2). His speech resulted in the strategic policy of allocating priority resources from the state and local governments to build world-class universities (Li, in press). On December 24, 1998, the Ministry of Education issued the "Action Plan for Educational Revitalization Facing the 21st Century" which was approved by the State Council on January 13, 1999. To commemorate President Jiang's speech on May 4, 1998, this national policy was widely called the Project 985.¹ The other strategic decision was made in early May of 1999. While hosting the State

¹ Project 985 officially started in 1999, and there were a total of 43 universities enlisted in this project by 2010, including the first batch of nine institutions, that included Peking, Nanjing and Xiamen Universities.

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Council Work Meeting, then Prime Minister Zhu Rongji decided on a radical expansion of new student recruitment to universities (Yue, 2004). The Third National Education Work Meeting, held in the late June of the same year, proposed the goal of achieving a growth of gross enrollment rate in higher education of approximately 15 % by 2015 (Ministry of Education, 1999). In fact, this policy was influenced by Martin Trow's theory of higher education expansion, and marked the beginning of a radical expansion process known as the so-called historical stride of higher education (Li & Lin, 2008).

Obviously, the two policies have different focuses. The institutions selected by Project 985 are more limited than by the Priority Construction Project in the seventh Five-Year Plan and Project 211, which started in 1993,² but the amount of funds is much larger, and the commitment to the pursuit of excellence toward world-class universities is stronger. At the same time, the period of rapid expansion since 1999 might be seen to embody a value of democratization in education. Essentially, the goal is to catch up with the international trend of accelerating the move from elite higher education to a mass system. This allows many more young people to receive a higher education and facilitates the equalization of education opportunities. As China is rising as a global economic and cultural power, these two strategic policies have actually served as necessary steps for China's rejuvenation and for the country to play a key role in the international community. Through the implementation of the two policies, many Chinese universities have managed to expand their size rapidly, thus pursuing a greater degree of educational equality while at the same time strengthening the existing but limited elite education which they offer. In fact, different institutions at different levels in the system have played distinct and different roles in this historical process.

This paper selects three key comprehensive universities—Peking University (PKU), Nanjing University (NJU) and Xiamen University (XMU)—out of the 12 Chinese universities in the Social Sciences and Humanities Research Council of Canada (SSHRC) Research Project led by Professor Ruth Hayhoe at the University of Toronto, to examine their institutional responses to the parallel policies of massification and building world-class universities, including the challenges faced, the strategic decisions made and the reforms carried out with the support of Project 985. Particularly, it looks into how the three institutions

² Project 211 involves the construction of around 100 key universities to address the needs of the twenty-first century. It started in 1993 and by 2010 there were a total of 107 universities enlisted for priority funding. Peking, Nanjing and Xiamen Universities are also among them.

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have balanced their elite and mass education functions, their national and local missions, their pursuit of excellence and their commitment to equity, their response to globalization and their awareness of China's distinctive heritage, and their orientation to being comprehensive in the disciplines they offer while maintaining certain unique curricular areas. Through the discussion of these three cases, this paper attempts to reveal how China's top comprehensive universities have responded to the national call to clarify their mission and undertake new responsibilities, including both new initiatives for expansion and a renewed pursuit of excellence. Most of all, the paper intends to create a better understanding of the process of seeking excellence in China's move to a mass system of higher education, a process which is deeply embedded in China's modernization efforts in the new era of globalization.

The Role of the University

It is commonly observed that in today's rapidly changing society, the role of universities has become increasingly important. Compared with the medieval university, the so-called ivory tower (Rees, 1976, p. 82), the modern university now has more and more societal commitments, as elaborated in the comment by famous American public intellectual Henry Commager that the modern university is, "next to government itself, the chief servant of society, the chief instrument of social change...It is the source, the inspiration, the powerhouse, and the clearinghouse of new ideas" (Commager, 1965, p. 79). It is also widely recognized that a university should not be merely a mirror of society but rather a beacon for society (Hutchins, 1968, p. 107).

The discourse is rooted in two fundamental frameworks through which the university has established its legitimacy (Brubacher, 1982), an epistemological framework and one derived from political philosophy. In the epistemological framework, universities pursue knowledge as "a matter of curiosity" (Flexner, 1930, pp. 10–14), of thinking "the unthinkable" (Hutchins, 1952, p. 41), or of uniting the young and the old in the "imaginative" consideration of learning (Whitehead, 1929, pp. 92–93). On the other hand, the political purposes of universities come as no surprise, since almost all great philosophers have treated them as a branch of politics (Brubacher, 1982, p. 14). This is evident in both the West and East, from Plato in his *Republic*, Aristotle in his *Politics* and Dewey (1916) in his *Democracy and Education*, to classics of Confucian philosophy such as the *Analects* of Confucius, the *Theory of Education* (Xueji) and Cai Yuanpei (1912) in his *Opinions on the New Education*.

For Brubacher (1982), the two dichotomous frameworks are often conflicting

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instead of being reconcilable. However, it seems that there has been no such problem in the Chinese tradition. For example, classical Confucian theorists have reconciled them in the following way. On the one hand, higher learning is viewed as “to let one’s innate virtue shine forth, to renew the people, and to rest in the highest good” (*The Great Learning [Daxue]*), which focuses on individual cultivation and growth in knowledge and morality. On the other hand, the *Theory of Education (Xueji)*, probably the first essay written specifically on the theme of education in the world, extended the idea of knowledge pursuit to service to the state and society in terms of the public good (Hayhoe & Li, 2010, p. 95). These classical Confucian ideas were continued in a lively way by Cai Yuanpei (1912), who transformed PKU into a modern university between 1917 and 1923, and by Guo Bingwen who established the National Southeast University, later to become NJU at around the same time (Li, Lin, & Gong, in press). As the tone set by these two influential university leaders nearly one century ago has laid a solid foundation for the current development of Chinese universities, it will be important to examine how Chinese universities have sought excellence in their move to a mass system, within the two fundamental frameworks suggested by John Brubacher.

Today higher education systems have become much more complex and nuanced, and there are fundamental divergences among various types of institutions. Meanwhile, there are different levels of higher education, from two-year community colleges and vocational schools to general undergraduate universities and top research universities. The differences in structures, functions, scale, and patterns play a determining part in the varied roles these individual institutions have to carry out. One of the authors has argued that “a variety of social needs should be addressed by diversified higher education institutions” and “different types of universities have different social responsibilities to fulfill distinct social demands” to meet (Gong, 2008).

Social Responsibility of the Three Universities

Such national comprehensive universities as PKU, NJU and XMU are in the top echelon among the more than 2 200 institutions in the Chinese higher education system. The Chinese government has specific expectations of them that result in institutional missions and social responsibilities quite distinct from other universities, even though they share some features common to the overall system.

The official kickoff of Project 985 was signaled by the “Action Plan for Educational Revitalization Facing the 21st Century” issued on December 24,

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1998, and it includes China's nine most elite universities. These top universities account for less than 0.5 % of the higher education system, yet they host nearly 50 % of the key laboratories, one-third of the annual research budget, 20 % of Master's students, and 30 % of doctoral students (Ministry of Education, 2003). For this reason, they are considered as a kind of vanguard of elite Chinese universities.

The first batch of the 985 institutions are sometimes called the "two plus seven," the two referring to PKU and Tsinghua University with a goal of becoming world-class universities and the other seven including Fudan, Nanjing, Shanghai Jiaotong, Xi'an Jiaotong and Zhejiang Universities, also the University of Science and Technology of China and the Harbin Institute of Technology, with a goal of becoming high quality universities. There is no specific distinction made between "world-class" and "high quality," but in striving for internationally recognized status, it is very clear that the Chinese government has a firm intention to differentiate even among the roles of the top nine Project 985 universities with varying expectations of different institutions in the group.

Differences are obvious in the degree of and approach to government support for the first batch of the nine universities in Project 985. As shown in Table 1, the priority input for PKU and Tsinghua were at the same level from 1999 to 2001. In these three years, both institutions received 1.8 billion yuan provided solely by the central government.³ The total amount of 3.6 billion yuan invested in the two institutions accounted for nearly 50 % of the total budget of 7.4 billion yuan committed by the central government. Funding for other universities was provided jointly by the central and local governments or other public sources. These are the so-called Province and Ministry co-sponsored universities. For example, Fudan University, Shanghai Jiao Tong University, and NJU all received 1.2 billion yuan each for three years, of which 0.6 billion yuan was provided by the Ministry of Education and another 0.6 billion yuan was provided by Shanghai or Jiangsu Province. As Zhejiang University was merged with Hangzhou University, Zhejiang Agricultural University, and Zhejiang Medical University, it received a total of 1.4 billion yuan from Project 985. The Ministry of Education and Zhejiang Province each provided 0.7 billion yuan. Xi'an Jiao Tong University, for its part, received 0.9 billion yuan, of which 0.6 billion yuan was provided by the Ministry of Education and 0.3 billion yuan was provided by Shaanxi Province. The 0.9 billion yuan received by the University of Science and Technology of China came from three providers, the Ministry of Education, Anhui Province, and the Chinese Academy of Sciences, each contributing about

³ As of July 28, 2010, the exchange rate is 1.00 yuan = 0.147478 US\$.

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one-third of the total funding. The Harbin Institute of Technology was funded by the Ministry of Education, the Heilongjiang Provincial Government, and the Commission of Science, Technology, and Industry for National Defense for 0.3 billion yuan, 0.4 billion yuan, and 0.3 billion yuan, respectively (Ministry of Education, 2001). The universities added to Project 985 after the year 2000 were all Ministry-Province co-sponsored universities and some had three or four sponsors. For example, XMU was co-sponsored by the Ministry of Education, Fujian Province and Xiamen City. The Ocean University of China was co-sponsored by the Ministry of Education, Shandong Province and the State Oceanic Administration, and Qingdao City.⁴ The data relevant to the first phase of Project 985 are shown in Table 1.

Table 1 Fund Received in the First Phase of Project 985 (unit: billion yuan)

Institution	Amount	The central government	Local government, etc.
PKU	1.8	1.8	–
Tsinghua University	1.8	1.8	–
NJU	1.2	0.6	0.6
Fudan University	1.2	0.6	0.6
Shanghai Jiao Tong University	1.2	0.6	0.6
University of Science and Technology of China	0.9	0.3	0.3+0.3
Xi'an Jiao Tong University	0.9	0.6	0.3
Zhejiang University	1.4	0.7	0.7
Harbin Institute of Technology	1.0	0.3	0.4+0.3
Total	11.4	7.3	4.1

Source: *The Yearbook of China's Education* (2000), pp.181–182.

Since such universities as NJU, Fudan and Zhejiang Universities are Ministry-Province co-sponsored universities, they have to meet the demands from both the national and the local in terms of research and educational and social services. Their institutional mission and responsibility are thus different from those of PKU and Tsinghua, which are funded solely by the Ministry of

⁴ Retrieved on February 8, 2010, from Ministry of Education website <http://www.moe.edu.cn/edoas/website18/94/info13494.htm>

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Education.

Peking University: Leading Culture

Peking University, the former Imperial University of Peking, has always had a strong sense of responsibility for Chinese society, and has been viewed as “an iron shoulder supporting morality and justice,” (*tiejian dan daoyi*), as expressed in a poem by revolutionary intellectual Li Dazhao. Professor Chen Pingyuan, Chair of PKU’s Department of Chinese Language and Literature, recently said, “PKU is not a world class university at this moment nor will it be in the short term. However, PKU’s role in the history of human civilization cannot be matched by many world-class universities. PKU is rising along with China, an ancient country in the East, and PKU is deeply involved in and to some extent affects this historical process” (Chen, 2001, May 16). A similar point was made in the portrait of PKU that appears in the book coming out of the SSHRCC Project: “F[f]rom the May Fourth Movement of 1919 onwards, it had been involved in every significant cultural and political movement” (Hayhoe, Zha, & Yan, in press). Both faculty and students of PKU have always stood up “as a conscience to the nation”,⁵ especially at critical stages in modern China’s development over the 20th century, from struggling for sovereignty, getting rid of traitors to the nation at home and embracing the Western concepts of “Mr. Democracy and Mr. Science” during the May Fourth Movement, to facing a full-scale Japanese military invasion in 1936 when the feeling was “Even though Northern China is vast yet it cannot accommodate a single quiet study desk.” Then after 1949, to standing up to “the Gang of Four” in a protest in memory of Premier Zhou Enlai following the 1976 Tiananmen Incident, and then holding a banner with “Hello Xiaoping” when Deng Xiaoping came to power, saying that China’s rejuvenation begins now and begins with us.”

After thorough discussion among teachers and students that began in 2005, PKU’s new mission statement was finalized to celebrate its 110th anniversary in 2008. The statement set out four distinct elements in PKU’s mission: moulding and casting a broad range of talents (*taozhu quncai*), discovering new principles of knowledge (*faming xinli*), leading culture (*yinling wenhua*) and serving society (*fuwu shehui*). All have historical roots in PKU’s tradition and meet the needs and challenges of China’s future and indeed that of the world. Professor Li Qiang, Assistant to PKU’s President, participated in the discussion and formulation of the new mission statement. He noted, “although the four parts of

⁵ These words were from Professor Wang Yongquan, the former provost of Peking University and the first director of the Institute for Higher education. See Hayhoe, 2006, p. 260.

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the mission statement encompass the historical features of PKU, the aims of training personnel, the focus on basic research, and service to society are the responsibilities of many research universities. The third element, 'leading culture,' may however be unique to the ethos of PKU."⁶ It shows that PKU's core mission and responsibility is not only to train high-quality and versatile professionals across a wide area and to "continue broadening the knowledge frontiers and opening new directions to the future through all ways possible to benefit the nation," but also to contribute to the rejuvenation of China's culture. This means finding ways to combine Chinese traditional culture with contemporary culture, and to integrate the best from China with cultural developments in the wider world (Hayhoe, Zha, & Yan, in press). This strong sense of socio-cultural responsibility to China and to the world, comes not only from the commitment and high intellectual standards of PKU's students and faculty, but also from PKU's longstanding tradition of independent thought and free expression within an inclusive and diverse environment. This has enabled PKU to maintain a critical spirit and a deep concern for social justice at a time when secular and materialistic temptations are prevalent and higher education faces both economic and political pressures.

Nanjing University: Pursuing Excellence

Among key universities in China, NJU seems to be somewhat of a unique institution. This century-old university has an impressive and indeed brilliant history. In the 1920s, it was said, "PKU is known for its literature and history, while National Southeast University is famous for its science." NJU was called National Southeast University from 1920 to 1928 and during the subsequent period, as National Central University, it was widely recognized as the leading university of the Republic of China, because it had a comprehensive set of disciplines, excellent academic faculty, and was located in Nanjing, China's republican capital. After being renamed Nanjing University in August 1949, with the shift of the national political and cultural center to the Northern capital of Beijing and with the removal of the Law, Business, Engineering, Agricultural, Medical and other schools during the adjustment and restructuring of national universities in 1952, NJU was essentially marginalized. In contrast to PKU, NJU was twice passed over when key institutional status was conferred on a small number of universities by the Ministry of Education in the 1950s. It was only included in the list of key universities when this was expanded to 64 universities in the 1960s. The most demoralizing time for NJU came when its president,

⁶ Internal document of Peking University "The mission of Peking University."

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Kuang Yaming put forward the “Proposal 835” in 1985. The aim of this proposal was to build high quality universities in China with priority funding to be given to a limited number of higher education institutions. It drew the attention of such central leaders as Deng Xiaoping, and became the most important aspect of the strategic policy making for higher education development. Unfortunately, NJU was not given any priority funding again. This was a severe blow to NJU, but the then newly appointed President, Qu Qinyue, rallied the university to rise above these hardships arising from its political legacy and “have the ambition and resolve to build a first-class university through diligence and hard work” (Gong, 2004). The difficult process of “redeeming the past through academic excellence” thus began to bring about NJU’s rejuvenation in the 1990s.

The NJU people were proud that, during the 7th and 8th Five-Year National Development Plans, without any extra investment from the central government, NJU achieved impressive accomplishments, relying on its sustained efforts in academic research, and personnel training. For example, from 1992 to 1998 NJU ranked number one among Chinese universities on several academic indicators, including the number of research articles published in the Science Citation Index (SCI) journals. In the mid 1990s, it was one of the first universities enlisted in the national Project 211. In the late 1990s, it was included in the first batch of universities in Project 985 (Li, Lin, & Gong, in press) and became a member of the C9 League.⁷

NJU people are also proud of their pioneering historical contribution to the reform movement in contemporary China. In 1978, an influential article entitled “Practice Is the Sole Criterion for Testing Truth,” by Hu Fuming, an assistant professor who was the then vice-chairperson of NJU’s Philosophy Department, was published in the *Guangming Daily*, the national leading newspaper for intellectuals. It has been seen as a milestone in rebutting the “two whatevers” doctrine of Mao’s successor, Hua Guofeng, and a rallying cry for Deng Xiaoping’s return to power (MacFarquhar, 1991, p. 378).⁸ In addition, this

⁷ The C9 League was formulated in 2003 by the nine Chinese universities first selected into Project 985, imitating the Ivy League in the U.S., the Russell Group in the U.K., and the Go8 in Australia. The nine elite universities include Peking, Tsinghua, Fudan, Nanjing, Shanghai Jiaotong, Xi’an Jiaotong, Zhejiang Universities, the University of Science and Technology of China and Harbin Institute of Technology. The C9 League decided to create a regular platform for the group to collaborate with each other in seeking world-class standing, with an annual Forum on this theme. At the latest, held recently at Xi’an Jiaotong University, the C9 League agreed on creating joint or collaborative programs, a C9-Summer School for educating highly talented students, and efforts to find win-win solutions in enhancing the quality of education and research (Publicity Department, 2009, October 9).

⁸ The “two whatevers” refers to Hua Guofeng’s statement that “we must support whatever

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article led to what was called the “great discussion on standards for truth” in the late 1970s, and promoted a movement of seeking for truth independent of ideological lines, rooted in historical reflection and oriented towards reform. The movement is often compared by scholars to PKU’s stance during the May Fourth Movement and is used as evidence to support the claim that research universities should become think tanks that stimulate social reform and development.

In pursuit of excellence, NJU set its long- and medium-term goals for reform and development in the following terms in 2010:

- An indispensable think tank for contemporary China and future society, boldly exploring and disseminating truth regardless of gain or loss, analyzing conflicts and issues in the contemporary world and transitional societies, influencing the scientific policy making of both national and local governments, and providing new ideas, theories and strategies for the China’s rejuvenation as a rising power, following the path set out in its influential 1978 essay “Practice Is the Sole Criterion for Testing Truth.”

- A cradle of innovative talent that will take leadership in various fields in the future, exploring its own unique model of innovation in undergraduate and graduate education, and contributing to educating Chinese talent who will make achievements such as those of Galileo, Newton, Einstein and Bill Gates in response to the Qian Xuesen (Tsien Hsueh-shen) Question, and based on its own unique and innovative educational model.

- Offering a high level of service to society through scientific advancement and technology transfer, that facilitate industrial transformation and economic growth and in turn bring about social progress in Jiangsu Province, the Yangtze River Delta, and the nation, drawing on the talent, knowledge, technology and information that constitute its advantage.⁹

Xiamen University: A Southeast Outlook

Obviously different from that of PKU and NJU, geographical location has been an important factor in XMU’s development and history. The university is located in Southeastern China, in the hometown of entrepreneur Tan Kah Kee (Chen Jiageng), who funded and founded XMU in the 1920s. At one time, XMU faced the unfavorable developmental factors of being far from China’s political and economic centers and of facing Taiwan across the Strait: “Its location close to Taiwan, and its geographical isolation, gave it a low profile in the new Soviet-influenced higher education system of the 1950s” (Hayhoe, Zha, & Xie,

decisions were made by Chairman Mao and follow whatever instructions were given by Chairman Mao.”

⁹ Long- and Medium-Term Reform and Development Plans of Nanjing University (2010).

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in press). However, XMU President Wang Yanan, a famous economist, emphasized the importance of the historical connection between XMU and Southeast Asia. He also found a way to retain its traditionally high profile disciplines of Education, Economics and Maritime Studies in the 1950s, at a time when most comprehensive universities were required to transfer their departments of economics and education to specialized normal universities and institutes of economics and finance. Thus he quietly built up its academic reputation as a comprehensive university with its own unique features. With the reform movement of 1978 and Xiamen's opening to outside world through its early designation by the central Chinese government as one of the first four special economic zones, XMU was able to take advantage of these new political and geographic factors for its development.

Similar to other key comprehensive universities in Project 985, XMU has followed a common pathway of elite universities for achieving excellence. The meaning of the term elite universities, as defined by its current President, Zhu Chongshi, is "a group [of universities] with lofty ideals, a commitment to social progress, and a wide range of expertise and knowledge" (Xie & Chen, September 28, 2007). XMU's teachers and students supported its drive and efforts to pursue the status and quality of a world-class university, and also recognized that this requires a long term developmental process. It is noteworthy that faculty of XMU think that in addition to pursuing academic excellence for its own sake, "it was important that the university should seek to solve significant social problems at the local and national levels" (Hayhoe, Zha, & Yan, in press). In contrast to other key comprehensive universities directly administered by the Ministry of Education, XMU "started to concern itself with local demands very early and has a very good relationship with the Fujian Provincial Government." This may be related to certain features of local or *Minnan* (South Fujian) culture. Some professors and scholars of XMU noted that "One of the strengths of *Minnan* culture...was the tendency to give attention to the main lines of national policy while being extremely flexible in its application at the local level" (Hayhoe, Zha, & Yan, in press). In addition to the Ministry of Education, Xiamen City and Fujian Province provided substantial funding to support XMU within Projects 211 and 985. In return, XMU has more firmly rooted its mission in the primary responsibility of serving the development of Xiamen City and Fujian Province.

Facing the city of Xiamen, the Province of Fujian, the Taiwan Straits and Southeast Asia, XMU has a stronger orientation in its unique mission towards the local than either PKU or NJU, yet it is also open to Southeast Asia and the world.

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The Expansion Process: Various Strategies and Pathways

In China's massification of higher education, it is commonly observed that the task of expanding opportunities for undergraduate students has been largely taken by provincial- and local-level higher education institutions, while top universities have mainly expanded their graduate enrollments. Thus most key comprehensive universities have implemented the policy of expansion at the graduate level, but they have had divergent strategies and pathways at the undergraduate and sub-degree level.

Expansion at the Undergraduate Level: Divergent Pathways

Some key comprehensive universities, like PKU, strategically tried to control the growth of their undergraduate student body in an effort to maintain their educational quality and to produce a relatively small number of outstanding professionals, as expected by the Ministry of Education. On the other hand, other universities have striven to respond to the demand of rapid expansion.

The strategy of PKU to the massification was to adhere to their elite undergraduate programs while expanding at the graduate levels with multiple pathways. As shown in Table 2, there were 9 280 undergraduate students enrolled in PKU in 1990. Ten years later in 2000, the number was 13 328 after PKU merged with Beijing Medical University (with 3 818 undergraduates), and by 2005 it was 15 125.¹⁰ As the data show, during the nationwide expansion of enrollment, PKU controlled and maintained its undergraduate size. In 2000, there was about a 2.5 % increase in its undergraduate population from 1995, if its new medical school was not counted. This increase was mainly due to the establishment of new types of engineering programs and departments. The traditionally reputed disciplines, especially the humanities, social and natural sciences, had a very limited expansion in their student numbers. PKU's undergraduate students increased 19.9 % in ten years, and according to the official data from the Ministry of Education, undergraduate students in humanities and social sciences were 4 276 in 1995, 4 484 in 2000, and 4 914 in 2005.¹¹

Table 2 Undergraduate/Diploma Students of PKU, NJU and XMU (1995–2005)

¹⁰ "Peking University Undergraduate Teaching Assessment self-assessment report" internal document, November, 2007, p. 3.

¹¹ *Statistics of Higher Education Institutions directly Administrated by the Ministry of Education*, 1995, pp. 4-9; 2000, pp. 11-12; 2005 pp. 15-17.

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Institution	1995	2000	2005	Growth Rate
PKU	9 280	13 328 (3 818*)	15 125 (4 000*)	63 %
NJU	7 764	12 763**	12 202	57.2 %
XMU	9 180	10 927	19 109	108.2 %

Note. Adapted from *Statistics of Higher Education Institutions Directly Administrated by the Ministry of Education*. 1995, pp. 4–9; 2000, pp. 11–12; 2005, pp. 15–17.

* Student numbers of PKU’s Medical school. ** Undergraduate students only.

Unlike PKU, NJU is located in Jiangsu Province and is a co-sponsored institution of Jiangsu Province and the Ministry of Education. It has thus received considerable pressure from both the local government and the public to expand its student recruitment. In 1996, the Jiangsu Provincial Government took the pioneering step of expanding its enrollment in local higher education institutions by 10 000 students annually, despite conservative criticism from the Ministry of Education, which did not adopt a policy of expansion until 1999. The undergraduate enrollment of NJU thus increased by 64.4 % from 1995 to 2000, while PKU had only a 2.5 % increase over the same period, if the medical students brought in by the merger are not counted. NJU then began to control its enrollment of undergraduate students from 2000 to 2005, with a 4.6 % negative growth rate compared to 2000.¹² In this period, PKU had a 13.5 % increase in its undergraduate population. NJU’s strategy was to set up a publically owned but privately run second-tier college, the Jinling College, to satisfy the demands of the local Jiangsu government and the public.

XMU’s approach was different from that of both PKU and NJU. It has very actively embraced a process of expansion. The total number of undergraduate students (diploma program students not included) was 7 714 in 1995 and reached 17 797 in 2005, with a radical growth rate of 130 % in 10 years and a net increase of more than 10 000 students. The Tan Kah Kee College, a publically owned but privately run second-tier college set up in 2003, enrolled about 8 000 undergraduate students. The expansion of undergraduate education was thus impressive, compared to PKU and NJU. XMU was very enthusiastic about

¹² Diploma students are not included in this number.

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reform and development, because of its geographic location and the fact that its participation in Projects 211 and 985 gained major support from the city of Xiamen and Fujian Province, in addition to the Ministry of Education.

Examining the strategic pathways of PKU, NJU and XMU from 1995 to 2005, one can see that PKU responded cautiously to the call for expansion at the early stage and tried to maintain its elite education model. By contrast, XMU actively responded to the demands of local government and society to expand undergraduate education opportunities and played a dynamic role in the process. NJU, for its part, tried to maintain an appropriate balance between mass and elite higher education, and between enrollment expansion and the pursuit of excellence.

Expansion at the Graduate Level: Similar Patterns

At the graduate level, all the three universities showed a drastic increase in student enrollments. The total enrollment of graduate students at PKU increased 272.8 % from 4 055 in 1995 to 15 119 in 2005. Meanwhile, Master's and doctoral students increased from 2 989 and 1 006 in 1995 to 9 921 and 5 088 in 2005, with a growth rate of 231.9 % and 405.8 %. Obviously, the enrollment of doctoral students grew much faster than that of Master's students. The proportion of PhD students in the graduate student population remained almost identical at one-third from 2000 to 2005, increasing from one-fourth in 1995.

In the same period, the total enrollment of graduate students at NJU increased 313.6 % from 2 409 in 1995 to 9 964 in 2005. Meanwhile, Master's and doctoral students increased from 1 825 and 584 in 1995 to 6 767 and 3 197 in 2005, with a growth rate of 270.8 % and 447.4 %. PhD students in the graduate student population remained also at an identical ratio of one-third from 2000 to 2005, increasing from one-fourth in 1995. NJU in fact had the same pattern of change in student enrollments at the Master's level and PhD level as PKU.

It is very impressive to see a 578.4 % growth rate in XMU's graduate students just within 10 years, from 1 360 in 1995 to 9 226 in 2005. Doctoral students grew from 215 in 1995 to 1 810 in 2005, with a growth rate of 714.9 %, which is faster than the 547.7 % growth rate of Master's students. Different from those of PKU and NJU, XMU's doctoral students accounted for 20.6 % of the whole graduate student body in 2000 and 19.6 % in 2005, an increase from 15.8 % in 1995.

Based on these data, it is obvious that XMU shared with PKU and NJU a fairly similar pattern of change in student enrollment at both Master's level and PhD level, except that it had a much faster rate of growth in its whole graduate student population and a smaller ratio of doctoral students than PKU and NJU.

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Table 3 Graduate Students of PKU, NJU and XMU, 1995–2005

Institution	1995	2000	2005	Growth Rate
PKU	4 055 (1 006*)	9 399 (3 019*)	15 119 (5 088*)	272.8 %
NJU	2 409 (584*)	4 466 (1 332*)	9 964 (3 197*)	313.6 %
XMU	1 360 (215*)	2 730 (562*)	9 226 (1 810*)	578.4 %

Note. *Statistics of Higher Education Institutions directly Administrated by the Ministry of Education.* 1995, pp. 10–11; 2000, pp. 5–10; 2005 pp. 6–11.

* Doctoral students.

Second-Tier Colleges: An Innovative Move of Co-Sponsored Institutions

Institutions co-sponsored by both the Ministry of Education and local governments, like NJU and XMU, are different from PKU in the sense that they must meet demands from both the national and local levels. Unlike PKU, they had to face stronger and more direct pressure from local governments and society for the expansion of undergraduate enrollments, as has been seen above.

Jiangsu Province, where NJU is located, is a prosperous province which has experienced a rapid growth in the economy. The Jiangsu Provincial Government provided timely matching funds for NJU in Projects 211 and 985 with the result that NJU felt an obligation to serve local development as well as national needs. From 1995 to 2005, NJU increased its annual intake of new undergraduate students from 2 000 to 3 400 (Li, Lin, & Gong, in press), including taking on its share of the province's enrollment expansion. However, it still faced pressure from the local government and the public to open up its quality resources and enroll more students from Jiangsu. At the same time, the Ministry of Education had asked its affiliated top universities to control their expansion of undergraduates in order to maintain the quality of elite education over this period.

Facing this dilemma, NJU established the Jinling College in 1999. Together with other local second-tier colleges such as the Wenzheng College of Soochow University, the Chengxian College of Southeast University, and the Zhongbei College of Nanjing Normal University, the Jinling College is part of the first wave of publicly owned but privately run second-tier colleges in China. These colleges use some resources from their sponsoring universities, such as faculty,

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libraries and campus facilities to attract funds from society and from corporate sources. Furthermore, they use an administrative model similar to that of private colleges, with lower admission standards and much higher tuition fees. For example, the tuition fee for a NJU undergraduate student is 4 600 per year whereas it is 13 000 per year for an undergraduate student at Jinling College.

Initially, the Ministry of Education was conservative about this new type of publically owned but privately run second-tier institution. Out of respect for the autonomy of local higher education development and in order to protect this kind of innovation and exploration, the Ministry of Education only intervened to close down the two colleges of NJU and Southeast University, another key national university in Jiangsu Province directly under its administration; it did not intervene with the other second-tier colleges established by various public universities in Jiangsu.

These second-tier institutions have aroused considerable controversy in scholarly circles, yet they have the advantage of relying on the disciplinary strengths, faculty, facilities and administrative systems of their sponsor universities. Therefore, as hybrid institutions they have the benefit of significantly higher social recognition and employment competitiveness than the new non-affiliated and purely private colleges. Not surprisingly, these hybrid colleges began to flourish rapidly in such economically dynamic provinces as Jiangsu, Zhejiang, Hubei and Fujian. In April of 2003, the Ministry of Education publicized a set of “Guidelines on Regulating and Strengthening the Administration of Trial Second-tier Colleges through New Mechanisms and Models.” This document recognized the exploratory development of publicly owned but privately run second-tier institutions as legitimate, but required them to clearly define their property rights and to evolve into fully independent colleges. By 2008, there were 322 independent colleges with 2.2 million students (Ministry of Education, 2009).

NJU’s Jinling College was set up in 1999, but was halted temporarily as a result of Guidelines put out by the Ministry of Education in the next year, and its enrollment was only resumed in 2003. The college’s development remained relatively small scale due to factors such as a lack of sufficient campus space. In 2008, its new intake of student was 2 237, with a total student population of 5 050. But XMU’s situation was very different. Since the establishment of the new Zhangzhou campus in 2003, its Tan Kah Kee College has grown quickly and now hosts more than 10 800 students.

It is undeniable that NJU and XMU had an initial consideration of generating revenue for their institutions when they established Jinling and Tan Kah Kee

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Colleges respectively, as a kind of response to market opportunities. More importantly, however, these second-tier colleges were set up as a way of making some return on the investment they had received from the local government and society. It was also a practical way of responding to the local demands for the expansion of opportunities to undergraduate students, while ensuring that the quality of their undergraduate education would not drop due to the expansion. While many people have interpreted the development of second-tier colleges as a revenue generating step, XMU leaders, for example, insisted that their motive was not financial, but rather a sense of responsibility to Fujian Province and their local community” (Hayhoe, Zha, & Xie., in press).

Seeking Excellence: Mergers, Comprehensive and Internationalization

As argued by many theorists of higher education (Brubacher, 1982), universities—especially research universities—have played increasingly important roles in social development as the knowledge economy has strengthened and globalization has intensified. In 1983, four university presidents Kuang Yaming, Liu Dan, Li Shusen and Qu Bochuan brought their “Proposal 835” to the central government as an appeal that China should build a small group of key universities with priority public funding (Kuang, Liu, Li & Qu, 1983, June 9). The proposal was finally adopted by the central government, which decided to provide priority funds to a few key universities in the period of the 7th five-year plan, from 1986 to 1990. Later both Project 211 in 1993 and Project 985 in 1998 emerged from this early decision. Building world-class research universities has thus become a strategic priority for China and the long-term goal of universities like PKU, NJU and XMU. The three key universities have taken substantial yet careful steps forward through mergers, the development of more comprehensive curricular coverage and internationalization.

Mergers

During the restructuring and adjustment movement in the early 1950s, the original disciplines of engineering, medicine and teacher education in PKU, NJU and XMU were either separated out to create new independent institutions or merged with other universities. After the restructuring and adjustment, all the three universities became “comprehensive” universities solely based on their coverage of the natural sciences and humanities. Although these two broad disciplinary areas might be seen as “comprehensive” in some sense, the universities were actually crippled by the loss of professional and applied fields.

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The separation of basic disciplines and applied sciences and the relatively small and narrowly defined disciplinary areas hindered the cultivation of innovative talent and prevented them from catching up with the worldwide trend toward interdisciplinary development. In the mid-1980s, university presidents and scholars began to appeal for “several first-class comprehensive universities to be built which could meet the demands of development in socio-economic and technological areas in the twenty-first century” (Qu, 1985, October 17). These institutions were expected to have basic characteristics of comprehensive universities with a focus on the humanities, social and natural sciences, while becoming much more comprehensive in their coverage of multiple disciplines, including applied and professional fields. There were various ways of achieving these goals, such as gradually developing and strengthening new interdisciplinary areas based on the existing foundations in the humanities and social and natural sciences within one institution, or creating them through mergers with different types of specialized institutions such as institutions of engineering, medicine or agriculture.

After the mid-1990s, the central government gradually made clear some fundamental directions for the restructuring of administrative units, which involved changing the roles of the central administrative offices in ways that separated the functions of government from those of enterprises. On March 10, 1998, the First Session of the Ninth National People’s Congress adopted the State Council’s Reform Plan for Government Offices. A total of 15 state ministries and commissions were eliminated and 4 new ministries and commissions were established, while three ministries and commissions were renamed (Xinhua News Agency, 1998, March 11). After having restructured the central administrative units, the State Council spent three consecutive years to adjust the administrative system and structure of higher education institutions directly administrated by the Ministry of Education, and more than 300 universities were involved in this complicated process, which stirred up a national wave of mergers.

At the national level, the movement of mergers was brought about by the reform of the administrative units of the central government. At the institutional level, there were two dynamic impetuses that speeded up the movement: One was to change the former structure of higher education institutions under specialized ministries that tended to have single, narrow disciplinary orientations; another was to enhance the competitiveness of Chinese universities in terms of their ranking and social influence. Some universities experienced mergers that turned them into virtual “aircraft carriers,” such as the new Zhejiang University,

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which came about through a merger of the original Zhejiang University with Hangzhou University, Zhejiang Medical University and Zhejiang Agricultural University, and the new Jilin University, which brought together the original Jilin University, the Jilin University of Technology, the Norman Bethune University of Medical Sciences, the Changchun University of Technology and the Changchun Institute of Posts and Telecommunications. These mergers greatly enhanced the strengths of their original respective institutions and resulted in comprehensivizing curricular coverage. However, quite a few of the merged universities also experienced serious problems, such as the existence of multiple campuses in one institution, ambiguous and confusing disciplinary integration, and serious funding shortages (Gu, 2010).

The three cases in this paper show us some different strategies to respond to the merger movement. The merger of PKU and Beijing Medical University was strongly supported by the central government, resulting in a relatively smooth process which was recognized as positive by many faculty members and students (Hayhoe, Zha, & Yan, in press), but for sure there were also some criticisms and objections, as is always the case with a high profile institution like PKU. XMU avoided a merger with other universities, as there were no other local higher education institutions equivalent to XMU and suitable for a possible merger. Among the three cases, NJU was the only really controversial one and thus is worth further examination.

NJU was the first key university that attempted to create a first-class, comprehensive university with multiple disciplines through a win-win merger. As early as mid-July of 1985, the first Chinese-American University Presidents Conference held at the Fragrant Hills (*Xiangshan*), in the outskirts of Beijing, discussed the issues around how to restructure the disciplines of Chinese universities. The American University presidents commented that it was much more efficient and effective to include such disciplines as engineering, medicine, agriculture and economics into comprehensive universities rather than having specialized independent universities of these disciplines (a pattern that had come from the Soviet Union in the 1950s). Based on this idea, they proposed a reform of the fundamental structure of Chinese universities. They also supported the merger of NJU and the Nanjing Institute of Technology, since “it would be more difficult and less economical to set up humanities and social sciences in an institute of technology or disciplines of engineering in a university focusing on humanities and social sciences” (Chinese Association of Higher Education, 1996). Their advice triggered further careful discussions. In the fall of 1985, NJU and the Nanjing Institute of Technology agreed to join in creating the

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“Comprehensive University of China.”¹³ This was approved by the Ministry of Education, which formed an Organizing Committee for the new university. However, as the central government did not approve the request of a budget of 0.1 billion RMB for the new university as a major item in support of its status as a key national university within the Seventh Five-year National Plan (1986-1990), the merger plan did not go forward.

NJU had another opportunity of considering a merger as the merger movement gained momentum the late 1990s. There were two perspectives about the proposed merger in NJU’s faculty and top management. One view held that there are many possible paths of development and merger is not the only choice. NJU’s choice could be to build an elite campus with its own historical uniqueness by optimized allocation of resources and by enhancing excellence through recruiting talented new faculty members. The other view insisted that even if NJU’s disciplinary structure was adjusted and broadened, its programs in engineering technology and biological sciences were not competitive, and it was very difficult, if not impossible, for NJU to achieve a breakthrough in these disciplines under the existing conditions. After various discussions, NJU’s leaders finally came to an agreement on one main principle: “Merger or not should depend on whether it would be conducive to building NJU into a world-class university” (Wang, Gong & Mao, 2002, pp. 534–535). In other words, the decision should depend on whether the merger would be beneficial for optimizing NJU’s disciplinary structure and interdisciplinary collaboration and for improving the quality, efficiency and social contribution of teaching and research.

From 2000 to 2006, NJU considered possible mergers with institutions of medicine, engineering and technology, or agriculture, and Southeast University,

¹³ The administration and faculty of the two universities had arguments on the name of the new university after the merger. Nanjing University wanted to use its original name continuously, but the Nanjing College of Technology felt it would be merged into Nanjing University if the new university name remained as Nanjing University. The Final decision was to use Comprehensive University of China instead of Nanjing University. This name seemed very uncommon, but the abbreviated form of the new name, either in English or Chinese, was the same as that of the National Central University, the original name of Nanjing University in the Republic period before 1949, thus was endorsed by faculty and students at both universities. This process actually reflected some of the bargaining that is common to a merger decision.

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the new name of the Nanjing Institute of Technology, was always in NJU's consideration as the most suitable partner. During this period, NJU made at least four attempts to discuss the merger with Southeast University. In September of 2003 more than 50 renowned professors at NJU and Southeast University co-wrote a public letter, appealing to the central government for the merger of the two universities to form a new first-class comprehensive university. It would be not only a leading university in China, but also a basis for further building a world-class university internationally. However, for unexpected reasons, all these attempts finally failed. NJU thus became the only key comprehensive institution in the first batch of the nine universities in Project 985 that had not experienced some kind of merger (Li, Lin, & Gong, in press).

While PKU and Beijing Medical University experienced a smooth merger process, and XMU was fortunate not to have to merge with any other institutions, NJU regretted having not been able to merge with Southeast University. The three universities obviously faced different situations with different choices to be made. The very different outcomes of intended merger for the three institutions show that the universities had significant autonomy or self-mastery, to use a Chinese term, and went through a careful process of deliberation and evaluation in identifying potential partners for merger and in seeking the means of actualizing a merger. The process was quite different from the situation in the 1950s, when Chinese universities had to be fully compliant with central government plans for restructuring and adjustment without any possibility of entering into debate or making their own choices.

Curricular Comprehensiveization and Renovation

Besides the movement of merger for changing the old structure of universities with a single discipline or a very limited set of disciplines and enhancing their institutional competitiveness in the global ranking, setting up new disciplines and updating old disciplines was another strategy for PKU, NJU and XMU as they have sought excellence in education, research and services. Historically, the three universities were strong in the humanities, social sciences and natural sciences, but weak in such applied sciences as engineering technologies and biological technologies. Their move towards more comprehensive curricular coverage and the renovation of traditional curricula has been based on the integration of different disciplines, aiming at building a modern structure that accommodates areas such as engineering technology, bio-technology and applied humanities and social sciences.

While maintaining its existing unique and highly reputed traditional

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disciplines, PKU carefully selected and set up new disciplinary areas, departments and colleges. In particular, it established some new disciplinary areas in technology, and set up the School of Electronics Engineering and Computer Sciences in 2002 and the College of Engineering in 2005. PKU did not choose to develop traditional areas in technology such as architecture, civil engineering, or mechanical engineering, but decided to focus on new disciplines instead, such as nanometer materials, energy engineering, and biomedical engineering. The successful establishment and rapid development of the School of Electronics Engineering and Computer Sciences, which was based on PKU's highly reputed departments of mathematics and electronics, shows that research in such basic fields as physics and mathematics at PKU is shifting to new areas of high-tech development. Researchers in the old fields switched their focus to information transmission, microelectronics, and computer science in the late 1980s. The typesetting technology for Chinese characters which the new school pioneered in turn laid a solid foundation for the success of a company, established by PKU, and known as the Founders Group. The Group is now an independent multinational company that brings considerable stock returns to PKU every year (Hayhoe, Zha, & Yan, in press). It is obvious that the integration of basic and applied sciences, and tradition and modernity, not only made excellent use of PKU's basic disciplinary strengths but has also met the demand for new technology in China's rapidly changing society.

The efforts made by XMU to comprehensivize its disciplines also show the same trend—that is, taking the pure natural sciences and humanities as a base to reach out to wider fields of the applied sciences: “Generally, the principle was to build applied fields on the basis of strong disciplinary areas. Thus engineering was established on the basis of physics and chemistry and management on the basis of economics” (Hayhoe, Zha, & Xie, in press). In addition to departments of modern engineering such as electronic information, microelectronics, materials science, biological technology, ecology, and bioinformatics, XMU also formed traditional departments and colleges for mechanical design, manufacturing and automation, chemical engineering, civil engineering, and architecture. This approach is different from that of PKU and NJU, probably because Fujian Province and Xiamen City had a high local demand for technical professionals, and the greater Xiamen area does not have strong technological universities like Tsinghua in Beijing and Southeast University in Nanjing. To give an example, “while most other major universities gained their medical schools through a merger, XMU launched its own college of medicine in 1996, with funding from the Xiamen city government, which felt the need for a local

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medical school” (Hayhoe, Zha, & Xie., in press). Apparently, XMU placed more emphasis on serving local needs than PKU and NJU did.

After multiple attempts to merge with Southeast University failed, NJU decided to develop new applied areas in the social sciences and technology with three approaches: integrating different traditional disciplines, setting up “Special Disciplinary Areas (SDA),” and forming disciplinary groups. In 2008, NJU decided to enhance its programs in modern engineering technology, and formed the Institute of Electronics and Technology and the Institute of Modern Engineering and Applied Sciences, as part of its effort to create a new disciplinary structure focusing on humanities, natural sciences, technology and medicine. However, these efforts to develop on its own, without the advantages of a merger with an institution that had strong programs in engineering or medicine, turned out to be difficult. For instance, NJU was the first to rebuild its medical school after the restructuring and adjustment of departments and colleges in the early 1950s had removed the medical schools of all major comprehensive universities (Li, Lin, & Gong, in press). However, this medical school, which was founded in 1987, has still remained as a small-scale, low-key institution even after more than 20 years of development.

Internationalization

Almost all universities in Projects 985 and 211 have endeavored to develop their status as first-class universities through international cooperation and exchange. PKU is a high profile and unique example. Given the advantage of its location in the national capital of Beijing, it has wide and high-level cooperation with its international counterparts. China’s strong economic development has attracted increasing numbers of politicians, industry magnates, scientific and cultural emissaries to visit Beijing. In this situation, PKU’s unique geographical advantage has provided it with a wider stage for its globalization agenda than is possible for most other universities in China. Presidents and Prime Ministers from over 50 countries have given public speeches at PKU in recent years, and PKU’s students have benefited from these open lectures. They not only get the opportunity of listening to them but also of exchanging their views directly in the question and answer periods that often follow these high profile lectures. On the other hand, PKU has also made a strong effort to attract students from around the world. The number of international students on the PKU campus has increased steadily, from 1 011 in 1995, to 1 177 in 2000, to 1 790 in 2005, and finally to 2 587 in 2007.¹⁴ More importantly, the percentage of international students who

¹⁴ Self-Evaluation Report of Bachelor Program Teaching of Beijing University. internal data,

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are pursuing a degree has increased from 30 % in 1995 to 66 % in 2005. Although these numbers are still weak compared with those of world-class universities like Harvard, Stanford, Oxford and Cambridge, PKU has made firm its mission to go global.

NJU has also adopted internationalization as one of its key strategies in striving for excellence since the mid-1980s. Among many of its international collaborative projects, the NJU and Johns Hopkins Center for Chinese and American Studies is particularly noteworthy. The center was the first long-term international collaboration project in China after 1978 and a successful example of such cooperation for others. Professors from China and America are invited by NJU and Johns Hopkins Universities to give courses in China. Chinese students are taught by American professors, while American and international students are taught by Chinese professors. Many important scholars and politicians visit the Center every year to discuss important issues with the students and exchange their perspectives. In an open academic environment, students can not only gain knowledge and learn new theories but can also participate in the process of globalization. Since its establishment in 1986, 1 800 talented students from China, America and other countries have graduated from the Hopkins–Nanjing Center.¹⁵ They are active now in government offices, business enterprises, higher education institutions, research institutes, media, and non-government organizations in China, America, and other countries.

The internationalization process at XMU has also emphasized solid collaboration and exchange. The university usually selects appropriate partners for collaboration to achieve effective win-win forms of cooperative activity that are more than just written agreements. XMU's goal in the new century is to extend its strategy in the 1990s of focusing on exchange with Southeast Asia. Examples of this extended strategy include the joint Economics Research Center with Cornell University in the U.S. and the Chemistry Laboratory with the École Normale Supérieure in France, funded by China and France. A project at the university level is a small-scale international collaboration network jointly established with the University of Washington in the U.S., Inha University in South Korea, the Royal Melbourne Institute of Technology in Australia, and the South Pacific Technology University in Singapore, all institutions that share a geographical location on the ocean. Wu Shinong, XMU's Vice President, said:

November 2007.

¹⁵ Retrieved on March 25, 2010, from <http://zmzx.nju.edu.cn/zhongmei/page/main96/main.aspx>

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“In natural sciences, it was essential to meet international standards and contribute to global research efforts” (Hayhoe, Zha and Xie, in press). In fields such as economics, management and law, however, he “saw it as a matter of balancing the attempt to reach world standards with equal attention to indigenous perspectives and content” (Hayhoe, Zha and Xie, in press). In the fields of Chinese history, literature, and philosophy, the university “must set its own indigenous standards and seek to present aspects of Chinese civilization to the global community. One of the modalities for this is the establishment of Confucius Institutes around the world” (Hayhoe, Zha and Xie, in press).

There is probably no other country that has as rich an experience of learning from the university systems of other countries as China. The legislation enacted in January 1904 was copied from Japan, that of 1912 and 1913 from France and Germany, and the following influential legislation of 1922 was adapted from the U.S. model. When Cai Yuanpei assumed the presidency of PKU in 1917, he was especially influenced by the German university model, but when he served briefly as Minister of Education in the Nationalist regime, established in 1927, he tried to reorganize higher education along the lines of the French university district system. After the new China was established in 1949, its higher education system was restructured and adjusted based on the model of the Soviet Union. After the opening-up policy of 1978, Chinese universities have gained new momentum through reform and openness to the world. Along with China’s rise, Chinese universities have also become more confident, ambitious and open. Now the questions that arise are how Chinese universities should balance their orientation between localization and globalization, what values Chinese universities will bring to the international community, and what are the new ideas and practices they may introduce for the future development of the globe.

PKU, NJU and XMU have provided tentative answers for these questions. Justin Yifu Lin, the Chief Economist of the World Bank appointed in 2009, is the director of the China Center for Economic Research at PKU. He extended the Western theory of economics to explain the economic development of China. Kuang Yaming, the retired President of NJU, established the Center for the Study of Chinese Thinkers in the 1980s. In 2006, on the tenth anniversary of his death, two hundred volumes of the biographies of Chinese thinkers in the series for which he served as editor-in-chief were published as a memorial. The series of books systematically introduced and evaluated philosophers and politicians from Confucius to Sun Yat-Sen. Of these books, fifty have been published in both Chinese and English, opening up to the English speaking world the breadth of Chinese civilization and the essence of Chinese culture (Li, Lin, & Gong, in

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press). XMU has restored its Institute of Chinese Studies to continue the legacy left by Lu Xun, Lin Yutang, and Gu Jiegang in the 1920s and to pave a new way forward in the field of Chinese history and culture.

Cultivating Talent: Seeking an Answer to the Question of the Century

Qian Xuesen (Tsien Hsueh-shen), father of the Chinese missile, passed away in 2009, leaving behind an intriguing question, which has been called “the question of the century.” Since 2005 Qian had talked on multiple occasions about Chinese education with the national leaders who visited him. He expressed his deep concern about higher education in China in this way: “China is still not fully developed, and one reason for it is that no university in China has been operated in a way to educate creative talent for the sciences and technology. The universities have no unique qualities that enable them to cultivate outstanding talent. This is a big problem” (Jin & Qi, 2009, December 5). Prime Minister Wen Jiabao has interpreted Qian’s “question of the century” in the following way: “He talked with me about this issue five or six times...I understand that the outstanding talent he referred to was not the generally talented people we usually talk about, but those who could have remarkable achievements like his own” (“Why our school,” November 3, 2009).

In fact, since the 1980s, PKU, NJU and XMU have explored various models for cultivating outstanding talent. One of them is focusing on the learning of fundamental knowledge and broad capability through modules of general education that are rooted in Chinese tradition. NJU’s Kuang Yaming Institute implemented a model of general education which has focused on the integration of education for undergraduate and graduate students. Students are grouped and differentiated around specific disciplinary areas at the fundamental first level, based on NJU’s most highly reputed disciplines, to cultivate world-class, creative and high quality talent with ideas, vision and capability. PKU’s Yuanpei Program, named after its famous chancellor, Cai Yuanpei, was implemented in 2001 with the aim of providing students more free choices by adjusting its traditional discipline based academic programs. Its core idea is to enhance students’ basic knowledge and adjust their learning process based on their individual traits and needs. These exploratory experiments have had a far-reaching influence in Chinese universities and have drawn some attention from the international community. *Science*, a leading magazine in the field of natural sciences, published an exclusive report about these initiatives (Ding, 2001).

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Another model for cultivating outstanding talent is through enhancing international collaboration and exchange in order to offer students an open and diverse academic environment, encouraging them to develop their creative capacity and broaden their perspectives. One joint undergraduate program of PKU and Yale University allows thirty students from Yale to study at PKU's Yuanpei Institute for one semester, living together with PKU students. The collaboration with Waseda University offers students a learning opportunity of two years at Waseda University, followed by another two years at PKU. They can earn a bachelor's degree in international relations. PKU also has similar programs with other world-class universities such as Harvard and Stanford.

Despite these excellent initiatives, there are common problems in undergraduate education in Chinese universities, particularly associated with professors' teaching style and students' learning habits. For example, the tendency of professors to focus on research at the expense of their teaching has not been adequately addressed so far. Their relationships with students lack sufficient two-way communication and exchange. Students also do not have enough freedom in selecting courses and in seeking support and guidance from their professors. Qian Xuesen's "question of the century" actually functions as a kind of pressure or stimulus to address these problems, and that is why his question has stimulated intense and widespread debate and discussion in the academic community as well as among the general public. Many have realized that education for cultivating outstanding talent will be crippled, superficial or even soulless, without an emphasis on undergraduate education as its essential basis (Tian & Xiao, 2008, October 9). With these problems in mind, the Ministry of Education launched a special fund to support an ambitious Experimental Plan for Cultivating Outstanding Students in Basic Disciplines in December 2009—the Everest Project. This project starts its experiment first with mathematics, physics and chemistry, aiming at cultivating leading scholars in line with common models of undergraduate education in basic areas.¹⁶ PKU and NJU are participating in this project, together with nine other national key universities.

¹⁶ Eleven universities entered the "Experimental Training Plan for Outstanding Students in Basic Sciences": Beijing University, Qinghua University, Nankai University, Fudan University, Chinese Science and Technology University, Nanjing University, Shanghai Jiaotong University, Zhejiang University, Xian Jiaotong University, Jilin University, Sichuan University. The experiment began with mathematics, physics, chemistry and computer science. Retrieved on March 14, 2010, from <http://scitech.people.com.cn/GB/10462847.html>

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Conclusion

No matter what institutional pathways, models and strategies Chinese universities have taken for development in response to the national call for rapid enrollment expansion and the quest for excellence at a world-class level, all their efforts have shown that Chinese universities continue to integrate the two philosophical frameworks of higher learning and education noted at the beginning of this article: the epistemological and the political (Brubacher, 1982). This integration is rooted in classical Confucian ideas, as evident in the re-definition of their institutional mission and commitment, the repositioning of their socio-political roles, and their quest for local, national and global ways of contributing. As seen in history and over the modern period, this tradition of emphasizing knowledge for good governance as well as deepened understanding of societal commitment has had a profound and permeating influence on Chinese universities. In fact it has become one of the core embedded features of the Chinese model of the university (Li, in press).

With this philosophic tradition of higher learning and education, it is expected that top Chinese comprehensive universities such as PKU, NJU and XMU will have bolder and deeper reforms in future, with more substantial efforts to cultivate outstanding talent, as they look for new answers to Qian Xuesen's "question of the century." Probably we are right to anticipate that the future development model of Chinese universities will rise to the challenge of both responding to the country's huge need for higher education that is widely accessible while devising various innovative pathways of seeking excellence and forming talent of the outstanding caliber of figures such as Albert Einstein, René Descartes or Bill Gates.

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