

# The Goals, Strategies and Insights of C9 Universities' Construction of World-class Universities and Disciplines

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**Abstract.** In the context of building a strong country of higher education, the "Double-First Class" construction plans of C9 universities are analyzed from the aspects of goals and measures. The research finds that construction goals are ambiguous, that the introduction and training are emphasized in the construction of the first-class teacher-group, and that the disciplines don't support universities enough. In order to better promote the "Double-First Class" initiative, it is necessary to establish more clear construction goals, pay attention to the cultivation and introduction of innovative talent teams, and emphasize the basic role of disciplines in universities.

## 1. Introduction

*Overall Scheme for Comprehensively Promoting the Building of World-class Universities and Disciplines (OSCPBWUD)* was promulgated by the State Council of the People's Republic of China in 2015[1]. On January, 2017, China's Ministry of Education, Ministry of Finance, and National Development and Reform Commission jointly issued *Implementation Measures for Comprehensively Promoting the Building of World-class Universities and Disciplines*[2]. On September, 2017, 42 universities including Peking University and Tsinghua University were in the list of "Double-First Class".

After the "Double-First Class" list was published, many universities published the "Double-First Class" construction plans one after another, which entered the stage of comprehensive implementation in China. Construction plans of "985 project" universities were analyzed including Peking University, Tsinghua University, Nanjing University, Zhejiang University, Shanghai Jiaotong University, University of Science and Technology of China, Fudan University, Xi 'an Jiaotong University and Harbin Institute of Technology, they were also referred to C9 universities, the data was from their official website. It is significant to compare and reflect construction schemes of C9 universities. The reason why C9 universities are taken as research objects is that they have the "higher positioning and greater investment, and that they are known as China's pacesetter in building world-class research universities"[3]. "China's top universities with the highest level are also known as China's 'ivy league'." [4]

## 2. The goals of the "Double-First Class" construction plans of C9 universities

The common points of C9 universities' "Double-First class" construction plan are as follows:

The establishment of the goals is based on the *OSCPBWUD* to promote the construction of world-class universities and first-class disciplines.

The construction target of "Double-First Class" is divided into three stages, which is in line with the requirements of the government.

By 2020, C9 universities will be world-class universities.

It is necessary to focus on Chinese characteristics and their own characteristics, rather than build Harvard University, Stanford University, University of Cambridge and University of Oxford, etc. At some point in the future, the brand of Chinese culture and their own styles will be with C9 universities.

The differences are as follows:

In terms of the planning of the construction goals, Peking University is two years ahead of the national requirements to build itself into a world-class university, while other universities follow the

national strategic vision.

From the point of short-term goals, although C9 universities are emphasized to build a world-class university, there are differences in the expression of words, such as integral construction of Peking University, the reach of Tsinghua University, the entry of overall strength of Nanjing University, the entry of Zhejiang University, Xi 'an Jiaotong University and Harbin Institute of Technology, the top of Shanghai Jiaotong University and University of Science and Technology of China, preliminary completion of Fudan University. It reveals that policy-makers of different universities are more cautious in written expression according to their own actualities.

The subjects are required in some universities, such as Peking University, Tsinghua University and Shanghai Jiaotong University in 2020 put forward a number of disciplines are top-level in the world, a number of research fields or areas of Fudan University are in the leading position among world-class disciplines. Some subjects of Nanjing University and Xi 'an Jiaotong University are developed into world-class ones, some preponderant disciplines of Zhejiang University and University of Science and Technology of China rank among the best in the world. The differences reflect the different universities for the construction of the foundation, they not blindly pursue consistently.

From the point of medium-term targets, "striving to" is found in texts in Peking University, Tsinghua University, Nanjing University, and there is a carefully worded statement. Zhejiang University, Shanghai Jiaotong University, University of Science and Technology of China, Fudan University and Harbin Institute of Technology are ranked among world-class universities in 2030. Xi 'an Jiaotong University is to achieve above the average of world-class universities.

A group of subjects of Peking University in the leading position among world-class universities. First-class disciplines of Tsinghua University, Zhejiang University, Shanghai Jiaotong University and University of Science and Technology of China are less than ones of Peking University, but leaders of these universities hope some disciplines are the world's top level. First-class disciplines of Nanjing University are less than ones of Tsinghua University and Zhejiang University.

From the point of long-term goals, in 2048, Peking University will become a top world-class university, which means that it will go beyond such as Harvard University and Stanford university. China may become the academic center. Tsinghua University, Zhejiang University, Fudan University and Harbin Institute of Technology, Shanghai Jiaotong University become outstanding world-class universities, and rank among the forefront of world-class universities, the volatile ranks will not emerge, Xi 'an Jiaotong University, University of Science and Technology of China and Nanjing University are ranked in the leading position among world-class universities in the middle of twenty-first century.

The mainstream disciplines of Peking University is at the forefront of world-class universities, the problem is that it is difficult for disciplines to support Peking University to become a top university. The academic level of disciplines will enter the forefront of the world in Nanjing University, and more disciplines of Zhejiang University will reach the world's leading level, indicating that people from Zhejiang University are highly confident and have high ambitions.

### **3. Implementation measures of C9 universities' "Double-First Class" construction**

#### **3.1 Supporting the excellence, the need, the specialty and the new, and optimizing the layout of disciplines**

It is needed to emphasize on improving basic research ability, strengthening performance evaluation, realizing dynamic adjustment, supporting advantageous and characteristic disciplines, adjusting disciplines according to social needs, and promoting the development of interdisciplines in C9 universities. At the same time, they propose the development of hierarchical classification of different disciplines, establish different evaluation criteria, optimize the layout of disciplines, and coordinate the progress of different disciplines. For example, Peking University builds 30 leading domestic and international first-class disciplines, and 6 comprehensive interdisciplinary groups. It is oriented to two major fields, and the construction tasks of different disciplines are different, they are established different evaluation standards. The humanities form a Chinese theory in China's practice, it is

important to use Chinese theory to study, interpret and explain Chinese issues, and also propose a Chinese plan for solving world problems. Nanjing University realizes the coordinated symbiosis of arts, sciences, engineering and medical sciences, highlighting the characteristics and cross-integration, and layering construction. Zhejiang University requires that the basic disciplines of liberal arts highlight the Chinese characteristics, and some research directions or fields reach domestic leading and international advanced, and achieve “fine and special”; the basic disciplines of sciences are facing the international frontier, making significant progress in several research directions or fields, striving to reach international leading position, and to be “fine and strong”.

In terms of the organization that supports the construction of disciplines, there are differences between different universities. For example, Peking University builds a trinity of the central university, academic divisions, colleges to support discipline construction; Fudan University plays two levels of enthusiasm from the central university & colleges and promotes discipline development.

### **3.2 Combine and cultivate talents to create the first-class staff-group**

C9 Universities reform the institutional mechanism, strengthen the construction of teachers' professional morality, combine and cultivate to create the first-class staff-group. Tsinghua University focuses on introducing well-known scholars with international influence, accelerating the selection and development of talents, and establishing an institutional mechanism to support the development of young teachers, employing professors to guide their career development. The Teacher Development Center trains them. Tsinghua University attracts doctoral graduates from famous universities abroad to engage in post-doctoral research, strengthens the construction of teachers' ethics, strengthen the ideological and political work of teachers, and establish and improve the long-term mechanism for the construction of teachers' morality. Peking University builds an internationally competitive talent-using mechanism. Shanghai Jiaotong University implements the precision introduction plan for leading talents, establishes a talented workstation overseas, hires a talented ambassador, constructs a normal global talent network, targets introduction of strategic scientists and key talents in key areas. Academic Leader Promotion Plan, Excellent Young Talent Development Plan and Famous Teacher Training Plan are carried out in Shanghai Jiaotong University. Fudan University introduces and trains high-level talents that are urgently needed for the construction of first-class universities.

C9 Universities attach great importance to the introduction of groups of first-rate scientists, discipline leaders and innovation teams who are active in the international academic forefront and meet the major strategic needs of China, and give them generous treatment. Harbin Institute of Technology implements a studio plan for scientists who are leading high-level talents, giving first-class resource guarantees, policy inclinations, and a high degree of autonomy. Zhejiang University recruits top talents in the field of natural sciences or engineering technology, giving remuneration packages above annual salary of 300,000, research funding, especially, experimental science, engineering, agriculture, medical science, etc. each of them subsidizes RMB 2 - 3 million, non-experimental science is funded RMB 500,000 per person. Zhejiang University gives them housing arrangement and other support, provides a one-time moving fee of RMB 50,000, employs as a “100-person plan” researcher who tutors doctoral students, and helps solve their children admission. A set of school talent department can be purchased at a preferential price.

C9 Universities will introduce high-level talents as the focus of the “Double-First Class” construction. This is the requirement to become the world-class universities and the construction of first-class disciplines. However, putting “introduction” in front of “cultivation” will undoubtedly violate the “Double-First Class” vision. It is easy to cause the loss of top scholars in the central and western universities, and jeopardize their discipline development and talent cultivation.

### **3.3 Focus on policy cohesion and coherence**

C9 Universities will match the previous policies with the “Double-First Class” construction schemes, which will make the policy cohesive and coherent, which is conducive to the development of the universities' work. Many viewpoints in the “Double-First Class” construction plan of Peking University are in *Outline of the 13th Five-Year Plan for Reform and Development of Peking*

*University (OFPRDPU), Comprehensive Reform Plan of Peking University (CRPPU) in 2014, and Peking University's World-class University Planning (PUWUP). A "three-step" strategy was proposed in the OFPRDPU. The first step is to enter the ranks of world-class universities around 2018, and several disciplines will enter the forefront of world-class disciplines; the second step is to fully realize the goal of creating a world-class university around 2028. The overall strength ranks among the top universities in the world, and a large number of disciplines will enter the forefront of world-class disciplines. The third step, by 2048, will become the promoter and leader of higher education in the world, and all disciplines will enter the forefront of the world. The study of teachers and students is advocated in the CRPPU. All the new members of the teaching and research series are included in the "pre-employment-long-employment" management system framework, the autonomy of the department's governance is expanded, and a modern university system and governance system with Chinese characteristics are build gradually. The PUWUP puts forward in the "Reform and Construction" section, "Deepening teaching reform, cultivating high-quality creative talents; deepening the reform of scientific research system and improving the level of scientific research; speeding up the reform of the personnel system, building a high-quality talent team; strengthening party building and providing strong political guarantees; strengthening foreign exchanges and cooperation, and building an open university." The strategic goals or construction contents of the documents are highly consistent with related content of the "Double-First Class" construction scheme.*

### **3.4 Pay attention to the whole process, promote the overall development of students, reform the system and mechanism, and stimulate the vitality of running a university**

C9 Universities advocate large-scale enrollment, integrate general education and professional education, strengthen the curriculum reform of students' learning and learning outcomes, promote the internationalization of students, and pay attention to the academic innovation abilities and international competences of doctoral students and career competences of professional degree graduates. They strengthen innovation and entrepreneurship education, cultivate top-notch innovative talents, improve employment quality of students, improve graduate tracking services; establish a new type of think tank systems, establish and improve the academic evaluation and academic standards systems of philosophy and social sciences, and create academic environment for academic innovation; establish an open and transparent supervision mechanism, improve grassroots party organizations, shift management focus, expand the autonomy of colleges, and establish a dual-employment and multi-employment mechanism for inter-college teachers. Shanghai Jiaotong University has built a group of "three divisions" consisting of curriculum professors, entrepreneurial tutors and venture capital instructors to jointly cultivate entrepreneurial talents. Tsinghua University delegated the power of academic evaluation, primary titles, middle titles, vice-senior titles, talent introduction and salary adjustment to colleges. Nanjing University integrates entrepreneurship education into the talent training program, and builds a "five-in-one, four-innovation, three synergy" innovation and entrepreneurship talent training system; Harbin Institute of Technology participates in the construction of the China Aerospace Engineering Science and Technology Development Strategy Research Institute, makes itself a strategic source for promoting China's space development, and a high-end think tank of a national engineering technology development strategy and the economic and social fields.

## **4. Summary**

It is necessary to establish clearer construction objectives, pay attention to the cultivation and introduction of talent teams, and lay more emphasis on the fundamental role of disciplines in universities.

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