The “Double First-Class Initiative” in China: Background, Implementation, and Potential Problems

Qiang Liu

Associate Professor, Institute of International and Comparative Education,
Beijing Normal University, PR China – Corresponding author
qliu@bnu.edu.cn

David Turner

Professor, Institute of International and Comparative Education,
Beijing Normal University, PR China
david.turner@southwales.ac.uk

Xiaoli Jing

PhD Student, Department of Integrated Studies in Education,
McGill University, Canada
jing.xiaoli@mail.mcgill.ca

Abstract

The construction of world-class universities and first-class disciplines (Double First-Class Initiative) is a major commitment made by the Chinese government to adapt to changes in the educational environment at home and abroad. It is also an innovative strategy for the development and practice of international higher education. As part of the Double First-Class Initiative, China's higher education institutions have formulated plans for their development and for developing their disciplinary specializations. They have instituted special measures for developing subject areas, staff development, building teams of teachers and researchers, and enhancing their disciplinary characteristics. However, there are some potential problems with the implementation of the Double First-Class Initiative, not least of which are the imprecision in the definition of “world-class”, the narrow focus on the range of institutions, and the lack of future-oriented development methods. These problems have attracted the attention of the government and the universities, and stimulated some discussion in society more widely.

Keywords

Double First-Class Initiative – China – global higher education – world-class university – university rankings – quality – implementation measures – potential problems

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To improve the quality of China's higher education, speed up the development of disciplines with distinctive strengths, and enhance the international influence of Chinese universities, the State Council of the People's Republic of China issued the *Overall Plan for Coordinately Advancing the Construction of World-Class Universities and First-Class Disciplines* (hereinafter referred to as the “Double First-Class Initiative”) on October 24, 2015. The core idea of the Initiative was to advance the construction of world-class universities and first-class disciplines, and thus build China into an international power in higher education. Later, the Chinese Ministry of Education, Ministry of Finance and National Development and Reform Commission issued a series of documents supporting the development of the Initiative, including *Implementation Measures to Coordinate the Construction of World-Class Universities and First-class Disciplines (Provisional)* and *Notice of Releasing the List of Universities and Colleges Participating in the Construction Plan for World-Class Universities and First-Class Disciplines*. These documents further specify the the implementation details of the Initiative, including the conditions for selecting world-class universities and first-class disciplines, and the methods to support and manage the selection process. With the publication of these documents, the Double First-Class Initiative officially entered the implementation phase (Sun, 2017).

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1 Background of the Double First-Class Initiative

The process of global integration has accelerated exchanges and cooperation between countries, and the internationalization of higher education has also become a route toward constructing and developing world-class universities. In order to catch up with other world powers in the development of world-class universities and cutting-edge disciplines, and to build on the

comprehensive strength and international competitiveness of China's higher education, China re-examined the international environment of higher education, and introduced a program of strategic investment. This follows the earlier, successful, Project 211 and Project 985.

2 Impact of the International Environment

With the transformation of global knowledge and change in the economic system, information resources become an important factor in promoting economic development, and knowledge stimulates the economic growth greatly. As an incubator of new knowledge and technological development, higher education has been widely recognized as the key to promote economic development and technological innovation. In the United Kingdom, for example, in 2011–2012, the output of universities exceeded 73 billion pounds, and their contribution to GDP exceeded 39.9 billion pounds, equivalent to 2.8% of the country's total GDP in 2011 (Universities UK, 2015). A study of investment in and returns to human capital conducted by American economist Gary Stanley Becker concludes that investment in higher education has contributed greatly to the overall return on investment in education (Becker, 1975). The traditional way of promoting economic development by relying on material investment can no longer adapt to the rapid development of science and technology. Investment in human capital and education is crucial for social development (Lu & Zhang, 2012). Investment in higher education brings significant economic benefits and helps improve the productivity of society as a whole through continuous improvement of individual labor productivity.

Many countries also regard higher education as an effective way to improve their international competitiveness and continue to increase investment in higher education. For example, between 1998 and 2008, the United States invested more than three times as much in higher education as the OECD average (Liu & Ma, 2012). To catch up with developed countries, developing countries are also attaching greater importance to the development of higher education. In addition, to revitalize the economy, seize development opportunities and enhance international competitiveness, the governments of many countries have also paid close attention to the development of universities and published higher education development strategies. According to incomplete statistics, from 2004 to 2012, about 30 high-level universities and disciplines development programs were implemented in about 20 countries and regions (Huang, 2017).

3 Needs of the Domestic Environment

The launch of the Double First-Class Initiative is the continuation and adjustment of the policies for building key colleges and universities in China (Zhang, 2016). These policies have a long history in China. As early as in 1995, the State Council of the People's Republic of China approved and issued the *Overall Plan for the Construction of Project 211* and officially initiated Project 211 (The State Council of the People's Republic of China, 1995). There were three parts to Project 211: the improvement of overall conditions for running schools, the construction of key disciplines and the establishment of a public service system of higher education. The second and third phases of Project 211 gave top priority to building key disciplines. In 1998, Jiang Zemin, president of China at that time, stated that, “In order to achieve modernization, China needs a number of first-class universities reaching world-class levels” (Ministry of Education, 1998). Shortly afterwards, the Chinese Ministry of Education (1998) issued the *Action Plan for the Revitalization of Education in the 21st Century*, which proposed to “build a number of first-class universities and a number of first-class disciplines reaching world-class levels”. This marked the beginning of Project 985. The early policies for building key universities have produced a series of achievements, making it possible for China's higher education to achieve rapid development and quality improvement in a short period of time. In 2018, 11 universities in China were among top 100 in the QS World University Rankings, and 576 disciplines in 73 universities were among the world's Top 500 (5 of which are among the top 10 in the world) (Quacquarelli Symonds, 2018). However, in this process, many problems have been exposed, including lack of training to develop creative and high level academics, an imbalance in the higher education system, and inertia and lack of competition between key institutions of higher education. In order to overcome these shortcomings, continuous reform and readjustment of the policies of key institutions is necessary.

The social environment is the foundation of higher education and an essential consideration when a country formulates its higher education policies. The development of higher education is the process by which higher education adjusts itself to changes in society. The Chinese economy is transitioning to the ‘new normal’, with a shift from extremely rapid growth to medium-to-high growth, a shift from an extensive model of growth in scale and speed to an intensive model focused on quality and efficiency, a shift in industry from lower-to-medium manufacturing to medium-to-high, a shift toward investment-driven and innovation-driven growth, and a shift to an increased role for the market in resource allocation (Zhang, 2015). The educational

ideas and training models of higher education institutions in China have been adjusted accordingly. In 2015, the Ministry of Education, the National Development and Reform Commission and the Ministry of Finance jointly issued a document which specified that during the 13th Five-Year Plan period, 100 colleges and universities nationwide would be strengthened by introducing internships, and experimental training platforms. Projects would be introduced to integrate production and education and promote school-enterprise cooperation and reform of training (Wang, 2018). In addition, China is currently at the stage of social transformation, and thus there are urgent needs to produce reserves of intellectual and talented personnel to support its political and economic development by building world-class universities and first-class disciplines.

4 Implementation Measures for Building World-Class Universities and First-Class Disciplines

The Double First-Class Initiative seeks to use performance assessment approach to drive reform and strengthen the development of key disciplines. By 2020, a number of universities and disciplines will be developed to world-class level and a number of disciplines will be world-leading. By 2030, more universities and disciplines will be among the best in the world, and the overall competitiveness of Chinese higher education will be significantly improved. With the number and capability of first-class universities and disciplines increasing among the best in the world, China will become an international power in higher education (The State Council of the People's Republic of China, 2015). To implement the national policy, colleges and universities across the country have formulated their plans to become world-class universities, and specified their own goals and targets. Institutions have made new arrangements for discipline development, personnel and staff training, academic team building, and disciplinary characteristics enhancement.

5 Discipline Development

The development of key disciplines, especially those committing to protecting national security and major interest, is central to the Double First-Class Initiative. The development of emerging disciplines and cross-disciplinary studies is intended to support industrial transformation and promote regional development, creating priority for some disciplines (Ministry of Education of

the People's Republic of China, 2017). Discipline building should support the development of unique capabilities and address gaps that have an impact on development. Limited resources are to be pooled to forge comparative advantages and improve the overall level of higher education.

Based on the current progress of the Double First-Class Initiative, many colleges and universities have increased the pace of discipline development. For example, Tsinghua University (2017) has established a three-tiered discipline development system of disciplinary areas, discipline groups and subjects. It integrates the existing 11 disciplines into the four key disciplinary areas of engineering science and technology, natural sciences, humanities and social sciences, and the arts, life sciences and medicine. On this basis, 20 discipline groups that support each other synergistically have been formed, including architecture, civil engineering and water resources, nuclear science technology and safety, the environment, and computing. Tsinghua University will focus on the development of eight subjects that are competitive and form a relatively independent knowledge system, including electrical engineering, mechanics, power engineering and engineering thermophysics. Peking University (2017) organizes its discipline development projects based on 30 first-level subjects, 6 discipline groups and 2 disciplinary areas. By 2020, it will focus on building 30 nation-leading and internationally first-class subjects. By 2030, it will cultivate new discipline growth points by relying on six comprehensive cross-disciplinary groups. Further in the future, it will promote the overall adjustment of its disciplinary layout on the basis of the two key disciplinary areas of clinical medicine + X, and international and regional studies. In order to promote the development of its own leading subjects, Beijing Normal University (2017) has also adopted a plan and intends to build six first-class disciplinary groups: basic sciences, education, cultural heritage innovation, ecological civilization and green development, state governance and social development, and science and technology innovation and future scientific development. On this foundation it hopes to lay a solid foundation for building a world-class university.

6 Personnel Training and Staff Development

Developing individuals is the core task of a university and the top priority of the Double First-Class Initiative. Globalization has intensified competition among countries for comprehensive national strength. Economic development and social changes will eventually turn into deep-level competition on the basis of human skills and knowledge. Minister of Education, Chen Baosheng, argued

that in the process of implementing the Double First-Class Initiative, colleges and universities should return to their core activities, focus on their original purposes, follow their fundamental mission of moral education, and play their role in education. Colleges and universities should enroll the most talented individuals and teach and nurture them (Sohu, 2016).

To build world-class universities, the Double First-Class Initiative must nurture talented individuals and improve the international competitiveness of graduates. Chinese universities are actively exploring their practices in relation to teaching objectives, teaching contents and education modes. For example, Zhejiang University (2017) is committed to building what it calls an integrated open-loop system of education that is supposed to strengthen data sharing and resource connectivity in all aspects of education and provide more learning opportunities and learning platforms to improve the openness, flexibility and experience of learning and teaching. Shanghai Jiao Tong University (2017) has attempted to optimize the scale and structure of its programs, by developing high-quality curricula, promoting professional certification, supporting best practice in high-level teaching, and rolling out a plan for student innovation and entrepreneurship and improving postgraduate academic and practical ability. It focuses on nurturing excellent creative graduates with high moral principles and excellent characters, who have the latest academic knowledge, ability to innovate, and international vision.

7 Academic Team Building

A first-class academic team is indispensable for building a world-class university. The high rate of return to human capital in teachers of higher education makes it an important driving factor for the implementation of the Double First-Class Initiative. High-caliber experts and scholars not only drive the development of their entire discipline, but also generate spill-over effects in other areas. For example, the introduction of nanotechnology professionals in Fudan University has driven the development of its materials science, biology, materials science and engineering and other disciplines. The spill-over from nano-products also extends to people's clothing, food, shelter and travel. With the extensive implementation of the Double First-Class Initiative, the strategic position of human resources will continue to be highlighted and become a key element in building world-class universities and first-class disciplines (Zhang & Zhang, 2018). Fudan University regards academic team building to be one of the four prime components of building world-class universities. In 2017, it launched the "Extraordinary 2025" Elite Project, which has attracted a large

number of outstanding young people from home and abroad, and upgraded its academic staff (Guangming Daily, 2017).

Currently, all Chinese universities have a strategy for building academic teams in their plans for becoming world-class universities, and have recruitment and staff development programs to match their stage of development. Beihang University (2017) has launched the “Roc Soaring above the Sky Plan”, and is committed to building a first-class academic team that excels in both teaching and moral character, in its effort to develop leading personnel in key disciplines. The university has continuously improved its staff development policy, attracted leaders in their fields who are acknowledged experts in the international academic community, and implemented a plan to develop the skills of talented and strategic scientists. With the goal of building an elite team, the Renmin University (2017) has implemented the Outstanding Scholar Support Program to build a high echelon team including all kinds of experts. For example, it has launched the 7080 Outstanding Talents Program for young and mid-career teachers to support the all-around development of high-caliber teachers born in the 1970s and 1980s and ensure that they will grow into discipline leaders for the development of the university in about 10 years.

8 Disciplinary Characteristics Enhancement

The Double First-Class Initiative aims to forge a world-class higher education system, and to achieve this goal, it is necessary to build international-oriented disciplines and cutting-edge disciplines with Chinese characteristics. As a strategic objective, China's Double First-Class Initiative is not meant simply to imitate foreign world-class universities and first-class disciplines. Rather, it is an international development strategy to achieve parallel development with foreign universities, while retaining China's own characteristics. During his visit to Peking University, Xi Jinping emphasized that universities should develop by taking root in China: “We should not make Peking University the ‘second Harvard or Cambridge’, but the ‘first Peking University’” (The State Council of the People's Republic of China, 2014). In other words, the Double First-Class Initiative should not merely keep pace with the development of world-class universities and first-class disciplines, but should also develop diverse, differentiated and characteristically Chinese disciplines. In this way, China's characteristics will be transformed into competitive advantage, and forge a higher education system with Chinese characteristics and style.

To realize the goal of characteristically Chinese development, colleges and universities that have participated in the Double First-Class Initiative are also actively strengthening the development of their distinctive, core disciplines. For example, Beijing Normal University (BNU) (2017) aims to become “a world-renowned ‘Everest’ in the field of teacher education”, and to lead the development of teacher education in the world and forge an “Academic School of BNU” that leads the creative transformation and innovative development of culture. Nanjing University of Information Science and Technology (2017) also conforms to the educational ideal of characteristic development and is committed to building its meteorological science and engineering department into an international high-level scientific research and educational center, focusing on meteorological characteristics. Other local colleges and universities have also re-identified their missions based on their current development, paying attention to staged development in the key universities to avoid chasing mistakes in research, and avoiding following trends set by other similar colleges and universities as they explore their own characteristics and potential, and actively expand the global market by relying on local resources (Cai, Wu, & Yang, 2016).

9 Potential Problems in the Implementation of the Double First-Class Initiative

As of today, China has made great efforts to achieve the stated goals towards building world-class universities and first-class disciplines, not only the governments at different levels having issued opinions on the implementation of the Double First-Class Initiative, but also the universities that were selected to participate in the *Construction Plan for World-Class Universities and First-Class Disciplines* having released their comprehensive plan to put the policies into practice. However, when examining all these policies and practices, it can be found that some problems still exist with the implementation of the Double First-Class Initiative, including but not limited to the imprecision in the definition of “world-class”, the narrow focus on the range of institutions, and the lack of future-oriented development methods.

10 Imprecision in the Definition of “World-Class”

Since the launch of the Double First-Class Initiative, the idea of “world-class” has become a focus of attention in the field of higher education. Domestic

colleges and universities have set out being “world-class” as their development goal, and formulated a series of reform measures around this goal. There is a constant stream of conferences, projects, and publications on this topic. The *Overall Plan for Coordinately Advancing the Construction of World First-Class Universities and First-Class Disciplines* stated that, “We should coordinate to advance the construction of world-class universities and first-class disciplines, develop a number of high-level universities into world-class ones and bring a number of disciplines into the leading position among world-class disciplines” (The State Council of the People’s Republic of China, 2015), but it did not clearly define what a world-class university is. Scholars have different opinions on the definition of “world-class”. For example, Zhou Guangli and Wu Jianxin (2016) define the world-class standard as “first-class academic team, first-class scientific research results, first-class student quality and first-class academic reputation”. Xu Xiaozhou and Mei Weihui (2007) argue that “world-class needs to encompass large projects, large platforms, masters, significant achievements and grand prizes”. Altbach (2004) states that a so-called world-class university “should have the conditions such as excellence in research, top quality professors, academic freedom and self-governance, complete scientific research facilities, adequate research funding etc.” Obviously, these scholars have different understandings of a “world-class” university and there are differences in their definitions. It is the imprecise definition of “world-class” that results in many uncertainties in the process of implementing the Double First-Class Initiative, which are reflected in the behavior of the government and universities.

Due to the lack of a strict definition of “a world-class university” and explicit evaluation criteria, many colleges and universities simply interpreted the goal as one of moving up in the rankings. Some colleges and universities even regard a higher position in the global rankings as a goal that should steer school administration, and pool all resources to pursue higher rankings ranking. The root cause of this phenomenon is that the relevant policy documents fail to define clearly what “a world-class university” is and what the criteria are for judging “a world-class university”. This has caused much confusion in building world-class universities and first-class disciplines in China.

11 Narrow Scope of Application

The *Implementation Measures to Coordinate the Construction of World-Class Universities and First-class Disciplines (Provisional)* emphasized that the colleges and universities to be included in the program for developing world-class educational institutions should be those with advanced educational ideas,

education strength and high social recognition. These are universities that have long been built up as key universities. Universities included in the program for building their core disciplines into first-rate disciplines were those that were nationally recognized or at the forefront of international knowledge at discipline level, and that featured prominently in influential third-party evaluations (Ministry of Education, Ministry of Finance, & the National Development and Reform Commission, 2017). According to this principle, 42 universities and colleges will be developed into world-class educational institutions, while 95 universities will focus on building their core disciplines into first-rate disciplines. These 137 colleges and universities on the selected list will receive more funding and resources, and policy support will be provided by central and local government and relevant competent authorities. They will gain higher reputations and more social recognition in a beneficial cycle that enables them to enroll better students and recruit more well-known teachers and researchers to greatly improve their education strength. However, there are currently more than 2,000 institutions of higher education in China, which means that most colleges and universities can only be bystanders in the scramble to build world-class universities and first-class disciplines, although the government has proposed dynamic management of the process of implementing the Double First-Class Initiative to break the tyranny of the hierarchy of identity of universities and establish a dynamic adjustment mechanism. But in general, those colleges and universities on the selected list will inevitably achieve better development by relying on their policy advantages, while those not included in the list will find it difficult to break through in development, due to lack of financial and government support. It will be difficult for the dynamic adjustment mechanism to play its expected role, and to this extent the Double First-Class Initiative mirrors previous programs for building key universities.

At the same time, the Double First-Class Initiative will exacerbate the regional imbalance of higher education somewhat. In the list of selected universities (42), most are located in the eastern, well-developed regions, while no selected universities are located in regions such as Heilongjiang, Inner Mongolia, Shanxi, Hebei, Chongqing, Tibet, Qinghai, Ningxia, Guizhou, Guangxi or Hainan (Gao, 2017). In terms of geographical distribution of first-class universities, high-quality higher education resources are not evenly distributed in all provinces and regions, resulting in uneven distribution of financial resources, human resources and material resources in higher education, which has also affected educational development and development of disciplines. This lack of geographical homogeneity has also caused unfairness in student recruitment, as university enrollment quotas are mainly allocated on a provincial basis, and high-quality colleges and universities tend to enroll more local students.

Admission quotas for local students are much larger than those for students from other regions, and the admission rates to high-quality colleges and universities are much lower in the “underdeveloped” central and western regions than the well-developed eastern regions, resulting in many outstanding students being unable to access quality higher education (Song, 2017).

12 Lack of Future-oriented Development Methods

After the policies for building world-class universities and first-class disciplines were promulgated, many institutions of higher learning prioritized the recruitment of high-level academics and invested heavily in building a first-class academic team. For example, Beijing has proposed to spend no less than 70% of appropriations on recruitment (Chu, 2017). To achieve significant results in a short time, many regions have issued their plans to introduce top academics, such as academicians of the Chinese Academy of Sciences and Chinese Academy of Engineering, Changjiang Scholars and staff from the Recruitment Program of Global Experts and National High-Level Experts Special Support Program, and provide support services in household registration for leading academics, as well as salary, remuneration and job title evaluation to attract stars. The talent shortage, especially at the highest level, has adversely affected the implementation coupled with the excessive reliance of colleges and universities on recruitment as a way to improve their academic team, while the cultivation of homegrown talents has been ignored, producing vicious competition among universities for senior academics. In the implementation of the Double First-Class Initiative, colleges and universities should pay equal attention to staff development and recruitment, focusing on the cultivation of talent, and establishing a high-level professional development system that is consistent with the development of disciplines. They should select and support a number of young scholars who are familiar with China's national conditions and have a solid disciplinary foundation and outstanding ability in scientific research, to create a pattern of development that prioritizes staff development. That is not to say that universities and colleges should ignore recruitment of new staff, but recruitment should be supportive of academics who are already in the institution.

In addition, colleges and universities should be steered toward a rational view of future development, scientifically and regularly formulating their development plans, to avoid narrowing and cheapening the mission of building world-class universities and first-class disciplines. The Double First-Class Initiative should be based on performance assessment and establish an

incentive and restraint mechanism. The fundamental principle is to encourage fair competition among universities, highlight the effectiveness of disciplinary development, and fully stimulate the endogenous motivation and development vitality of colleges and universities. Universities and colleges must start from a realistic assessment of their current situation, to ensure that their plans are feasible. The performance of a university should not be judged on the basis of various quantitative indicators, which are likely to lead to a trend toward performativity, where increasing on the indicators is more important than the quality of teaching, learning and research in the institution, undermining the academic and cultural atmosphere of universities (Liu, 2016). The implementation process of the Double First-Class Initiative should not replicate a world-class university, nor conform to an international standard for a first-class discipline, but should promote efforts to build a first-class university culture and disciplinary characteristics (Cai & Yang, 2017). A truly world-class university should have a deep and unique culture, which is the critical point of building a world-class university. With the advent of post-massification in higher education, higher education development is not a process that merely pursues scale and quantity, but, rather, it should pay more attention to the coordination of scale, quality, structure, efficiency and fairness, and devote itself to cultural accumulation in the connotative development of higher education.

13 Conclusion

It can be concluded that the Double First-Class Initiative is another transformation of China's higher education, following on from Project 211 and Project 985. And it is also another breakthrough in China's advancement in specific disciplines, which will have significant impact on the development of China's higher education and the improvement of international competitiveness. In 2017, the central government announced the list of colleges and universities that will participate in the Double First-Class Initiative (42 universities and colleges will be developed into world-class educational institutions, while 95 universities will focus on building their core disciplines into first-rate disciplines), which specifies the historical mission and development direction of Chinese universities and their disciplines (Ministry of Education, Ministry of Finance, & National Development and Reform Commission, 2017). These universities and disciplines have become forefront of the reform of China's higher education and will surely become the core driving force for China's development of high level experts, institutional innovation, scientific and technological innovation, and scientific research.

In addition, following the trend toward global integration, China's Double First-Class Initiative is part of the development of higher education around the world. Although China's Double First-Class Initiative still needs improvement in terms of concept definition, scope of application and construction methods, the experience provides of developing concepts, planning, and characteristics of school administration set a reference point for university development and discipline building worldwide. In September 2017, the website of University World News (2017) commented that, "By 2050, it [the Double First-Class Initiative] will enhance the global status of Chinese universities and disciplines and affect the pattern of global higher education."

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