

Research on the Construction Path of High-level Universities under the Background of “Double World-Class” in China: Taking Jiangsu Province as an Example

Xuedong Liu, Longjun Zhou, Guoqing Chen

Jiangsu Second Normal University, Nanjing, Jiangsu, China

Abstract: Under the background of China’s “Double World-Class” construction, the paper takes high-level universities in Jiangsu Province as the research sample, and adopts a case study method to study the connotation of high-level universities, the effectiveness and problems of high-level university construction in Jiangsu Province. Based on this, the path selection of high-level university construction in Jiangsu Province is proposed, which is to optimize the education structure, clarify the school goals, strengthen the discipline construction, improve the education evaluation mechanism, enhance the level of education internationalization, enhance the ability of serving economic and social development, and promote Jiangsu Province marching from the “Great Province of Higher Education” toward “Strong Province of Higher Education”.

Sci Insigt Edu Front 2019; 2(2):101-113.

Doi: 10.15354/sief.19.ar049

Keywords: Double world-class; High level university; Construction path; Jiangsu province

Correspondence to: Guoqing Chen, Associate Professor, School of Education Science, Jiangsu Second Normal University, Nanjing, Jiangsu, China, E-mail: 760453871@qq.com.

About the Author: Xuedong Liu, Lecturer, Institute of Educational Modernization, Jiangsu Second Normal University, Nanjing, Jiangsu, China, E-mail: xuedongliu163@163.com. Longjun Zhou, Associate Professor, School of Education Science, Jiangsu Second Normal University, Nanjing, Jiangsu, China, E-mail: 294437034@qq.com

Conflict of Interests: None.

THE world-class university is not only the main symbol of the development level of a country's higher education, but also an important embodiment of the comprehensive competitiveness of a country. "Without a world-class university, a big country can make a breakthrough in some way, and a small country can also achieve national prosperity. However, looking at the history of modern world, there is no big country that can truly become a world leader with comprehensive leadership in the face of backward education." (Shi et al., 2008) Since 1995, China has successively implemented construction projects such as "211 Project", "985 Project", "Advantage Discipline Innovation Platform" and "Featured Key Discipline Project" etc. Focus on building a number of key universities and key disciplines, and improve the overall level of China's higher education. In 2015, the State Council issued the "Coordinating and Promoting the Overall Plan For World-Class Universities and First-Class Disciplines" and proposed the grand goal of building world-class universities and world-class disciplines (referred to as "Double World-Class"), and blew the "Assembly Horn" for the country's universities to sprint for staying and leading in the forefront, and create the world's top institutions.

In order to connect the country's "Double World-Class" construction, all provinces and cities have successively formulated high-level university construction and first-class discipline cultivation programs, set off a campaign to become a strong province in higher education, and to promote "China's higher education enters a new era of regional development" (Zhou, 2016). In 2016, Jiangsu Province issued the "Jiangsu High-Level University Construction Plan" to comprehensively launch the construction of Jiangsu high-level universities. Through the implementation of the strategy of high education and strong provinces and high-level university construction projects, Jiangsu Province has gradually been marching forward from a great province to a strong province in higher education.

The Connotation of High-level Universities and Their Construction Standards

At present, there is no objection to the importance of high-level university construction in both the education sector and the academic community, but what is the reason for it is still inconclusive. Throughout the history of China's higher education development, the concept of "high-level university" was gradually formed during the implementation of the "211 Project" and "985 Project". Some scholars believe that high-level universities are a comparative, spiritual, academic and developmental concept, which is the unity of personal values and social values, social and educational, ideal and realistic (Xu, 2010). Meanwhile, some scholars have revealed the essential characteristics of high-level universities from two perspectives: concept and entity, "From the perspective of concept, it can be divided into four dimensions: comparative, ambiguous, spiritual and constructive. From the perspective of entity, it can be divided into three levels: spiritual level, institutional level and technical level." (Zhai et al., 2010) However, some scholars

have explained the basic connotation of high-level universities: 1) Uncertainty. There is no clear boundary between high-level and non-high-level universities. 2) Dynamic. High-level universities are not static, but dynamic. 3) Relativity. High-level universities are just relatively assessed (Lv et al., 2011). In general, high-level universities are a comparatively relative concept. The historical background analysis from the concept of high-level universities has its original meaning corresponding to world-class universities. At the same time, some studies have revealed that high level universities can reach a relatively higher level in some respects than the average universities.

The proposal of high-level universities is not only the transformation of the concept of higher education development, but also the transformation of the development path and mode of colleges and universities. So, how to judge whether a university is a high-level university? In addition to reference to world-class university evaluation standards, such as Essential Science Indicators (ESI), QS World University Rankings, Times Higher Education World University Rankings (THE), Academic Ranking of World Universities (ARWU), etc., Chinese scholars have also conducted special research on high-level university construction standards. Some scholars believe that “see if it can produce and reproduce the social capital on the existing basis to meet the development needs of college students, university teachers and other related subjects (Dong et al., 2015). Some scholars have suggested that the characteristics of high-level universities should be selected, that is, “having excellent conditions for running schools, having first-class teachers; cultivating first-class talents; developing high-level disciplines and scientific research; conducting extensive international cooperation and exchanges; The charter and management system implements high-quality and efficient management; assumes due social responsibility and becomes a think tank and think tank for national and local economic and social development.” (Wang et al., 2014).

Analysis of the Effectiveness of the Construction of High-level Universities in Jiangsu Province

The construction of high-level universities in Jiangsu Province is government-led, with the school as the main body, following the principle of “combination of overall promotion and classification guidance” and “combination of comprehensive reform and special reform”, and formulated and issued a series of high-level university development. Strategic measures to promote the acceleration of higher education from the expansion of the main focus to the improvement of the connotation, laying a solid foundation for the construction of a world-class university. Nowadays, the number of colleges and universities in Jiangsu Province ranks among the top in the country, and the main indicators of higher education connotation construction are also among the best in the country.

The Construction of the Teaching Staff has been Continuously Strengthened

With a first-rate faculty and top-notch students, it is one of the most prominent signs of a world-class university. Jiangsu has implemented talent programs such as “Outstanding Contribution Experts”, “Blue Engineering”, “333 High-level Talent Cultivation Project”, “Six Talent Summits” and “Specially Appointed Professors” to cultivate a group of high-quality teachers. Colleges and universities provide first-class teaching and research facilities, create a good working atmosphere, and enable teachers to have more autonomy and more time to engage in teaching and research. According to statistics, a total of more than 100 thousand full-time university teachers are in the province, of which 85 academicians, 198 Yangtze River Scholar Professor, 252 Winners of National Outstanding Youth Foundation people, and over a thousand of National Leading-level talents (Jiangsu Provincial Department of Education, 2016).

The Level of Discipline Construction is Greatly Enhanced

The discipline is the cell of the university, and building a world-class university must be based on disciplines. Jiangsu takes the construction of key disciplines as a starting point, and strives to strengthen the connotation construction of key disciplines in universities by consolidating the direction of disciplines, building talented highlands, cultivating innovative talents, building high-end platforms, and producing major achievements. In the latest national subject evaluation rankings, Jiangsu's colleges and universities have 13 first-level disciplines ranked first in the same category in the country, accounting for 13.7% of the country; 79 of Jiangsu's 21 universities have entered the ESI database in the top 1% of the world's similar disciplines, ranking first in the country. The number of subjects entering the country ranks second in the country (Jiangsu Provincial Department of Education, 2016).

The Overall Strength of Scientific Research has been Significantly Enhanced

The university occupies an increasingly important position in the national innovation system. University research is the backbone of national science and technology innovation and has become an important force in the national innovation-driven development strategy. At present, there are 6,988 platforms of various science and technology bases in Jiangsu, including 5 “2011 Collaborative Innovation Centers”, 52 national key laboratories, engineering (technical) research centers, and 15 national university science parks (Jiangsu Provincial Department of Education, 2016). During the “Twelfth Five-Year Plan” period, the province's colleges and universities received 50.13 billion CNY in science and technology funding, and 143,000 scientific research projects; 133 national science and technology awards and 326 outstanding scientific research awards (sci-

ence and technology) by the Ministry of Education (Jiangsu Provincial Department of Education, 2016).

The Quality of Talent Training has Improved Significantly

“University is the combination of scientific and technological progress and talent cultivation. It has an important mission in building an innovative country... In the many tasks of the university, cultivating innovative talents is its top priority.” (Leading Group of Chinese and Foreign Principals Forum of the Ministry of Education, 2006) Jiangsu has implemented training programs for outstanding engineers, outstanding teachers, outstanding agricultural and forestry talents, outstanding cultural and artistic talents, and constantly explores innovative, applied and compound talent training models. The university regards talent cultivation as the core task of building high-level universities, continuously optimizes the professional structure, deepens the reform of personnel training mode, and cultivates top-notch innovative talents. At the same time, it draws on international advanced educational ideas and educational experience to introduce foreign high-quality educational and teaching resources, and trained a large number of international talents.

Continuous Improvement of Social Service Capabilities

In view of Jiangsu’s economic development needs and industrial layout, combined with the development of science and technology in schools, the university will identify the areas of scientific and technological cooperation that are in line with the development of Jiangsu’s industry, and give full play to the technical support, talent support, introduction and digestion, innovation support and frontiers of universities in the industry-university-research alliance. The role of strategic decision support in the field Nanjing University adheres to the service concept of “serving Jiangsu and radiating the whole country”. It has four core businesses: the construction of political, academic, research and innovation, the construction of a business incubator platform, the construction of a science and technology consulting service platform, and the construction of an international technology transfer platform. A total of 26 Industry-University-Research cooperation platforms have been established including Nanjing University Changshu Ecological Research Institute and Nanjing University Yancheng Environmental Protection Technology and Engineering Research Institute (Nanjing University, 2016).

The Problems in the Construction of High-level Universities in Jiangsu

Nowadays, “University has become an indispensable thing for economic development and national survival. (Ashby, 1974)” Jiangsu Province is the first in the country to pro-

pose the construction of a province with high education, take the lead in promoting the construction of advantageous disciplines, actively promote comprehensive reform of higher education, and continuously improve the overall education. Strength and high-level university construction have also steadily advanced. Guided by the strategy of strong province by higher education, Jiangsu's high-level universities have taken a connotative development path and have achieved certain results and accumulated valuable exploration experience, but there is still a big gap compared with world-class universities.

University Education Level and Regional Distribution are not Balanced

At present, among the only two "985 Engineering" universities in Jiangsu, only Nanjing University can be called the top domestic university, but there is still a big gap from the world's top universities. In "QS 2018 World University Rankings", Nanjing University ranks 114th and Southeast University is only presented after the 500th (QS, 2018). In addition, there is a large gradient gap in the development of higher education in Southern, central and Northern Jiangsu, and high-level universities are mainly concentrated in Southern and Central Jiangsu. Although higher education in Northern Jiangsu has developed rapidly in recent years, it is still relatively weak. This backward situation has seriously affected the economic and social development and talent cultivation in Northern Jiangsu, and has restricted the construction of a strong province of higher education in Jiangsu Province.

Universities Lack the Characteristics of Running a School

In the era of higher education popularization, higher education plays multiple roles. It satisfies the various needs of learners in different ways, so more emphasis should be placed on the diversity of higher education (Westerheijden, 2003). Therefore, high-level universities must have their own characteristics, and they must develop new features and create new advantages while maintaining their own characteristics. After experiencing scale expansion and connotation development, most universities in Jiangsu have clearly defined their own positioning and development goals. However, compared with the world-class universities, the mode of running a university in Jiangsu still does not break the pattern of "One thousand schools with one face" formed under the traditional planned economic system. The goal of talent training tends to be more abstract and generalized, and the educational concept is not clear enough to highlight the characteristics of each school.

University Discipline Barriers Still Exist

Disciplinary construction is the carrier and support of scientific and technological innovation in universities, major discoveries and breakthroughs in the field of science and

technology. Every progress in society and the birth of any emerging industry are closely related to the development and innovation of disciplines (Wu, et al. 2013). At present, The internal and external institutional barriers between universities and universities in Jiangsu Province have caused the division of scientific and technological resources, and the allocation of resources is scattered, closed and inefficient; Repeated construction of scientific research facilities and data materials, it is difficult for science and technology resources to be integrated and configured according to the innovation chain and industrialization rules, resulting in resource shortage and idle waste. There are too few contacts among professors in various departments within the university, and the rigidity and lack of exchanges and cooperation between various departments have caused many scholars and scientific researchers to limit their intelligence to their own small scope.” (Huang, 2006)

The Educational Evaluation Mechanism is not Sound

Daniel L. Stufflebeam, an American education appraisal expert, puts forward: “The purpose of educational evaluation is not to prove, but to improve.” (Stufflebeam, 1966) At present, the evaluation of higher education in Jiangsu mainly includes the examination and evaluation of undergraduate teaching work, the professional certification of teachers, and the evaluation of new professional programs. There are still many problems in the process of educational evaluation, such as the single subject of evaluation and the lack of initiative in colleges and universities; The evaluation indicators are unified, and there is a situation in which “a ruler measures different types of colleges and universities”, which is difficult to reflect the characteristics of various universities; The evaluation results are not convincing, and the social recognition is low, etc. Moreover, the quality responsibility of colleges and universities is low, the quality and culture concept is weak, and there is no perfect internal quality guarantee mechanism.

Low Level of Education Internationalization

The wave of economic globalization has brought higher education into the era of “new internationalization.” Internationalization is regarded as an important indicator for measuring the quality of higher education. It has become a major topic of concern to governments, higher education institutions, student organizations and certification bodies around the world (Wit, 2010). As Professor Ulrich Teichler (2003) of the University of Kassel, Germany, said: “Internationalization is no longer a matter of the few top universities, and all universities must be internationalized to some extent.” Currently, although the level of internationalization of higher education in Jiangsu has gradually improved, compared with developed countries, the internationalization indicators such as faculty, curriculum, scientific research cooperation, foreign student training, and Sino-foreign cooperative education are still at a low level, and the structure needs to be optimized.

The Ability of Universities to Serve Economic and Social Development is Low

In today's world, whether it is building a world-class university or building a high-level university, it is necessary to put research and innovation and social service capabilities at an important position (Zhao, 2008). In recent years, the main strategies, technological innovations and service capabilities of Jiangsu's colleges and universities in service economic development have been continuously enhanced. However, the awareness of economic and social development in the service areas of universities is relatively weak, and the overall service capacity of the society is not enough. The combination of universities and economic and social development is not close, and the discipline construction is separated from the needs of regional economic and social development. The ability of universities to serve Jiangsu's economic transformation and upgrading needs to be improved, especially in terms of personnel training, technological innovation and transformation of results.

The Path Selection of Jiangsu High-level University Construction

In the face of increasingly fierce international competition, universities have become an important factor affecting the competitiveness of a country. As the famous Spanish politician and educator Ortega Y. Gasset (1930) said: "A great country must have a great school; likewise, without a great school, it will not be a great country." Under the "Double World-Class" construction strategy in China, the construction of high-level universities in Jiangsu should continuously improve the top-level design, learn from the advanced experience of domestic and foreign universities, and explore the development path based on its own reality.

Implement classification development and optimize the structure of higher education

World-class universities have their own characteristics in terms of school philosophy, discipline structure, and system construction. Harvard University Honorary President Neil L. Rudenstine pointed out "Good universities are not all comprehensive and research-oriented. Different types of universities should have different goals. Even research universities are not the same." (Liu, et al., 2002) Jiangsu should adjust the structure of higher education in combination with the needs of talents and industrial development needs in the region, promote the construction of high-level universities, and enrich the diversity of higher education systems. Policy design should encourage university level stratification, give more choices to universities, localities, students, etc.; encourage higher education institutions to position different missions and develop a

strategic picture with characteristics. “Isolated mountain peaks can no longer dominate this landscape. The stars are more splendid than the lone star, and they can brighten up the night sky.” (Kerr, 1964) The university should further promote the comprehensive reform of education, actively explore the road of diversification, quality, specialization and internationalization, and strive to build Jiangsu Province into a pilot zone and demonstration zone for deepening reform of higher education.

Clear School Goals and Scientifically Develop Development Plans

The idea is the value orientation and personality characteristics of the university. It is the soul of the development of the university. The pioneer of the concept will bring the overall leap of the university. Compared with world-class universities, the problems faced by Chinese universities are most likely to be conceptual and institutional gaps. The famous American educator Ernest L. Boyer (1987) said: “A high-quality university must have a clear and vibrant goal of running a school. It can’t be a hodgepodge that meets all the requirements of all. It needs to make choices and determine which ones should be considered.” Therefore, scientific concepts, lofty missions, outstanding goals, advanced culture, and an atmosphere conducive to innovation are indispensable factors for high-level university construction. At the same time, the university must have a global vision, focus on long-term and sustainable development when formulating the plan, and must be based on China’s national conditions and the specific reality of the school. It must have inspiring development goals as well as specific measures to achieve the goals.

Strengthen Discipline Construction and Cultivate Top-notch Innovative Talents

American higher educator Burton R. Clark (1983) proposed: Knowledge is the logical starting point of higher education; “high-level knowledge is at the core of the purpose and essence of any higher education system” Discipline is the form of deep knowledge existence and the foundation of high-level university core competitiveness, which determines that universities must attach importance to discipline construction. “The concept of discipline construction is the deepest and most core content of the university’s educational philosophy. It is called the soul of creating a world-class university.” (Clark, 1983) The discipline construction of Jiangsu high-level universities should be based at the forefront. The development of disciplines is aimed at “academic cusp”, promoting discipline integration, cross-cutting, complementarity and transformation and upgrading, creating new disciplines and opening new directions. Belgian scientist I. Prigogine predicted: “The 21st century is a century of comprehensive science or cross-science.” (Prigogine, 1987) In the process of discipline construction, universities should set up various interdisciplinary research centers and form interdisciplinary research groups so that “disciplines will not be separated from each other, but will be integrated through a rea-

sonable principle” (Hutchins, 1936); develop interdisciplinary training programs and plans, break down barriers between disciplines, enhance interdisciplinary penetration, and vigorously cultivate top-notch innovative talents.

Improve the Evaluation Mechanism and the Quality of Higher Education

With the popularization of higher education and the increasing resources of university control, the accountability system that emphasizes the overall performance of the university as a target of evaluation rises globally. The administrative department of education in Jiangsu Province should establish a scientific and perfect evaluation mechanism for higher education quality, and promote the transformation of educational evaluation function from “quality assurance” to “quality improvement”. First; we must develop a scientific and reasonable performance evaluation index system. According to different types of construction of universities and projects and their different construction stages, select different performance evaluation indicators. Second, we must introduce third-party evaluation. Actively explore the establishment of a long-term mechanism based on social evaluation, and introduce third-party professional evaluation agencies to participate in high-level university construction performance evaluation. Third, we must establish incentive and exit mechanisms. According to the performance evaluation and evaluation, the key construction of universities and projects will be dynamically adjusted. At the same time, as the first person responsible for the quality of education, colleges and universities should strengthen quality responsibility, strengthen the construction of connotation and quality culture, and continuously improve the quality of their education.

Expand Education Opening and Improve Internationalization Level

Today, no country, government, university or other organization can evade the influence of globalization, and no individual in social life can enjoy the globalization process. Universities must be open to the entire realities of their time, must be born in a real life, and must be integrated into the external environment (Gasset, 1930). According to the national “One Belt, One Road” initiative, Jiangsu should continuously promote educational exchanges and cooperation with relevant countries (regions), and vigorously support various provinces and universities along the belt line to carry out various forms of exchanges and cooperation. Colleges and universities should actively attract international innovation forces and resources, gather world-class experts and scholars to participate in discipline construction, cooperate in cultivating international talents, promote substantive cooperation between disciplines and relevant foreign research institutions, and accelerate the international development of discipline construction; Exploring a new model of international education, comprehensively applying the forms of cooperation, introduction or blending, and broadening the international development of Jiangsu high-level universities.

Give Full Play to Professional Advantages and Serve Economic and Social Development

Nowadays, “Knowledge is the core of society. More and more people and more and more institutions have never needed or even required knowledge as they do now. As a producer, wholesaler and retailer of knowledge, universities inevitably provide services to the society.” (Kerr, 1964) Jiangsu vigorously supports the comprehensive reform of colleges and universities, strengthens the cooperation of similar majors in universities and colleges, and builds professional groups that can meet the needs of Jiangsu’s industrial structure optimization and adjustment, highlighting the level and characteristics of colleges and universities; continue to promote the deep cooperation between universities and industry enterprises, and explore a new model is built by industry, localities and universities. Colleges and universities should implement the concept of “Based on Jiangsu, integrating into Jiangsu, Serving Jiangsu, and Developing Jiangsu”, and strive to adapt, serve and lead Jiangsu’s economic and social development. At the same time, it is necessary to actively combine the advantages of its own disciplines and local industrial characteristics, strengthen communication and cooperation with local governments and science and technology education departments, solve practical problems for local development, and promote the win-win development of schools.

Conclusion

“Universities are in the general social structure of a particular era rather than outside. ... It is a manifestation of the times and a force that affects both now and in the future.” (Frexner, 1930) In the era of knowledge economy, high-level universities have become the core competitiveness of the country and have played a leading and leading role in promoting national economic and social development. The university is now “second only to the government as the main provider of society and the main tool for social change..., it is the source, advocate, promoter and communication center for new ideas.” (Brubacher, 1978) The university has changed from the “ivory tower” to the “power station” and “booster” of social progress in the modern era.

“Great universities were developed during the great period of great political entities in history.” (Kerr, 1964) With the deepening of the popularization of higher education in China, the reform and development of higher education faces unprecedented opportunities and challenges. Promoting the construction of high-level universities has become an important measure to accelerate the construction of a province with high education and promote regional economic development under the new situation. China’s “Double World-Class” construction project has provided a new opportunity for the construction of high-level universities in Jiangsu, and created favorable conditions for the realization of the goal of “Strengthen Province by High Education”. Jiangsu Province should closely combine the problems and development opportunities faced by China’s higher education, learn from the beneficial experience of developed countries in

developing higher education, increase reform efforts, accelerate the pace of development, and promote the construction of high-level universities to achieve connotative and leap-forward development, and the quality of personnel training, research and innovation, and social service levels have been significantly improved.

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Received: 7 March 2019

Revised: 27 March 2019

Accepted: 16 April 2019