

Research on the Construction Path of World-class Universities with Chinese Characteristics

-- Analysis based on World University Rankings QSWUR, THEWUR and ARWU

Yao Zhai^{1, a}

¹North China College, Nanjing Normal University, Danyang 212300, China.

^a1372894580@qq.com

Abstract

The world university rankings are one of the important means to reflect the university level, and also provide a reference for evaluation of the world-class universities with Chinese characteristics. This paper selects three world university rankings of QSWUR, THEWUR and ARWU as the object to analyze its characteristics and commonality and then proposes suggestions on an optimized scientific research system, strengthens the teaching staff and improves the quality of talent training for the path of how to build a world-class university with Chinese characteristics.

Keywords

World university rankings, world-class University with Chinese characteristics, construction path.

1. Introduction

In January 2017, the Ministry of Education, the Ministry of Finance, and the National Development and Reform Commission jointly issued the "Measures for the Implementation of World-Class Universities and First-Class Disciplines (Interim)", which clearly defined the selection criteria, selection procedures and support methods for "Double first-class program". It also pointed out that it is necessary to implement dynamic management, break the identity solidification and establish a dynamic adjustment mechanism for the construction of universities and disciplines. The introduction and implementation of the "Double first-class program" is an important strategic adjustment and deployment of the country for higher education. Universities are not only the mainstream of "Double first-class construction", but also the main front for the construction of world-class universities with Chinese characteristics. As early as May 2014, when General Secretary Xi Jinping visited Peking University, he proposed that it is necessary to widely absorb the world's advanced experience and follow the rules and adapt to local conditions and run a world-class university with Chinese characteristics. On May 2, 2018, General Secretary Xi Jinping made an important speech when he visited Peking University. He once again stressed that universities should firmly grasp the fundamental task of cultivating socialist builders and successors, insist on running the correct political direction and build a team of high-quality teachers, which may form a high-level talent training system and strive to build a world-class university with Chinese characteristics.

The World University Ranking is an important form of third-party evaluation institutions involved in higher education management, which plays a role in diagnosis, orientation and supervision of higher education [1]. Although the current number of indicators, content selection and weights of the university rankings are inconsistent, but because of its simple and clear results, relatively objective and scientific characteristics, the university rankings have

become one of the important means to reflect the university level. If they are ranked among the best in the world in different university rankings for many years based on different ranking indicators and weights, such universities should be arguably recognized as world-class universities[2]. Therefore, by studying the characteristics of the evaluation index system of the university rankings and analyzing its impact on the university's school orientation, development goals, strategic measures, and realization path, it is not only related to the effectiveness of the "double first-class" construction of each university, but also related to the realization of the goal of higher education power and the "two hundred years" struggle.

2. World University Rankings and Their Characteristics

2.1. World University Rankings

Since 1983, US News and World Report launched the world's major university rankings, a large number of university rankings have emerged. Different university rankings have different indicator systems, and different indicator systems also represent their different quality and evaluation views. Here we choose the world's most influential world university rankings: QS World University Rankings (QSWUR), THE World University Rankings (THEWUR), and World University Academic Rankings (ARWU) as examples.

The first-level indicators and weights of the three world university rankings are shown in Table 1:

Table 1. World university rankings Level Indicators and Weights Statistics

NO.	Name	Primary indicators and weights
1	QSWUR	Academic reputation(40%); Faculty/student ratio(20%); Citations per faculty(20%); Employer reputation(10%); International teacher ratio(5%); International student ratio(5%)
2	THEWUR	Teaching: the learning environment(30%); Research: volume, income, reputation(30%); Citations: research influence (30%); International outlook: staff, students and research (7.5%); Industry income: knowledge transfer (2.5%)
3	ARWU	Quality of Education (10%); Quality of Faculty (40%); Research Output (40%); Per capita performance (10%)

2.2. Characteristics and Commonality Analysis of World University Rankings

By analyzing the above table, it can be seen that the three rankings differ in the number of primary indicators, the choice of content and the weight of each indicator. QSWUR involves six aspects: academic reputation, teacher-student ratio, citations per faculty, employer's reputation, international teacher ratio and international student ratio. There are no secondary indicators. Compared with the other two ranking indicators, the number of indicators is the least. Reputation is included in the evaluation index system, accounting for 10%[3]. THEWUR have five first-level indicators: teaching, research, citations, international vision and industry income, which are divided into 13 secondary indicators compared to the other two rankings. There are more indicators in the list, and the content is more extensive[4]. There are four indicators including six aspects in the ARWU: alumni, award, HiCi, N&S,PUB and PCP [5]. In general, the multi-dimensional evaluation indicator system is a consensus and a trend, and the difference in the number of indicators, content selection and index weights reflects the different

setting goals of each ranking. QSWUR and THEWUR are market-oriented, providing professional information services to students, parents, employers and other stakeholders. The goal of ARWU is to compare the academic performance of world-class universities, find gaps, and accelerate the construction of China's world-class universities.

By analyzing and sorting out the evaluation index system of the world university rankings, in addition to discovering the different characteristics of each ranking evaluation index system, we can also summarize some common features. First, it is guided by scientific research results. By observing the weights of the scientific research results of the three major ranking indicators, it can be seen that the major rankings attach great importance to scientific research results and set evaluation indicators based on this. The academic reputation and the average citations per faculty index in QSWUR accounts for 60%; the proportion of research and citations indicators in THEWUR is also 60%; the research results of ARWU and the quality indicators of teachers reflecting the achievements and influence of teachers' scientific research achievements are as high as 80%. The second is that the above rankings focus on the construction of the teaching staff. The academic level of teachers is the core competitiveness of universities and personnel training. In QSWUR, the teacher-student ratio and the international teacher ratio index add up to 45%; the direct indicators of scientific research in THEWUR also indirectly reflect requirements for teachers; teacher quality indicators in the ARWU rankings accounted for 40%. The third is that rankings pay attention to the quality of personnel training. Throughout the three world university rankings, employer reputation, the learning environment and education quality are all manifestations of the improvement of talent training requirements. For example, the proportion of teaching indicators in THEWUR is 30%. The fourth is to attach importance to international reputation and influence. The setting of indicators such as the proportion of international students, the proportion of international teachers and the international vision reflects the importance that world-class universities attach to international reputation and influence.

3. Analysis on the Path of Building a World-class University

3.1. Optimize Scientific Research Evaluation System Around National Strategic Needs

The academic status and social reputation of world-class universities have been shaped over a long period of time. They are developed in accordance with the laws and the characteristics of running schools. The ranking system based on the output of scientific research papers cannot objectively measure the overall evaluation and commonality of a university[6]. The ultimate goal of academic evaluation is the sustainable development of academic research. Academic development logic is the leading evaluation mode, which moderately integrates the social impact of academic achievements, social and economic contributions, etc. and establishes a multi-dimensional, comprehensive and comprehensive quality evaluation index system.

3.2. Strengthen the Construction of the Teaching Staff And Enhance Their Comprehensive Ability

Strengthening the construction of the teaching staff is the key in the process of adhering to the correct political direction of running a school and promoting the high-quality connotative development of higher education. The gathering of top academic researchers is more likely to produce excellent research, and on the other hand to attract a group of high-quality students to study in the university. This virtuous cycle initiated by leading teachers has driven the school to become a "world-class university"[7]. To strengthen the construction of the teaching staff, on the one hand, universities should introduce high-level and urgently-needed talents with plans and priorities by combining their own goals for running schools. On the other hand, we

must pay attention to the cultivation of young talents and help young teachers integrate into the teaching team as soon as possible. At the same time, universities should comprehensively examine and evaluate the performance of teachers in personnel training, scientific research and social services.

3.3. Adhere to Intellectual and Moral Cultivation and Improve the Quality of People Cultivation

As the primary function of the university, talent cultivation should adhere to Outcomes-based Education (OBE), which is an education model based on learning output. Universities should establish a three-dimensional evaluation model of "quality of training process", "quality of students in school" and "quality of graduates", and conduct pilot surveys of students and employers to track the quality of career development during and after graduation. In addition, universities must closely integrate the country's major strategic needs in the process of running a school. In the "double first-class" construction, we must consciously integrate our own development into the responsibility and mission of the national strategy, and provide a strong national economic construction and social development. Talent support.

3.4. Refer to The International School Standards to Promote the Characteristics of Running A School in China

Creating a world-class university rooted in China's land is an inevitable requirement for realizing the "Chinese dream" of the great rejuvenation of the Chinese nation. General Secretary Xi Jinping also emphasized in the National College Ideological and Political Work Conference that China's higher education must follow its own development path and solidly run socialist universities with Chinese characteristics. "China's universities must firmly follow the Chinese characteristics and world-class development path and build a world-class university rooted in China's land. They must embody national characteristics, national characteristics and cultural self-confidence and lead the country's social and economic development" [8]. Due to its strong strength and good reputation, the university has attracted many outstanding teachers and students from all over the world to work and study. China must increase its efforts to support and support double-class construction of universities and enhance the international competitiveness of Chinese universities. There are more than one path for "double first-class" construction. The university must understand its own advantages and disadvantages, adhere to innovation and development, develop its characteristics, adhere to the Chinese characteristics and the world-class as the core, implement the fundamental tasks of intellectual and moral cultivation to train more builders and successors and serve the cause of socialism with Chinese characteristics.

Acknowledgements

Research Project of North China College of Nanjing Normal University in 2018(Project NO.2018yky006); The Fine Course Project of North China College of Nanjing Normal University (Project No. 2018yjpkc003); The Excellent Teaching Team Project of North China College of Nanjing Normal University "Marxist Theory Teaching Team" (Project No.2018jxtd004).

References

- [1] J.J. Duan: Exploring the Path of Establishing a World-Class University in China——Based on the Analysis of World University Rankings, Jiangsu Higher Education, 2017(5), 25-28.
- [2] L.Chen: Structure and Function: Comparison between Tsinghua University, Peking University and World-class Universities——Based on the Integration Analysis of QS, THE, ARWU World University Rankings, Foreign Education Research, vol.44 (2017), 3-21.

- [3] Information on: <https://www.topuniversities.com/qs-world-university-rankings/methodology>.
- [4] Information on: <https://www.timeshighereducation.com/world-university-rankings/methodology-world-university-rankings-2019#survey-answer>.
- [5] Information on: <http://www.shanghairanking.com/aboutarwu.html>.
- [6] P.hu. Li: Rational Thinking on University Ranking and Construction of China's World-Class Universities, China Higher Education Research, vol.6(2016),75-79.
- [7] T.t. Chen: "Common" Characteristics of World-Class Universities——Based on the Analysis of ARWU, THE and QS Rankings, Higher Education Development and Evaluation, Vol.32(2016), No. 3,19-30.
- [8] W.Zhang: The Influence of University Ranking on Colleges and Universities, Advanced Development and Evaluation. vol.28(2012): 19-25.