Contrastive analysis on the university rankings of China

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Abstract: According to the four rankings of China's universities conducted in 2007 by Guangdong Managing Science Academe, On-line College, China Universities Alumnus Association and Center for Science Evaluating of China. This paper attempts to analyze and contrast the standard systems in the four rankings, focusing on the frame construction of the standard-system and the proportion, talents training (the condition of students), the account of scientific researches and classification rankings as well.

Key words: university rankings; contrastive analysis; standard-systems

Since 1980s, some civilian organizations have been trying to rank China's universities by their own. Among all the rankings, the most influential four are those conducted by Guangdong Managing Science Academe (WU Shu-lian Team), On-line College, China Universities Alumnus Association and Center for Science Evaluating of China. The four rankings are published yearly before the National Entrance Examination. Exposed to the four rankings, people's opinions vary. Some are negative and some opposite. The four rankings, however, provide the society with an access to the information about the universities after all. The four rankings have some points in common, while differ from each other in some areas. This paper attempts to contrast and analyze the frame construction and the proportion of the standard-system, talents training (the condition of students), accounts of the scientific researches and classification rankings as well.

1. The frame construction and the proportion of the standard-system

(1) In the standard-system of Guangdong Managing Science Academe, there are only two first-class standards and four second-class ones, mainly concerning the output of education: talents training (57.09%) and scientific research (42.91%), characterizing as the scale of the contents of the standard-system.

(2) The standard-system in On-line College consists of education-input and education-output, take the education-input for example, material resource makes up 12%, faculty resources 19%, and academic resources 20%; in the standard of the education-output, academic achievement takes up 22% and students' condition 12%. In addition, the survey on the fame of the universities is also conducted and the statistics are also open to the public. The characteristics of this ranking are focused on the relativity of the standards.

(3) Like that of On-line College, the standard-system put forth by China Universities Alumnus Association also comprises such standards as education-input and education-output. For example, in the education-input, scientific research bases take up 15.56%, training bases 11.11% and faculty 13.33%; in the education-output, scientific research items hold 13.33%, scientific research achievement 20.00% and the conditions of the students

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20.00%. The survey on the fame of the universities is also supplied. Its feature is focused on the absoluteness.

(4) The Center for Scientific Evaluation of China designs and applies different standard-systems according to the different types of universities and different evaluating contents. Each system consists of such standards as the education-input, education-output and benefits. For example, when evaluating the competitive strength of the key universities, this ranking applies the standard of education-input, which is made up of resources of running a university (16.71%); the standards of education-output, consists of teaching level (26.16%), scientific research (45.31%) and the survey of the fame of the universities (academic fame and social fame). This ranking is characterized as generalization.

2. The account of talents training

(1) The talents training fall into under-graduate education and post-graduate education in the standard-system of Guangdong Managing Science Academe. As for the account of the post-graduate education, the innovation environment multiplies its quantity to measure the quality of the education; as for the account of the under-graduate education, the quality of students multiplies its quantity to measure the quality of the education. As for the account of talents training, this method lays particular stress on the quantity of the students and the scale of the university. It is, therefore, more favorable for the universities with a great scale and a great quantity of students. Some scholars believe that this standard will mislead the polestar of running a university.

(2) On-line College measures the quality of talents training in terms of such standards as the condition of students of the first-class standard, the quality of enrolled students of the second-class standard, and the percentage of the post-graduates in the whole students. The quality of talents training is unrelated to the scale of under-graduates, but rather relative with the scale of the post-graduates to some extent.

(3) The standard-system in the China Universities Alumnus Association evaluates the quality of talents training in terms of the quantity of the outstanding schoolfellows and prominent students among the graduates, among which the quantity of outstanding graduates is an accumulating standard, only prominent students (The winners of national excellent dissertation, national college students carving-out-program, contest of extracurricular academic science and technology works, mathematical modeling, electronic design contest and the English speech contest) reflect the anniversary standard of the talents training. It is of unilateralism in terms of the account of the talents training.

(4) Center for Science Evaluating of China values the education quality in terms of the first-class standard of teaching level and such three second-class standards as student resources and graduates, post-graduates and international students, and teaching quality. In addition to the scores of the new students, the number of graduates and an employment rate, the percentage of post-graduates, international students between undergraduates, the third-class standard also consists of the number of the winners from national top 100 dissertations and all kinds of international and national competitions. Therefore, this standard-system is relatively general.

Table 1 Standard-systems of 4 civilian rankings of China's universities in 2007

Evaluating Organizations	First-class Standard		Second-class Standard
Guangdong Managing Science Academe	Talent Education		Post-graduates Education Under-graduates Education
	Scientific Research		Physical Science Research Humanities Research
On-line College	Reputation		Survey on the reputation of academicians, famous scholars, experts, university presidents and principals of middle schools
	Academic Resources		The number of awarding rights for doctoral degree, the number of awarding rights for master's degree, the number of national key courses, the number of national key laboratories, the number of key humanities researching bases
	Academic Achievement		The total amount and the average of SCI, EI, SSCI, CSSCI
	Students		The quality of the new enrolled students, the proportion of the post-graduates among the whole students
	Faculty Resources		The percentage of over associate professors in the exclusive teachers, the number of academicians, the number of professors with the title of Changjiang Scholar, the ratio between faculty and students(exclusive teachers/ student number)
	Material Resources		Total academic funds for scientific research, average funds for each teacher and researcher, the total quantity of books and the average of books for each student, the total construction acreage of the buildings and the average for each student
China Universities Alumnus Association	Scientific Research		Scientific research bases Scientific research projects Scientific research achievements
	Talents training		Training bases, faculty, the condition of students
	Comprehensive reputation		Comprehensive reputation (national fame and academic fame)
Center for Science Evaluating of China	Scientific and technological innovation and humanities	Investment	Human resources, R&D bases, projects, funds
		Output	The application of the scientific achievement, the embodied number of papers, the quality of the papers, awards
		Benefits	Efficiency
	The comprehensive competitive strength of the key universities	Resources of running universities	Basic conditions, educational funds, faculty, advantageous courses
		Teaching level	Students resources and graduates, Post-graduates and international students, the quality of education
		Scientific research	Scientific research team, output of scientific research, the quality of output, the projects and funds of the scientific research, efficiency and benefits
		University reputation	academic fame and social fame

3. The account of scientific research

(1) Guangdong Managing Science Academe established that in the ranking standard-system, the proportion of physical research is 34.78%, while humanities 8.17%, according to the fact that the number of people who do science and engineering research is 4.3 times as that of people who do humanities research in China. The ratio between the two is 4.247: 1, whose theoretical basis is, macroscopically, out of the national education condition. It has been, however, controversial in the research areas for this proportion may not be suitable for every university.

(2) Referring to the standard-system of Guangdong Managing Science Academe in terms of the account of scientific research, On-line College applies both standards of total and average amount to ascertain the ratio between physical science and humanities in terms of the respective proportion between the number of the two kinds of researchers and the total number of the researchers. Thus the problem of how to set up the proportion between the achievement of scientific research and that of humanities research is solved flexibly. It is not reasonable to evaluate different universities with the same standard. Meanwhile the standard on scientific research is too simple.

(3) China Universities Alumnus Association counts the score of scientific research in terms of the projects and the achievement of scientific research. In addition, all the contents of the standards are compulsory, and in terms of the design of the standard-system, which concerns more about the ranking of the investment into universities from the government. It has much more compulsory standards in the system, while fails to show the features of common universities.

(4) According to the scientific theory, the developing regularity of science and the characters of scientific research, considering the in-put, output and efficiency, Center for Science Evaluating of China respectively designs the standard-systems of the competitive strength of scientific innovation, the competitive strength of humanities and the comprehensive competitive strength. This standard-system embodies the principle of evaluating in terms of classification, reflecting the scientific research ability and contributions of the universities from every aspect, which can avoid the deficiency of the other two standard-systems of Guangdong Managing Science Academe and On-line College in terms of scientific research.

4. Classification and ranking

(1) In addition to the rankings of the first-class standard, Guangdong Managing Science Academe also classifies the universities in terms of disciplines and subject category. Meanwhile, the universities are divided into four types in terms of regularity of scientific research, namely research, research-based teaching, teaching and research, and teaching. Five types of universities are classified in terms of discipline ratio: comprehensive university, arts and science, science, arts, and special universities. A, B, C, D and E, five levels are established according to the ratio between discipline and specialty. This classification is original and, to some extent, bears directing significance to the society.

(2) College On-line merely makes its ranking in terms of the first-class standards in the standard-system.

(3) In addition to the ranking of first-class standard (scientific research, talents training, comprehensive fame), China Universities Alumnus Association also offers rankings of Outstanding Alumnus of China and the cultivation of talents of China’s Universities.

(4) The evaluation report promulgated by the Center for Science Evaluating of China includes the

competitive strength ranking of educational regions of China's universities, the comprehensive competitive strength ranking of China's key universities, the competitive strength ranking of China's general universities, the competitive strength ranking of China's private colleges, the competitive strength ranking of scientific and technological innovation of China's universities, the competitive strength ranking of the humanities and social science of China's universities, discipline ranking of the key and general universities, and the specialty ranking of the four-year education of China's universities, etc. Meanwhile, according to the characteristics, tasks and quantities, universities are divided into eight types (the comprehensive, science and engineering, normal, medicine, language, financial, Sports-art, ethnic, agro-forestry) and a new undergraduate disciplines evaluation system is developed (a total of 192). According to the centralized and discrete distribution regularity, and the distribution features of disciplines in universities, universities are divided into five grades (A+, A, B+, B, C) in terms of disciplines (specialties) and levels. The ranking offered by the Center for Science Evaluating Research of China is currently the most detailed and comprehensive university ranking.

To sum up, Guangdong Academy of Management Science research group emphasizes particularly on evaluating the output of education. The evaluating standard pays much attention to the scope of running a school, which helps the students and their parents know about the scale of the university's talents cultivating and the strength of scientific research. The On-line College focuses on the investment and output of the education. This standard is of certain flexibility and can help the students and their parents comprehensively understand the university's condition about the investment and output of the education. China Universities Alumnus Association concerns about the key universalities' evaluation on the investment and output of the education. Basically they are inflexible standards. The standard-system of China Universities Alumnus Association can only help the students and their parents rationally analyze the current situation of the key universities. However, the Center for Science Evaluating of China concentrates on the evaluation of the education investment, output and benefits. This standard-system is relatively more comprehensive and systematic. Thus this evaluation can be seen as the most detailed university rankings, in which there are the most amounts of rankings of classifications. This ranking, therefore, can help the students and their parents comprehensively know about the present situation of different universities in terms of educational investments and outputs and benefits.

The standard-systems of the four rankings in China lay particular emphasis different aspects. Among the four rankings, those of the Guangdong Managing Science Academe and On-line College can help the public know about the present status in terms of talents training, the strength of scientific research and the top universities in China, while the other two ones, those of China Universities Alumnus Association and the Center for Science Evaluating of China is preferable to help the readers know the condition and the resources of a university.

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