Benchmarking Jiangsu University to Improve Its Academic Ranking

Li Xinxhao[*]   Joseph Muiruri Thige

School of Education, Jiangsu University, PO box 301, Xuefu Road 212013, China

Abstract

This paper collates research on global ranking through U.S.News.com in relation to Jiangsu University's non-appearance in global ranking of higher education institutions. The author critiques the Academic set up of the University in comparison with universities Ranked as World Class. The author navigates the study largely through descriptive and critical synthesis of published research and their variances. He explains how these measures improve the performance and ranking position of a Higher Education Institution (HEI). Looking at the international ranking systems in the world, and zeroing down to U.S.News.com; the author puts out the theory of all departments' focus on generating quality research, high quality publications and internationalization to meet the demands of World University ranking by addressing the Gap in Jiangsu University (JU) and how to close it

Keywords: Higher education ranking, Jiangsu University, U.S.News.com, international, indicators, weights

1. Introduction

By the year 2017, Higher Education academic ranking had attracted about 26 ranking systems. Some of these were university owned; others were government owned while others were independent of institutions and government input or control. Based on this wide diversity, the author sought to analyze and synthesize the ranking systems to establish a correlation and eliminate bias. He did this by evaluating each ranking system based on its ranking criteria which are conglomerated in what the modern day scholar regards to as the '*ranking regime*'.

1.1 . Analysis and synthesis of the ranking regime

Any indicator that was not quantifiably measurable such as an institution's reputation was automatically eliminated. The author sought to focus on the ranking variables through the indicators and the weights for each indicator to establish which ranking system had the most comprehensive indicators and weights evenly distributed. Those that had wide differences with the overall assessment in comparison to other ranking systems were also eliminated. After a wide cross reference, the author settled on four ranking systems which had a global coverage and whose ranking was closely correlated. Upon critical evaluation of these four ranking systems namely; *Europe's Times Higher Education (THE), Quacquarelli Symonds (QS) HEIs' ranking systems, China's Academic Ranking of World Universities and United States' (U.S.News.com),* the author concluded that (U.S.News.com) was the most comprehensive and mostly used as a benchmark by other ranking systems in their quest to get global recognition

2. Understanding the ranking Gap

Higher Education Ranking systems have in the recent past attracted most attention and enthusiasm, and therefore have been widely discussed whether on effectiveness or issue. Out of the mass of ranking systems available globally, four have proved to be most comprehensive and thus were sampled for correlation and evaluation. Given the popularity and visibility this brings to higher educational institutions, wide gaps in variables were noticed during the ranking assessment. Out of the four, U.S.New.com was found to be the most comprehensive as it measured very clear indicators. This assessment was based on the 12 ranking indicators and weights. Based on this evaluation the ranking system was used as the model. (Refer to the table below)

Table 1: *Criteria of International Academic Rankings through indicators and weights comparisons*

U.S.News.com2014	12.5%:GRR	12.5%:RRR	2.5%C	10%:NCI	7.5%:TC	10%:P	12.5%:Top10C	10%:PTP	2.5%:B	10%:IC	5%:NPA	5%:NPAAY
QS2009	40%:R	_	_	40%:T	_	_				10%:IO	10%GE	_
THE2009	30%:R	_	2.5%:II	32.5%:C	_	_				5%:IO	_	30%:T
ARWU2003	20%:R	_	_	20%:C	20%:TC	20%:P				10%:PP	10%:QE	_

Data Source: Data Retrieved on October 10-17th 2016 from

THE (www.timeshighereducation.com/(QS (www.topuniversities.com) ARWU (www.arwu.org) and, U.S.news.com http://www.u.s.news.com/ 2010-2015

The researcher used this to establish the parameters of academic quality through assessing Global Rankings' HEIs' content and what made them unique in shaping higher education. He did this to check the parameters of the Gap between World Class HEIs and Jiangsu University in view of the ever-increasing relevance of academic ranking globally. He opted for bibliographic and documentary research which confirmed the predominance of strategic value intertwined with the reductionism of knowledge in the context of research and publication and,

the western led process of internationalization of higher education

2.1 demystifying the ranking variables

All Global Academic Rankings feature different criteria and ranks the world universities from different aspects. Choice of reference was dictated by comprehensiveness and cross comparison with other ranking systems. Any presumed bias on choice is highly regretted. The author outlined the parameters used to aggregate ranking in the four leading systems compared. This helps the reader check the author's justification of U.S.News.com based on the depth and breadth of the divisions and focus areas as outlined below.

Though Jiangsu University did not feature in any of the ranking systems academically, it was featured in the Times Higher Education Ranking with improvements based on Data collected on 28th September 2016, Data source; (THE, 2016 [1i]) and by Quacquarelli Symonds as a four stars university based on its accommodation of international students. the researcher sought to point out the disparities 'gaps' that led to inadmissibility among the top 800 institutions globally. This in effect points to indicate that Jiangsu University's continuous transformation in internationalization, research and publication are soon getting the international attention which is a stepping stone to reaching the pinnacle of global recognition. Quacquarelli Symonds QS ranked Jiangsu University as a four star University in its 2016 internationalization comparison[2ii].

3. Evaluation of the leading ranking systems

3.1 THEs (Times Higher Education World University Ranking).

Times Higher Education World University Ranking (THEs; www.timeshighereducation.com/) was originally known as *Times Higher Education-QS World University Rankings*, as its data was supplied by Quacquarelli Symonds, a London-based higher-education media company since from 2004. While in 2010, the THEWUR and the QSWUR were split into two independent ranking programs and the *Times Higher Education* started to appoint Thomson Reuters as its new data supplier and initiated new criteria.

The THEs ranking currently combines 13 indicators and these indicators are categorized into following five areas: (the reason THE) was selected is the inability to outline, justify and demystify the 13 Indicators mentioned. Teaching (30%), Research quality (30%), Total Citations (32.5%), Industry income (2.5%) and International outlook (5%).

3.2. QS (Quacquarelli-Symonds World University Ranking)

The Quacquarelli-Symonds World University Ranking (QS; www.topuniversities.com) was released by a private company. It limits ranking by listing the top 500 world universities annually. The QS focuses on evaluating four areas of a university: Among these four dimensions' Academic peer review was given the highest weighting which account for 40%, the weighting of employer review account for 10%, citation per faculty and student faculty which accounts for 40% and International faculty and students account for 10% out of a hundred. Research quality: 40%; Graduate employability: 10%; Teaching quality: Total of 40%; International outlook: 5% and 5% respectively giving it a total 10% Total.

3.3 ARWU (Academic Ranking of World Universities)

The Academic Ranking of World Universities (ARWU; www.arwu.org.) was first published in 2003 by a group of researchers at the Shanghai Jiao Tong University (Liu & Cheng, 2005). The ARWU has since attracted much interest from around the world as it identifies the best 500 universities from 41 different countries. Nowadays, the ARWU combines five criteria: quality of education, quality of faculty, research, output and size of institution. These criteria are measured using the following indicators: Research output- 20%, Citation impact- 20%, Total citations- 20%, Publications- 20%, Per capita Performance- 10%, Quality of education- 10%

3.4. U.S.News.com World Report (2014)

The US News & World Report Best Universities, Interestingly, the US News magazine, launched by journalist David Lawrence in 1933, only gained notoriety when it incorporated the World Report Best College in 1983 due to its acquisition by Mortimer B. Zuckerman. Zuckerman, who graduated from Harvard Law School, was co-editor president for New York Daily News, and former professor at the Harvard Graduate School of Business, where he taught for nine years. U.S.News.com ranks Higher Education institutions using 12 indicators that measured academic research performance and their global and regional reputations. The ranking provided insight into universities performance and global comparison. The assessments focused on higher education institutions' both quantitative and qualitative assessment. *The U.S.News.com has 12 variables and weights*;

Global research – 12.5%, Regional Research – 12.5%, Publications – 10%, Books – 2.50%, Conferences –

---

[1] THE, 2016) https://www.timeshighereducation.com/world-university-rankings/jiangsu-university#ranking-dataset/589595

[2] QS, 2016) http://www.topuniversities.com/Univerity-ranking/jiangsu-universirty

Conferences 2.50%, Normalized citation – 10%, Total citations – 7.50%, Number of Publications – 12.50%, Percentage of total – 10%, International 10% , Number of PHDs awarded – 5%, and Number of PHDs awarded per academic year – 5%

Why chose U.S.news.com ranking system

According to the researcher's evaluation of the ranking systems considered, *U.S.News.com World Report* ranking system had the most elaborate widely distributed and clearly marked assessment outline. The ranking system had strong reputation since its creation as a national frontier for ranking. Stratification ranking system showed that the other three ranking systems (ARWU, QS and THE) highly borrowed their data from. U.S.News.com. it was also the most reputable system in the United States where more than half the ranked, top performing Higher Education Institutions are located. Its 12 indicators and weights were split for between 12.5% and 5% variables being highest and lowest respectively.

A sample of the distribution is contained below. Global research – 12.5%, Regional Research – 12.5%, Publications – 10%, Books – 2.50%, Conferences – Conferences 2.50%, Normalized citation – 10%, Total citations – 7.50%, Number of Publications – 12.50%, Percentage of total – 10%, International 10%, Number of PHDs awarded – 5%, Number of PHDs awarded per academic year – 5%. This distribution stratifies and distributes quality of evaluation across the entire institution by factoring all aspects that relate to academic engagements that in turn have verifiable indicators.

(Table 2: Best performing institutions of higher education's 12 indicators and weights)

Best global Universities Ranking Indicators 2016
Data Source: U.S.News 2015 edition

variables chart based on academic quantification compiled by Joseph Muiruri Thige	Harvard University	Massachusetts Institute of Technology	University of California-Berkeley	Stanford University	Oxford University	University of Cambridge
Normalized citation Impact	8	2	11	11	20	36
Conferences	98	16	30	48	134	82
Books	3	33	12	9	2	1
Publications	1	32	15	12	4	11
Regional research reputation	1	4	3	2	2	1
Global research reputation	1	2	5	4	6	3
Global score	100	94.3	92.2	89	86.7	86.2
Total citations	1	9	6	4	3	11
Number of publications that among the 10…	1	9	5	3	4	8
Percentage of total publications that are …	6	2	10	9	28	24
International collaboration	59	32	36	139	138	176
Number of PhD's awarded	16	172	23	46	56	45
Number of PHD's awarded per academic year	44	132	32	206	73	41

Data Source: Data Retrieved on October 10-17th 2016 from U.S.news.com http://www.u.s.news.com/ 2010-2015

Theoretical Framework

A general casual model for assessing the effects of the ranking regime within HEIs indicated that ranking is an exterior function of the direct and indirect effects of different major aspects of interior variables. The variables include research, collaboration, Publications, Books, Conferences, citations, Internationalization, and awards (Catell, 1921[1iii]; Hazelkorn, 2011[2iv]), the main emphasis in academic institutions however is research. Indicators

---

[1] Catell, J. M. (1921). *American men of science.* Bowker.
[2] Hazelkorn, E. (2011). *Rankings and The Reshaping of Higher Education: The battle for world-class excellence.* Palgrave Macmillan.

of scientific performance and impact are integral parts of research management and policy development internationally. In a recent article (Pouris 2006[1][v]) stated that a number of indicators have been developed positioning universities in their context. Through those indicators research authorities can identify the concentration of particular scientific research in a particular institution, the research emphasis of the various universities is similar. (Kaba, 2012) has researched the paradigm that countries attempt to emulate in their aspirations to make it to global rankings.

The author referred to two considerations, in particular as noteworthy with respect to internationalization and its bearing on global rankings: "academic inbreeding" (Altbach, 2004[2][vi]; Philip G, 2009[vii][3]) and inventiveness of research. If research is the central element in ranking, then other aspects of a university are required to make outstanding research possible" (Altbach, 2005, p. 22[4][viii]). This is all by way of saying that high quality research is an indicator of other attributes such as quality of faculty and overall education, and supporting infrastructure. (Barbara M. & Bjørn[5][ix], 2009 Merisotis, 2002[6][x]; Brooks R. 2005; Pascarella, 1980[7][xi]; Pascarella & Terenzini, 1991; Pascarella & Terenzini, 2005). With regard to reputation in rankings, this means that a department may receive higher evaluations when they are found within institutions that have, on the whole, a high reputation (Brooks 2005, p. 7). Using the concept of Bourdieu, reputation can be understood as a form of social capital that can be used in a competitive field.

Ranking Criteria

Ranking in the U.S.news.com as well as the other three top leading ranking systems were based on five years' assessment. Ranking systems analyzed gave much weight to research varying from 20% to 40%. Universities used this ranking criterion as benchmark to develop different aspects in their faculties and research fields. Bourdieu defines Higher Education Institutions (HEIs) ranking as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu 1983, p. 190[8][xii]; Graham A. & Thompson, 2001[9][xiii]). The worldwide popularity of university rankings is a reflection of the changes taking place in recent years in higher education (Sadlak & Liu: 2007[10][xiv]; Kehm, & Stensaker: 2009[11][xv]). It has been repetitiously hypothesized that the present notion of world-class university rests upon excellence in research (Altbach, 2004[12][xvi]; Altbach, 2009[13][xvii]; Altbach, 2011[14][xviii]; Altbach & Balan, 2007; Burns, 2012[15][xix]; Gupta, 2010[16][xx]; Kaba, 2012; Krishnan, 2005; Rauhvargers, 2011; Salmi & Saroyan, 2007; Salmi, 2011) state that world-class universities are "research universities at the pinnacle of the tertiary education hierarchy, as measured by the various international ranking systems".

Jiangsu University's Students International population quantification

In the seven years since the first batch of international students under Overseas Educational College, the number of international Students in Jiangsu University rose from (7 students in 2009 to 1897 students in 2016), this happened through rigorous screening of students and an effort by the Overseas Educational College OEC to internationalize the students' foreign department and make it more attractive especially to sciences undergraduate students and research post graduate students. These aspects of assessment were administered to ensure only highly competent students were admitted in order to retain high quality academic achievement in the context of a demanding global market (Heintze, 2004[17][xxi]; Philip G, 2009[lxxii];).

http://dx.doi.org/10.1057/9780230306394

[1] Pouris A. (2006). Assessing Scientific Strengths of Academic Institutions: the University of Pretoria, SAJ of Science 102:23-26

[2] Altbach, P. (2004). The costs and benefits of world-class universities. *American Association of University Professors, 90.*

[3] Philip G. Altbach, P.G., Reisberg, L, and Rumbley, L. (2009). Trends in Global Higher Education: Tracking an Academic Revolution. UNESCO 2009 World Conference on Higher Education.

[4] Altbach, P. (2005). India: A world-class country without world-class higher education.

[5] Barbara, M & Bjørn, s. University Rankings, Diversity, and the New Landscape of Higher Education, sense publishers Rotterdam/Boston/Taipei, 2009.

[6] Merisotis, J. 2002. "On the Ranking of Higher Education Institutions". Higher Education in Europe 27(4), 361–363.

[7] Pascarella, E. (1980). Student-faculty informal contact and college outcomes. *Review of Educational Research, 50,* 545-595.

[8] Bourdieu, P. 1983. „Ökonomisches Kapital, kulturelles Kapital, soziales Kapital". In Kreckel. R. (ed.), Soziale Ungleichheiten (Soziale Welt, Sonderheft 2). Göttingen: Schwartz, pp. 183–98.

[9] Graham, A. and Thompson, N. 2001. "Broken Ranks: US News' College Rankings Measure Everything but What Matters. And Most Universities Don't Seem to Mind". Washington Monthly 33(9), 9–14,

[10] Sadlak, J. and Liu, N.C. (2007). The World-class University and ranking: Aiming Beyond Status. Bucharest, UNESCO-CEPES.

[11] Kehm, B.M. and Stensaker , B. (Eds.) (2009). University Rankings, Diversity, and the New Landscape of Higher Education. Global Perspectives On Higher Education. Volume 18. Sense Publishers.

[12] Altbach, P. (2004). The costs and benefits of world-class universities. *American Association of University Professors, 90.*

[13] Altbach, P. (2009). One-third of the globe: The future of higher education in China and India. *Prospects, 39*

[14] Altbach, P. (2011). Ranking season is here. *International higher education, 62*

[15] Burns, J. (2012, September 11). Research key to universities leading global rankings. Retrieved from http://www.bbc.co.uk/news/education- 19558024
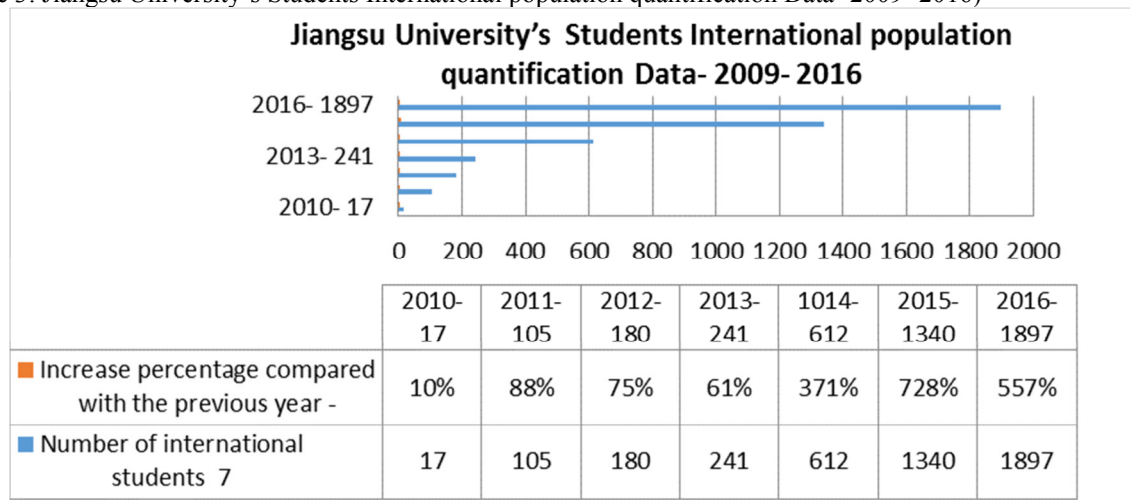
[16] Gupta, B. M. (2010). Ranking and performance of Indian universities based on publication and citation data. *Indian Journal of Science and Technology. 3*(7)

[17] Heintze, U., Radeborg, K., Bengtsson,H., & Stenlåås, A. (2004). Assessment and evaluation of individual prerequisites for dental

JU's Selection and retention overview

The variations in the selection methods portrayed a thought pattern and the structure of the educational system of the University (Altbach, P, 2004[2][xxiii]; Barbara, M & Bjørn, s, 2009[3][xxiv]). Students who passed the screening process exhibited an improvement in their self-concepts because it affirmed their academic excellence and their ability to make high scholarly achievements (Brooks, R. 2005[4][xxv]). Approximately two thirds of the students who were accepted indicated Jiangsu University was their first HEI choice (Coombs, 1976[5][xxvi]; Hallissey, 2000[6][xxvii]; Wexler, 1978[7][xxviii]). Acceptance into Jiangsu University was an indicator that one was already a cream in the society they came from giving the students a foundation for confidence.

(Table 3: Jiangsu University's Students International population quantification Data- 2009- 2016)

Jiangsu University's Students International population quantification Data- 2009- 2016

	2010-17	2011-105	2012-180	2013-241	1014-612	2015-1340	2016-1897
■ Increase percentage compared with the previous year -	10%	88%	75%	61%	371%	728%	557%
■ Number of international students 7	17	105	180	241	612	1340	1897

Data Source: Jiangsu University's overseas education college on www.oec.edu.cn/en

Due to this intense screening process, many applicants did not meet the application threshold and were therefore not successful. Regardless of different selection methods, some students failed to reach the academic achievement standards (Drummond & Duguid, 1997[8][xxix]; Lynch et al., 2006[9][xxx]). A study of the fourth- and fifth-year medical students conducted in (2014 by Li Xinchao) reported that 17 percent of the students complained about a severe lack of accomplishment in the clinical setting (Pöhlmann et al., 2005[10][xxxi]; Van Raan, A. 2006[11][xxxii]; Sanders & Lushington, 2002[12][xxxiii]) *faculty and administration* is predictive of poor student performance in terms of clinical competency and contextual understanding. Language barrier in Jiangsu University was an additional challenge as the professors were all Chinese with limited international exposure and average or above average command of the English language which is the medium of acidic instruction. Little additional research has been found to explain how to solve this phenomenon.

Dropouts and low academic achievement, despite rigorous screening at admission was due to lack of essential components of academic success. This component influenced intellectual consequences, attitudes, values, aspirations, and various psychosocial outcomes. Interactions with faculty also fostered "interpersonal skills, gains in general maturity and personal development" (Pascarella & Terenzini, 2005, p. 613), together with problem-solving and decision-making skills, and student satisfaction which improved students outcome in publication, research quality, interpersonal networking within the university and ability to extend capacity

---

education. *European Journal of Dental Education, 8,* 152-160.

[1] Philip G. Altbach, P.G., Reisberg, L, and Rumbley, L. (2009). Trends in Global Higher Education: Tracking an Academic Revolution. UNESCO 2009 World Conference on Higher Education.

[2] Altbach, P. (2004). The costs and benefits of world-class universities. *American Association of University Professors, 90.*

[3] Barbara, M & Bjørn, s. University Rankings, Diversity, and the New Landscape of Higher Education, sense publishers Rotterdam/Boston/Taipei, 2009.

[4] Brooks, R. 2005. "Measuring University Quality". The Review of Higher Education (29), 1–21.

[5] Coombs, J. A. (1976). Factors associated with career choice among women dental students. *Journal of Dental Education, 40,* 123-129.

[6] Hallissey, J., Hannigan, A., & Ray, N. (2000). Reasons for choosing dentistry as a career – a survey of dental students attending a dental school in Ireland during 1998-99. *European Journal of Dental Education, 4,* 77-81.

[7] Wexler, M. (1978). Mental health and dental education. *Journal of Dental Education, 42,* 74-77.

[8] Drummond, J. R., & Duguid, R. (1997). Student drop-out from UK dental schools. *British Dental Journal, 182,* 347-349.

[9] Lynch, C. D., McConnell, R. J., & Hannigan, A. (2006). University ranking in Ireland: Can current selection criteria predict success? *European Journal of Dental Education, 10,* 73-79.

[10] Pöhlmann, K., Jonas, I., Ruf, S., & Herzer, W. (2005). Stress, burnout and health in education. *European Journal of higher Education, 9,* 78-84.

[11] Van Raan, A. 2006. "Challenges in the Ranking of Universities". In Sadlak, J. and Cai, L.N. (eds.), The World Class University and Ranking: Aiming Beyond Status. Bucharest: UNESCO-CEPES, pp. 87–122.

[12] Sanders, A. E., & Lushington, K. (2002). Effect of perceived stress on higher education. *Journal of Dental Education, 66,* 75-81.

building to lower level students at the University (Astin, 1993; Frankin, 1995; Frost, 1991; Thomas & Galambos, 2004).

Input by students was a key component in improving the educational programs and the assessment of student perceptions were meaningful ways to gain insight into improving students' palatability and boost ranking in Jiangsu University (Henzi, Davis, Jasinevicius, & Hendricson, 2007). Focusing on students may help other stakeholders, including administrators and faculty to understand student needs and perceptions in order to best promote students' interests and interactions to foster student achievement and boost ranking by closing the gap. (Cafsa, 2010-2015[lxxxiv]; Li Ming, 2016; Mao yi, 2016; QS, 2017 ;)

Quantitative data of HEIs according to U.S.News.com

Key to note in the top ranked Higher Education was the number of International Students as compared to Jiangsu University. In Harvard University there was 1 international student for every 4 local students which was roughly a 25% ratio. Massachusetts Institute of technology had 1 international student for every 3 local students which was roughly a 30% ratio. University of California Berkeley had the lowest ratio with 1 foreign student for every 7 local students giving it a 14 % ratio. Stanford University was the second lowest with 1 foreign student for every 5 local students giving it a roughly 20% ratio. University of Cambridge had 1 foreign student for every 3 local students giving the university a 35% ratio. This meant University of Cambridge had the highest foreign to local students' ratio compared to the other top leading global Higher Education Institutions (HEIs). Cambridge University's average performance on engineering and medical sciences could be a contributing factor to its positioning as the number six best place university. Jiangsu University had a 3% of its students currently being international. Out of every 34 students in Jiangsu University, 1 was an international student (THE, 2017) if table 3's projection is anything to go by, the projected increase of international students in Jiangsu University would only be expected to grow in significant proportions in the years to come. Refer to Table 4 below.

Table 6: *Outlook based on academic data of U.S.News.com University Ranking)*

U.S.News.com's Quantitative academic data.

faculty and students data	Harvard university		University of Califor…	Stanford University	University of Oxford	University of Cambri…
Total number of students	20,152	11,074	36,186	15,596	19,919	18,812
Number of international students	5,025	3,682	5,493	3,408	6,740	6,465
Total number of academic staff	2,259	1,234	2,203	1,995	1,805	1,596

Data Source: Data Retrieved on October 10-17th 2016 from U.S.news.com http://www.u.s.news.com/ 2010-2015

Gap Analysis

The need to evaluate the academic progress of Jiangsu University is urgent. Through this evaluation, the institution as a whole will position itself to contribute to this ranking by working towards increasing the ranking parameters such that any system that ranks the University will find readily available assessment data which currently is not well documented for external assessment. by adopting a globally acceptable ranking system that's respected by other leading academic institutions globally and one that is considered as a globally leading World Academic ranking system for Higher Education, Jiangsu University will be making a statement to the world that its ready to take on other academic giants. However, at the moment, a lot needs to be done. Leading ranking systems though QS and THE both cited Jiangsu University as a good learning environment and a leading Asian academic hub respectively, these sightings act as grounds to explore and build on in order to close the ranking Gap.

Students' internal limitations

Many shortcomings influenced students' academic input and output in Jiangsu University. the Students who did not meet their academic obligation within the set timelines were forced to spend more money to finish their academic plan of study, In the event that they repeated a course or an academic year, they lost their opportunities

---

[1] 2015 年全国来华留学生数据统计 http://www.cafsa.org.cn/research/show-194.html

to gain income by graduating late, in the case of students who did not remain in the program, they lost their investment in the school or the department they studied in, through financial, time, and emotional loss. In most cases of academic failure, the latter result was expected. Jiangsu University also lost if the number of students in each class was less than the expected number because fixed costs remained the same while the school received less income from students' registrations. All these factors influenced the dismal performance of students.

In Jiangsu University, the patterns indicating a lack of student academic success were varied. A number of students repeated a year of study and thus delayed their graduation or were discontinued altogether for academic, tuition payment or other violations. Students who failed continuously were not allowed to graduate without doing all retakes. Furthermore, some students withdrew from courses or school as well as transferred to other academic departments every year of the three to six years depending with level and academic plan of study. These delays and punishments discouraged both the students affected and their colleagues pursuing the same academic programs further reducing the optimality.

Studying "conditional" effects of academic and nonacademic support programs impacted academic achievement of Jiangsu University. This was meaningful since most existing knowledge on the effect of college on students was based on samples that may not have represented all key student characteristics (Pascarella, 1998[lxxxv]; Merton, R, 1987[2][xxxvi]; Hallissey, J, 2000[3][xxxvii]; Heintze, U, 2004[4][xxxviii]; Röding, K, 2005[5][xxxix]; Coombs, J. A, 1976[6][xl];). When thinking of academic quantification in Jiangsu University, it must be remembered that the benchmarks on ranking must be based on particular parameters evaluated through a set of indicators and weights. Any HEI's assessment should point out how the assessment affects students study and post study engagements.

Jurisdictional assessment bias

Data and distribution of ranked indicators and weights in the top leading global institutions according to the four ranking systems was collected in western countries and may have posed some irreconcilable disparities and bias which the researcher highly regrets. It may be harder to explain academic ranking within Jiangsu University based on the four leading ranking systems solely based on those parameters because the research data under consideration represents a different set of ethno cultural and socioeconomic criteria (Pau et al., 2007; Rajab, 2001[7][xli]). Therefore, institutional study of ranking perceptions of indicators and weights in Jiangsu University may provide direct insight into the impact of the preferred indicators and weights in academic success of Jiangsu University's contextualization.

Hypothesis

The following hypothesis were formulated to guide the study

Hypothesis I

H1a: University's Publications positively affects Ranking of Higher Education Institutions
H1b: University's Citations positively affects Ranking of Higher Education Institutions
H1c: University's Networking positively affects Ranking of Higher Education Institutions
H1d: University's Reputation positively affects Ranking of Higher Education Institutions

Hypothesis II

H2a: University's Publications positively affects competitiveness of Higher Education Institutions
H2b: University's Citations positively affects competitiveness of Higher Education Institutions
H2c: University's Networking positively affects competitiveness of Higher Education Institutions
H2d: University's Reputation positively affects competitiveness of Higher Education Institutions

Hypothesis III

H3: There is a significance difference between the factors that influence Global Ranking's Higher Education Institutions and Jiangsu University

Hypothesis IV

H4a: There is a positive Impact of Jiangsu University's Ranking on the Academic development and competitiveness of the University and the nation

The Author's conclusion sums up the theory that '

> *a strategic value backed by a reductionism theory in acquisition of knowledge in research and*

[1] Pascarella, E. T., & Terenzini, P. T. (1998). Studying college students in the 21 st century: Meeting new challenges. *Review of Higher Education, 21,* 151-165.

[2] Merton, R. K. (1987). The focused interview and focus groups: Continuities and discontinuities. *Public Opinion Quarterly, 51,* 550-556.

[3] Hallissey, J., Hannigan, A., & Ray, N. (2000). Reasons for choosing dentistry as a career – a survey of dental students attending a dental school in Ireland during 1998-99. *European Journal of Dental Education, 4,* 77-81.

[4] Heintze, U., Radeborg, K., Bengtsson,H., & Stenlåås, A. (2004). Assessment and evaluation of individual prerequisites for dental education. *European Journal of Dental Education, 8,* 152-160.

[5] Röding, K., & Nordenram, G. (2005). Students' perceived experience of university admission based on tests and interviews. *European Journal of Dental Education, 9,* 171-179.

[6] Coombs, J. A. (1976). Factors associated with career choice among women dental students. *Journal of Dental Education, 40,* 123-129.

[7] Rajab, L. D. (2001). Perceived sources of stress among dental students at the University of Jordan. *Journal of Dental Education, 65,* 232-241.

publication at the level of internationalization of higher education, is a system capable of reshaping the global perspective and debate in the subject of ranking'. (Oec.ujs. July 2017).

The researcher in chapter two outlined the history of ranking to the level of international standardization. The author explained how ranking started as a quality assessment tool of collaboration to the current fierce establishment of a ranking regime. The ranking regime after synthesizing the data from the four leading ranking systems showed that there are clear inclinations to affirm world class Higher education institutions (HEIs) and set them as model standards of institutional assessment. His correlation was that Jiangsu University should benchmark itself against these parameters as summarized in (Tables 1, 2 and 3).

The researcher pointed out that ranking system lacked a central data pool to find data in order to guarantee quality assessment. Limited research was conducted to limit or eliminate such bias. Most significantly, some students had higher expectations of service and quality than was being delivered making it difficult to interpret results based on student satisfaction. While data about the students' experience of the learning environment were important to potential applicants, the comparability of these data across institutions for the purpose of objective ranking is still unclear.

Despite the differences in assessment methodologies used to rank universities, there was a level of agreement between ranking systems on which universities are 'the best'.

Although the meaning of the term quality varied, the ranking systems imposed a standard approach to the matter. As this approach showed, however, exterior ranking systems were not the only way to approach ranking. Indeed, the spread of the World Wide Web provided institutions with an opportunity to improve their own outlook through fair assessment by putting the power of ranking in the hands of the consumer and following the standard approach (Merisotis, 2002[xlii])

Recommendations for further study

There are several opportunities for further study related to the present study.

First benchmarking an institution against the Top class Universities as a way of improving HEI's outlook. Looking at the listed world class universities and their strategic overview on propelling each indicator and weight would play a major role in positioning Jiangsu University higher on the ranking scale. Further studies on this issue would confirm and expand the findings

Second, in this study, the researcher found that lack of clearly published numerical and academic data made Jiangsu University almost academically invisible in the global scale. Further study may answer the question and provide insight into the modalities to engage this avenue of online data to improve visibility of Jiangsu University and other Higher Education Institutions (HEIs).

Third, the findings about subjects offered in Jiangsu University against those offered in the top Ranked Universities show a wide disparity. Selections of academic disciplines are necessary in any institution's academic ranking regardless of location. Lack of resources could be responsible for the limited disciplines taught to international students in Jiangsu University or it's a strategic focus on fewer disciplines with an aim of perfecting them and becoming experts for specific fields could be the reason for the global invisibility. If this is the case, global trends should be considered before applying this policy in order to affect academic outcome and outlook of Jiangsu University

Finally, the study employed qualitative and quantitative methods and outcomes, thus exact aspects of the ranked institutions' development such as intellectual development and critical thinking could not be clearly evaluate. Applying clear numerical criteria of a quantitative study like survey data would make a classification of development outcomes possible.

---

[i] THE, 2016) https://www.timeshighereducation.com/world-university-rankings/jiangsu-university#ranking-dataset/589595

[ii] QS, 2016) http://www.topuniversities.com/Univerity-ranking/jiangsu-universirty

[iii] Catell, J. M. (1921). *American men of science*. Bowker.

[iv] Hazelkorn, E. (2011). *Rankings and The Reshaping of Higher Education: The battle for world-class excellence*. Palgrave Macmillan. http://dx.doi.org/10.1057/9780230306394

[v] v Pouris A. (2006). Assessing Scientific Strengths of Academic Institutions: the University of Pretoria, SAJ of Science 102:23-26

[vi] Altbach, P. (2004). The costs and benefits of world-class universities. *American Association of University Professors, 90.*

[vii] G. Altbach, P.G., Reisberg, L, and Rumbley, L. (2009). Trends in Global Higher Education: Tracking an Academic Revolution. UNESCO 2009 World Conference on Higher Education.

[viii] Altbach, P. (2005). India: A world-class country without world-class higher education.

[ix] ix Barbara, M & Bjørn, s. University Rankings, Diversity, and the New Landscape of Higher Education, sense publishers Rotterdam/Boston/Taipei, 2009.

x Merisotis, J. 2002. "On the Ranking of Higher Education Institutions". Higher Education in Europe 27(4), 361–363.

xi Pascarella, E. (1980). Student-faculty informal contact and college outcomes. *Review of Educational Research, 50,* 545-595.

xii Bourdieu, P. 1983. „Ökonomisches Kapital, kulturelles Kapital, soziales Kapital". In Kreckel. R. (ed.), Soziale Ungleichheiten (Soziale Welt, Sonderheft 2). Göttingen: Schwartz, pp. 183–98.

xiii Graham, A. and Thompson, N. 2001. "Broken Ranks: US News' College Rankings Measure Everything but What Matters. And Most Universities Don't Seem to Mind". Washington Monthly 33(9), 9–14,

xiv Sadlak, J. and Liu, N.C. (2007). The World-class University and ranking: Aiming Beyond Status. Bucharest, UNESCO-CEPES.

xv Kehm, B.M. and Stensaker, B. (Eds.) (2009). University Rankings, Diversity, and the New Landscape of Higher Education. Global Perspectives On Higher Education. Volume 18. Sense Publishers.

xvi Altbach, P. (2004). The costs and benefits of world-class universities. *American Association of University Professors, 90.*

xvii Altbach, P. (2009). One-third of the globe: The future of higher education in China and India. *Prospects, 39*

xviii , P. (2011). Ranking season is here. *International higher education, 62*

xix Burns, J. (2012, September 11). Research key to universities leading global rankings. Retrieved from http://www.bbc.co.uk/news/education- 19558024

xx Gupta, B. M. (2010). Ranking and performance of Indian universities based on publication and citation data. *Indian Journal of Science and Technology. 3*(7)

xxi Heintze, U., Radeborg, K., Bengtsson,H., & Stenlåås, A. (2004). Assessment and evaluation of individual prerequisites for dental education. *European Journal of Dental Education, 8,* 152-160.

xxii Philip G. Altbach, P.G., Reisberg, L, and Rumbley, L. (2009). Trends in Global Higher Education: Tracking an Academic Revolution. UNESCO 2009 World Conference on Higher Education.

xxiii Altbach, P. (2004). The costs and benefits of world-class universities. *American Association of University Professors, 90.*

xxiv Barbara, M & Bjørn, s. University Rankings, Diversity, and the New Landscape of Higher Education, sense publishers Rotterdam/Boston/Taipei, 2009.

xxv Brooks, R. 2005. "Measuring University Quality". The Review of Higher Education (29), 1–21.

xxvi Coombs, J. A. (1976). Factors associated with career choice among women dental students. *Journal of Dental Education, 40,* 123-129.

xxvii Hallissey, J., Hannigan, A., & Ray, N. (2000). Reasons for choosing dentistry as a career – a survey of dental students attending a dental school in Ireland during 1998-99. *European Journal of Dental Education, 4,* 77-81.

xxviii Wexler, M. (1978). Mental health and dental education. *Journal of Dental Education, 42,* 74-77.

xxix Drummond, J. R., & Duguid, R. (1997). Student drop-out from UK dental schools. *British Dental Journal, 182,* 347-349.

xxx Lynch, C. D., McConnell, R. J., & Hannigan, A. (2006). University ranking in Ireland: Can current selection criteria predict success? *European Journal of Dental Education, 10,* 73-79.

xxxi Pöhlmann, K., Jonas, I., Ruf, S., & Herzer, W. (2005). Stress, burnout and health in education. *European Journal of higher Education, 9,* 78-84.

xxxii Van Raan, A. 2006. "Challenges in the Ranking of Universities". In Sadlak, J. and Cai, L.N. (eds.), The World Class University and Ranking: Aiming Beyond Status. Bucharest: UNESCO-CEPES, pp. 87–122.

xxxiii Sanders, A. E., & Lushington, K. (2002). Effect of perceived stress on higher education. *Journal of Dental Education, 66,* 75-81.

xxxiv 2015 年全国来华留学生数据统计 http://www.cafsa.org.cn/research/show-194.html

xxxv Pascarella, E. T., & Terenzini, P. T. (1998). Studying college students in the 21 st century: Meeting new challenges. *Review of Higher Education, 21,* 151-165.

xxxvi Merton, R. K. (1987). The focused interview and focus groups: Continuities and discontinuities. *Public Opinion Quarterly, 51,* 550-556.

xxxvii Hallissey, J., Hannigan, A., & Ray, N. (2000). Reasons for choosing dentistry as a career – a survey of dental students attending a dental school in Ireland during 1998-99. *European Journal of Dental Education, 4,* 77-81.

xxxviii Heintze, U., Radeborg, K., Bengtsson,H., & Stenlåås, A. (2004). Assessment and evaluation of individual prerequisites for dental education. *European Journal of Dental Education, 8,* 152-160.

xxxix Röding, K., & Nordenram, G. (2005). Students' perceived experience of university admission based on tests and interviews. *European Journal of Dental Education, 9,* 171-179.

xl Coombs, J. A. (1976). Factors associated with career choice among women dental students. *Journal of Dental*

Education, 40, 123-129.

[xli] Rajab, L. D. (2001). Perceived sources of stress among dental students at the University of Jordan. *Journal of Dental Education, 65,* 232-241.

[xlii] J. P. MERISOTIS, Summary report of the invitational roundtable on statistical indicators for the quality assessment of higher/tertiary education institutions: Ranking and league table methodologies, Higher Education in Europe, 27 (2002) 475–480.