

Worldwide Ranking of Universities

Universities/ Colleges are ranked by newspapers, magazines, websites, governments and academics. In addition to entire institution, specific programmes, departments or Schools are ranked. The metrics that are considered while ranking the higher education institutions are, research metrics (i.e., the ability of the institution to learn and create knowledge for others to learn), teaching metrics (i.e., those focused on the transfer of accepted knowledge) and structural metrics like number of academic and research staff, student to academic staff ratio and non-recurrent assets of an institution. The teaching metrics is more abstract and inconsistent than research metrics, hence there is greater emphasis on those parameters which are more consistent and defensible in ranking scheme. The teaching metrics carry less emphasis compared to research metrics.

Research Metrics

The research metrics include publications, citations, awards, competitive research grants, research student load, research student completions, and eminent alumni.

The number of research publications and the journals in which these papers are published reflect the quality of research and it is essential that those papers appear in peer reviewed journals published at international journals having high impact factor. If the research work is granted by reputed organisations and the peer reviewed papers win awards, then the research is considered to be transformational. Other important factors under this metrics are number of research students in a university; number of research degree holders produced by a university in a given year; and the professional positions the alumni have occupied.

Teaching Metrics

Universities are places of learning rather than teaching. A student or graduate who has learned despite the quality of teaching may have achieved more from his/her efforts in university education than the one who has learned because of it.

The important metrics that reflect teaching quality are: high student completion rates, high student satisfaction, employability statistics and employer perceptions, student entry scores and student demand for the courses.

Structural Metrics

There are three basic structural metrics, they are number of academic and research staff, student to academic staff ratio and non-recurrent assets of an institution. These structural metrics protect an institution from manipulations by others. It is necessary to maintain large number of academic and research staff, very low student to academic staff ratio and high non-recurrent assets that include buildings, laboratories, endowments for scholarships, etc.

Limitations of Metrics

An individual or an institution if continued to be assessed based upon metrics like publications, citations, number of PhD students, then the individual or institution might try to optimise those parameters neglecting all other responsibilities thereby distorting the system by affecting its intrinsic behaviour. Over the years, internationally, many journals have appeared for the sole purpose of publishing the articles without even reviewing the research articles and checking their authenticity. Many international conferences are being organised and these conferences hardly reject any papers sent for presentation in the conference. The various important functions that have to be performed

by a good Professor like mentoring and counselling students; undertake administrative duties; participate in extra-curricular activities; support university committees will lose its importance in the institution. Many institutions in order to achieve higher ranking have relegated the professional ethics to a corner and this trend may shake the very basic foundation of university system.

In the university system, it is often the case that a great university performs well in all its metrics because it is a great university – and the key reason that a university is great does not relate to the metrics alone but, rather, to the transformational changes that it has made to science and society. The assumption that metrics do indeed relate to the transformational change in science or society is not always a valid assumption in a university. Indeed, it is possible for a university to perform well across a wide range of metrics without ever having made a transformational change – in those cases, the achieving of metrics are not true and accurate reflection of the system that they are endeavouring to model.

Well Known International Ranking Systems and Key Metrics

The well-known international ranking systems are-Academic Ranking of World Universities (Shanghai Jiao Tong University, China) (2003), THE QS World University Rankings (UK) (2004 -2009), Webometrics (Spain) (2004), Performance Ranking of Scientific Papers for Research Universities (Taiwan) (2007), Leiden Ranking (Centre for Science and Technology Studies, Netherlands) (2008), SCImago Institutions Rankings (Spain) (2009), QS World University Rankings (UK) (2010), THE Thomson Reuters World Ranking of Universities (UK) (2010), U-Multirank (EU, 2011) etc. Among these, following three are most popular ranking systems.

1. Shanghai Jiao Tong University Academic Ranking of World Universities (ARWU): One of the most respected international rankings, which ranks the top 500 universities from a selected pool of around 1,000. The metrics considered by this system are Quality of Education (Alumni), Quality of Faculty (Nobel Prizes, Fields Medals, and Highly Cited Authors), Research Outputs (Publications) and Per Capita Performance

2. Times Higher Education (THE) World University Rankings: It ranks the top 400 universities. The metrics considered by this system are teaching, Citations, Research (Volume/Income), International Mix (Students/Volume) and Industry Income.

3. QS Top University Rankings –Quacquarelli-Symonds: QS rankings contain a number of perception based metrics derived from surveys – these appear to be more favourable to English-speaking and European universities than Asian universities. The metrics considered are academic peer review, employer review, citations per faculty, student faculty, international faculty, and international students.

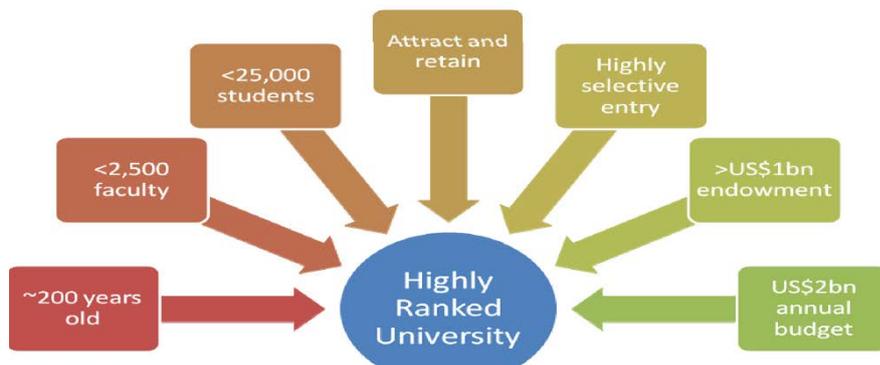
The ranking methodologies by each system are described in their respective websites.

Rankings went global in 2003 when Shanghai Jiao Tong University (ARWU) published the results of the first global university ranking. The importance of rankings seems to have grown exponentially and in recent years university rankings have become increasingly important worldwide. The Ranking systems have been evolved to identify who is best in the world and what makes them best. This ranking may help universities to attract appropriate talent and for policy makers ranking system may help in policy changes to be made in Higher Education Institutions and investments that are essential to improve the Higher Education System. Ranking is essential in a knowledge society as the knowledge rules the future economy of a country.

The following table gives the country wise distribution of top 100 universities as per THE.

	A	B	C	D
1	Country	2014	2013	2012
2	US	46	43	44
3	UK	10	9	10
4	Japan	5	5	5
5	Netherlands	4	5	5
6	Australia	5	6	4
7	France	2	4	4
8	Germany	6	5	4
9	Canada	3	3	3
10	Hong Kong	3	3	3
11	Sweden	1	3	3
12	Switzerland	2	2	3
13	China	2	2	2
14	Israel	1	1	2
15	S.Korea	3	2	2
16	Singapore	2	2	2
17	Belgium	1	1	1
18	Brazil	1	1	1
19	Taiwan	1	1	1
20	Turkey	1	1	1
21	Russia	1	1	0

Most of these highly ranked universities have the following characteristics.



(Professor Ellen Hazelkorn, UNESCO Forum on Rankings and Accountability in Higher Education Paris, 16-17 May 2011)

From the above table, we can observe that the name of any Indian University or Institute does not figure in the top 100. This may be due to Indian Universities' emphasis is mostly on teaching and learning and focus on research and more particularly the transformational research is low.

A large number of Indian Universities work on affiliation system and the research is mostly concentrated with Government established research organisations. Other structural metrics are also not very strong with Indian Universities. The private universities and deemed universities are new entrants and their investments are limited and again their focus is mostly on teaching and learning.

In India some leading magazines like India Today, Outlook and many business magazines rank colleges and universities and the robustness of these ranking are not well accepted among public.

It looks like, we have a long way to go, to have our Indian University(s) name to appear among the top 100 universities of the world. There is a need for a paradigm shift in the focus of Indian Universities from teaching and learning to research orientation for transformation, that trickles benefit to science in particular and society in general.

In a knowledge society, owning a top ranked university is not only prestigious but it reflects the knowledge status of the country.

Prof. S.R. Shankapal