

How responsible are rankings

...and how responsible is the use
we make of them?

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Definition

ranking

Oxford Dictionaries

1.(noun): A position in a hierarchy or scale.

1.1. (mass noun): The action or process of giving a specified rank to someone or something.

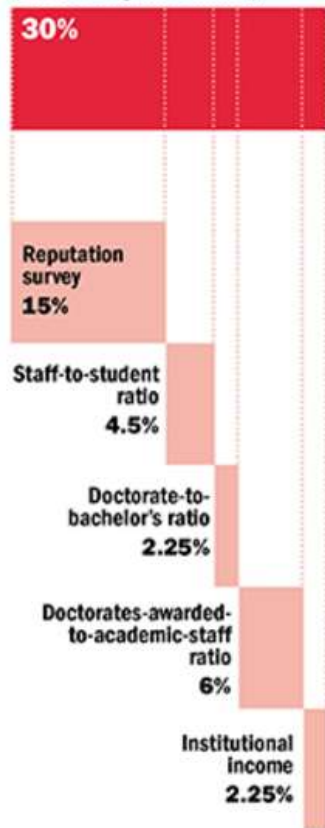
Macmillan Dictionaries

1. (noun): A position on a list that shows how good someone or something is compared to others, especially how good someone is at a sport.

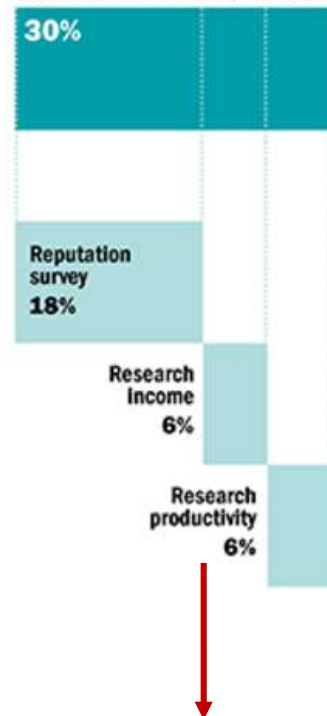
Some of them...



Teaching
(the learning environment)



Research
(volume, income and reputation)



No of papers in academic journals indexed by Scopus per scholar, **scaled for institutional size** and **normalised for subject**.

Citations
(research influence)



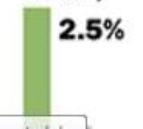
Citations to journal **articles, reviews, conference proceedings and books and book chapters** published over five years.

Data are normalised.
Papers with **more than 1,000** authors are included but under a **fractional** counting approach

International outlook
(staff, students, research)



Industry income
(knowledge transfer)



World University Rankings methodology table

THE WORLD UNIVERSITY RANKINGS

PROFESSIONAL JOBS SUMMITS RANKINGS

RANKING SCORES

One single table

Rank	Name	Overall	Teaching	Research	Citations	Industry Income	International Outlook
1	University of Oxford United Kingdom	94.3	86.7	99.5	99.1	63.7	95.0
2	University of Cambridge United Kingdom	93.2	87.8	97.8	97.5	51.5	93.0
=3	California Institute of Technology United States	93.0	90.3	97.5	99.5	92.6	59.7

ARWU considers every university that has any Nobel Laureates, Fields Medalists, Highly Cited Researchers, or papers published in Nature or Science.

Universities with significant amount of papers indexed by Science Citation Index-Expanded (SCIE) and Social Science Citation Index (SSCI) are also included.

Total number of papers indexed in Science Citation Index-Expanded and Social Science Citation Index in 2016.

Only publications of 'Article' type considered.

Special weight of two was introduced for papers indexed in Social Science Citation Index.

Indicators and Weights for ARWU

Criteria	Indicator	Code	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	Alumni	10%
	Staff of an institution winning Nobel Prizes and Fields Medals	Award	20%
Quality of Faculty	Highly cited researchers in 21 broad subject categories	HiCi	20%
	Papers published in Nature and Science*	N&S	20%
Research Output	Papers indexed in Science Citation Index-expanded and Social Science Citation Index	PUB	20%
	Per Capita Performance	PCP	10%
Total			100%

* For institutions specialized in humanities and social sciences such as London School of Economics, N&S is not considered, and the weight of N&S is relocated to other indicators.

- Academic Reputation (40%) – based on a based a QS Survey
- Employer Reputation (10%) – based on a based a QS Survey
- Faculty/Student Ratio (20%)
- Citations per faculty (20%) – All papers (Scopus excluding self citations) produced by an institution across a five-year period by the number of faculty members at that institution.
- International Faculty Ratio (5%)
- International Student Ratio (5%)

Led by the Massachusetts Institute of Technology (MIT). **The top four universities are all based in the US**, with Stanford, Harvard and the California Institute of Technology all following hot on MIT's heels. Only 51 of 76 British universities falling at least one place.

RANKINGS VS RATINGS

When considering universities, what is the difference between rankings and ratings?



RANKINGS Who's the best?

The QS World University Rankings® compare universities to one another and put them in order. Based on how the institutions perform across six indicators, QS produces rankings that are designed to assess universities in four areas:

- Research
- Teaching
- Employability
- Internationalization

Rankings often include only the top 100 or top 1000 universities across the globe, meaning that smaller or newer universities have a difficult time competing with the Harvards and Oxfords.

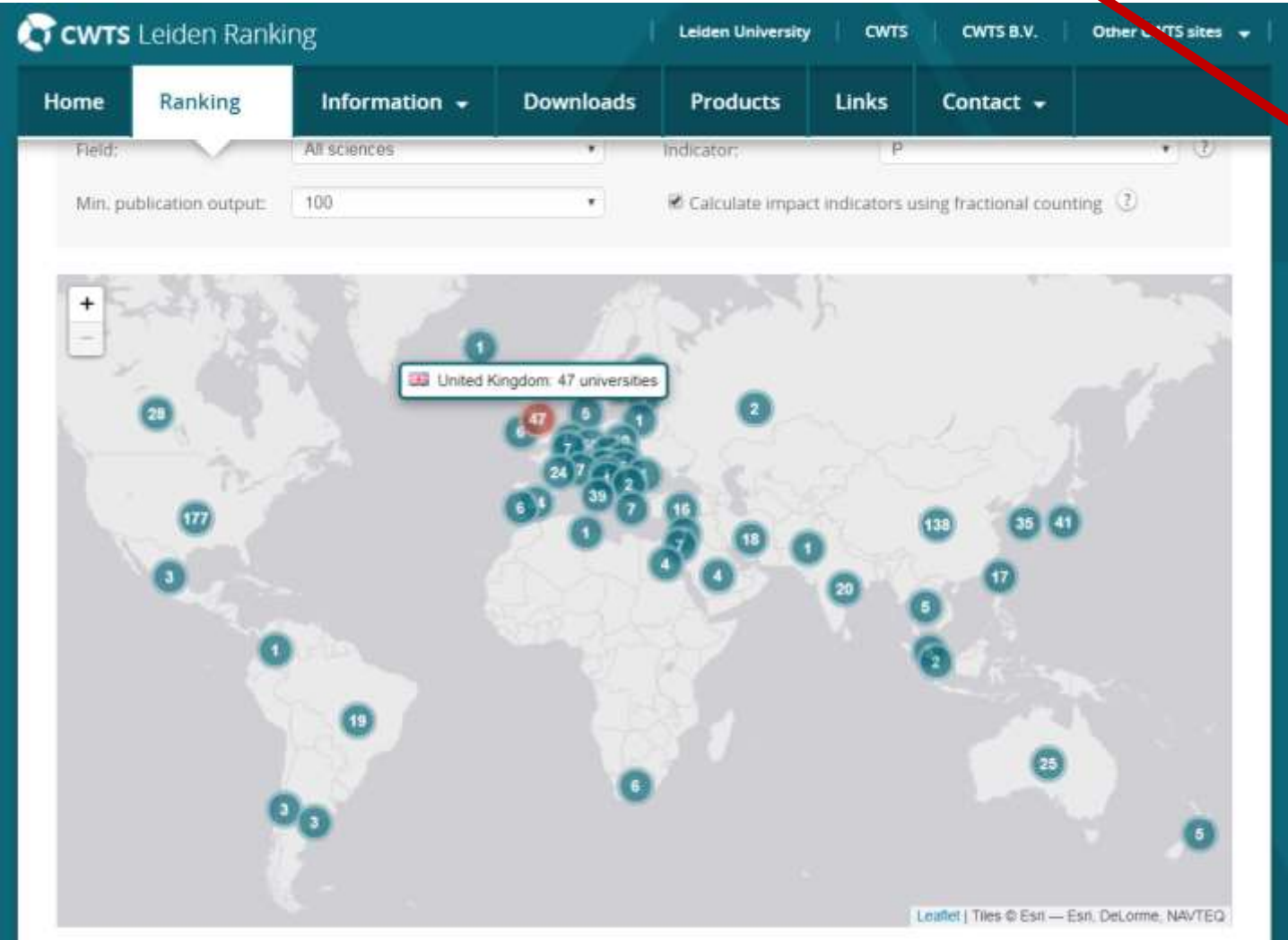
★ ★ ★ RATINGS ★ ★ ★

Who's good at what?

A rating assesses universities on how they perform in several areas, similar to the areas considered in rankings. But rather than comparing institutions against one another, they are judged on how they perform against a set standard. QS Stars is an audit on the strengths and weaknesses of a university. The university provides QS with evidence across dozens of indicators. This evidence is verified and the university is given an overall score ("5 Stars"), as well as a score for each category. There is no limit to the amount of universities that can achieve the highest score overall or in any category.



903 universities from 54 different countries. These are all universities worldwide that have produced at least 1000 Web of Science indexed publications in the period 2012–2015. Only so-called core publications are counted




- Written in English.
- The publication has appeared in a core journal.

From 70 with the word 'literature' in the title, only 4 are considered core journals.

	U Hertfordshire	Open University	U Greenwich
Teaching & Learning			
Bachelor graduation rate	A	-	A
Masters graduation rate	D	B	B
Graduating on time (Bachelors)	C	-	C
Graduating on time (Masters)	-	-	-
Research			
Citation rate	B	A	B
Research publications (absolute numbers)	-	-	-
Research publications (size-normalised)	-	-	-
External research income	-	-	-
Art-related output	-	-	-
Top cited publications	-	-	-
Interdisciplinary publications	-	-	-
Post-doc positions	-	-	-
Strategic research partnerships	-	-	-
Professional publications	-	-	-
Knowledge Transfer			
Co-publications with industrial partners	-	-	-
Income from private sources	-	-	-
Patents awarded (absolute numbers)	-	-	-
Patents awarded (size-normalised)	-	-	-
Industry co-patents	E	E	C
Spin-offs	E	E	E
Publications cited in patents	D	D	C
Income from continuing professional development	D	B	D
Graduate co-patents	D	D	E
International Orientation			
Foreign language bachelor programmes	-	-	-
Foreign language master programmes	-	-	-
Student mobility	D	E	D
International academic staff	-	-	-
International joint publications	A	A	A
International doctorate degrees	-	-	-
Regional Engagement			
Bachelor graduates working in the region	C	E	B
Master graduates working in the region	C	E	B
Student internships in the region	-	-	-
Regional joint publications	B	D	C
Income from regional sources	-	-	-
Strategic research partnerships in the region	-	-	-



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U-MULTIRANK BIBLIOMETRICS 2017:
TECHNICAL SPECIFICATIONS

U-Multirank 2017 bibliometrics: information sources, computations and performance indicators

Center for Science and Technology Studies (CWTS), Leiden University
(CWTS version 16 March 2017)

1 Information sources: research publications and patents

1.1 Web of Science database

All bibliometric scores are based on information extracted from publications that are indexed in the Web of Science - Core Collection database (Science Citation Index Expanded, Social Sciences Citation Index, and Arts & Humanities Citation Index). CWTS operates this WoS database under a commercial license agreement with Thomson Reuters.

The WoS contains some 14,000 active sources, both peer-reviewed scholarly journals and conference proceedings. The underlying bibliographic information relates to publications classified as 'research article' and 'review article'. The WoS database is incomplete (there are many thousands more science journals worldwide) and it is biased in favor of English-language. Hence, there will always be missing publications. WoS-based bibliometric data are never comprehensive and fully accurate; scores are therefore always estimates with a margin of statistical error.

Nonetheless the WoS is currently one of the two best sources, covering worldwide science across all disciplines. The only possible alternative database, Elsevier's Scopus database, has more or less the same features. All in all, one may expect comparable bibliometric results from both databases, especially at higher aggregate levels.

The WoS-indexed publications in Arts and Humanities (A&H) journals have not been included in the three citation-based indicators: (i) mean normalized citation score, (ii) top 10% most frequently cited publications, and (iii) interdisciplinarity indicator. There are three reasons: (1) the citation frequency counts are often zero or low; (2) citation patterns and counts tend to be much more affected by journal- or sub-field specific characteristics; (3) the relatively low level of validity of WoS-indexed peer-reviewed A&H journals as fully representative publication outlets of all research activities in these research disciplines.

The compounded effect of these three constraints is the high likelihood of unreliable and biased outcomes. In combination, the numbers of citations are usually too low to ensure representative, reliable and statistically robust citation-based indicators. Especially in those cases where a higher

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- Multidimensional
 - Does not refer to a single table
 - Detailed methodology
- Not comprehensive, depends on the data provided by the institutions

London, January 30, 2018

Use and interpretation of University rankings

Interpretation of university rankings

5. Comparisons between universities should be made keeping in mind the differences between universities (Consider if the disciplinary profile of a university has been corrected for or not).
6. Uncertainty in university rankings should be acknowledged
7. An exclusive focus on the ranks of universities in a university ranking should be avoided; the values of the underlying indicators should be taken into account (One university may seem to perform much better than another, while the performance difference may in fact be relatively small).

Use of university rankings

8. Dimensions of university performance not covered by university rankings should not be overlooked (the Leiden Ranking has a quite narrow scope, the U-Multirank is probably the most comprehensive)
9. Performance criteria relevant at the university level should not automatically be assumed to have the same relevance at the department of research group level
10. University rankings should be handled cautiously, but they should not be dismissed as being completely useless

Any ideas for the
debate?



London, January 30, 2018

