

## Journal Metric : SNIP & SJR

**SNIP and SJR are provided by SCOPUS. The definition is as follows:**

- **SNIP : Source-Normalized Impact per Paper**
- **SJR  $\square$  : SCImago Journal Rank**

### SCImago :

- **SCImago Journal Rank (SJR indicator) is a measure of scientific influence of scholarly journals that accounts for both the number of citations received by a journal and the importance or prestige of the journals where such citations come from:**

- **[en.wikipedia.org/wiki/SCImago](http://en.wikipedia.org/wiki/SCImago)**

### QS World University Ranking : of SCOPUS & Web of Science

From Wikipedia, the free encyclopedia **[http://en.wikipedia.org/wiki/QS\\_World\\_University\\_Rankings](http://en.wikipedia.org/wiki/QS_World_University_Rankings)**

The **QS World University Rankings** is a ranking of the world's top 500 universities by **[Quacquarelli Symonds](#)** using a method that has published annually since 2004.

The QS rankings were originally published in publication with **[Times Higher Education](#)** from 2004 to 2009 as the **[Times Higher Education-QS World University Rankings](#)**. In 2010,

***Times Higher Education*** and QS ended their collaboration. QS assumed sole publication of the existing methodology, while ***Times Higher Education*** created a new ranking methodology, published as **[Times Higher Education World University Rankings](#)**.

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## Citation Metrics (Measurement)

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## History

**The need for an international ranking of universities was highlighted in December 2003 in [Richard Lambert](#)'s review of university-industry collaboration in Britain for [HM Treasury](#)**

, the finance ministry of the United Kingdom. Amongst its recommendations were world university rankings, which Lambert said would help the UK to gauge the global standing of its universities.

The idea for the rankings was credited in Ben Wildavsky's book, *The Great Brain Race: How Global Universities are Reshaping the World*, to then-editor of [Times Higher Education](#), [John O'Leary](#)

. Times Higher Education chose to partner with educational and careers advice company

[Quacquarelli Symonds](#)

(QS) to supply the data, appointing Martin Ince, formerly deputy editor and later a contractor to THE, to manage the project.

Between 2004 and 2009, Quacquarelli Symonds (QS) produced the rankings in partnership with Times Higher Education (THE). In 2009, THE announced they would produce their own rankings, the [Times Higher Education World University Rankings](#)

, in partnership with

[Thomson Reuters](#)

. After criticism from universities, THE cited a weakness in the methodology of the original rankings,

**as well as a perceived favoritism in the existing methodology for science over the humanities, as one of the key reasons for the decision to split with QS.**

**QS retained the intellectual property in the Rankings and the methodology used to compile them and continues to produce the rankings, now called the QS World University Rankings. THE created a new methodology, first published independently as the [Times Higher Education World University Rankings](#) in September 2010.**

**QS publishes the results of the original methodology in key media around the world, including [US News & World Report](#) in the USA, [Chosun Ilbo](#) in Korea, [Nouvel Observateur](#) in France, and [The Sunday Times](#) in the UK. The first of these QS-only produced rankings, which uses the original methodology, was released on September 8, 2010.**

**Method**

**QS tried to design its rankings to look at a broad range of university activity. The six indicators are used.**

**Academic peer review (40%)**

**The most controversial part of the QS World University Rankings is their use of an opinion survey referred to as the Academic Peer Review. Using a combination of purchased mailing lists and applications and suggestions, this survey asks active academics across the world about the top universities in fields they know about. QS has published the job titles and geographical distribution of the participants.**

**The 2010 rankings included results from 15,050 people in its Academic Peer Review, including votes from the previous two years rolled forward provided there was no more recent information available from the same individual. Participants can nominate up to 30 universities but are not able to vote for their own. They tend to nominate a median of about 20, which means that over 170,000 data points make up this survey.**

**In 2004 when the rankings first appeared, academic peer review accounted for half of a university's possible score. In 2005, its share was cut to 40 per cent because of the introduction of the Recruiter Review.**

**Recruiter review (10%)**

**This part of the ranking is obtained by a similar method to the Academic Peer Review, except that it samples recruiters who hire graduates on a global scale. The numbers are smaller – 5007 responses in 2010 – and are used to produce 10 per cent of any university's possible score. This survey was introduced on the assumption that employers can accurately track graduate quality.**

**Faculty student ratio (20%)**

**These two indicators account for 50 per cent of a university's possible score in the rankings. A further 20 per cent comes from a university's ratio of faculty to students. These indicators attempt to measure teaching commitment, but QS has admitted they are less than satisfactory.**

**Citations per faculty (20%)**



**Citations of published research are among the most widely used inputs to national and global university rankings. The QS World University Rankings used citations data from Thomson (now Thomson Reuters) from 2004 to 2007, and since then uses data from Scopus, part of Elsevier. The total number of citations for a five-year period is divided by the number of academic staff in a university to yield the score for this measure, which accounts for 20 per cent of a university's possible score in the Rankings.**

**QS has explained that it uses this approach, rather than the citations per paper preferred for other systems, because it reduces the effect of biomedical science on the overall picture – bio-medicine has a ferocious “[publish or perish](#)” culture. Instead it attempts to measure the density of research-active staff at each institution. But issues still remain about the use of citations in ranking systems, especially the fact that the arts and humanities generate comparatively few citations.**

**QS has produced some data collection errors regarding citations per faculty.**

**One interesting issue is the difference between the Scopus**

**and Thomson Reuters databases. For major world universities, the two systems capture more or less the same publications and citations. For less mainstream institutions, Scopus has more non-English language and smaller-circulation journals in its database, but as the papers there are less heavily cited, this can also mean fewer citations per paper on average.**

### **International orientation (10%)**

**The final ten per cent of a university's possible score is derived from measures intended to capture their internationalism: 5 per cent from their percentage of international students, and another 5 per cent from their percentage of international staff.**

### **Data sources**

**The information used to compile the World University Ranking comes partly from the online surveys carried out by QS, partly from Scopus, and partly from an annual information-gathering exercise carried out by QS itself. QS collects data from universities directly and from their web sites and publications, and from national bodies such as education ministries and the National Center for Education Statistics in the US and the Higher Education Statistics Agency in the UK.**

### Aggregation

**The data is aggregated into columns according to its Z score, an indicator of how far removed any institution is from the average. Between 2004 and 2007 a different system was used whereby the top university for any measure was scaled as 100 and the others received a score reflecting their comparative performance. According to QS, this method was dropped because it gives too much weight to some exceptional outliers, such as the very high faculty/student ratio of the California Institute of Technology.**

### Classifications

**In 2009, a column of classifications was introduced to provide additional context to the [rankings](#) tables. Universities are classified by size, defined by the size of the student body; comprehensive or specialist status, defined by the range of faculty areas in which programs are offered; and research activity, defined by the number of papers published in a five-year period.**

### Results

**QS makes the point that its rankings are intended to assess large, general research institutions, not specialist ones. To be included in the QS World University Rankings, institutions must teach in at least two of the five main areas of academic life (the social sciences, the arts and humanities, biomedicine, engineering and the physical sciences), and must teach undergraduates.**

### **Faculty-level analysis**

**QS also publishes a simple analysis of the top 100 institutions in each of the five faculty-level areas mentioned above: natural sciences, technology, biology and medicine, social sciences and the arts and humanities. These five tables list universities in order of their Academic Peer Review score. They also give the citations per paper for each institution.**

**QS does not aggregate these scores and has said that doing so would not produce a meaningful result. It uses citations per paper rather than per person partly because it does not hold details of the academic staff in each subject area, and partly because the number of citations per paper should be a consistent indicator of impact within a specific field.**

## Effects

Rankings are widely read by students and academics. Some universities have a target to be well-placed in the rankings. In July 2010, Queen's University Belfast (UK) was advertising with the slogan "Destination Global Top 100." QS continues to produce the rankings while Times Higher Education publishes a new ranking and methodology, the [Times Higher Education World University Rankings](#)

, in collaboration with

[Thomson Reuters](#)

. QS has formed an international advisory board for the Rankings, convened by Martin Ince, and with members in Europe, Asia, Africa and North and South America.

### 2010 rankings

The 2010 QS World University Rankings show the [University of Cambridge](#)

is now ranked first in the world.

[Harvard University](#)

falls to second place, ahead of

[Yale University](#)

in third place.

[University College London](#)

remained in fourth place, ahead of

[Oxford](#)

and

[Imperial College](#)

[Massachusetts Institute of Technology](#)

ranked fifth. Overall, there has been a strong performance by technology universities in the 2010 rankings.

The 2010 QS World University Rankings also showed: The US has by far the most universities in the top 100, although the total of 53 is down on last year. [UC Berkeley](#) experienced the biggest rise in the top 30, jumping 11 places to 28th, just behind the

[University of Bristol](#)

. Overall there were 13 US universities in the top 20. 33 countries (including the Hong Kong special administrative region of China) had at least one university in the top 200. The UK had 30, and ETH Zurich at 18th was the top institution not working mainly in English.

## Commentary

Several universities in the UK and the Asia-Pacific region have commented on the rankings positively.

Vice-Chancellor of New Zealand's [Massey University](#), Professor Judith Kinnear, says that the Times Higher Education-QS ranking is a “wonderful external

**acknowledgement of several University attributes, including the quality of its research, research training, teaching and employability.” She says the rankings are a true measure of a university’s ability to fly high internationally: “The Times Higher Education ranking provides a rather more and more sophisticated, robust and well rounded measure of international and national ranking than either New Zealand’s**

**[Performance Based Research Fund](#)**

**(PBRF) measure or the**

**[Shanghai rankings](#)**

”  
.

**Vice-Chancellor of the [University of Wollongong](#) in Australia, Professor Gerard Sutton, said the ranking was a testament to a university’s standing in the international community, identifying... “an elite group of world-class universities.”**

**Martin Ince, chair of the Advisory Board for the Rankings, points out that their volatility has been reduced since 2007 by the introduction of the Z-score calculation method and that over time, the quality of QS’s data gathering has improved to reduce anomalies. In addition, the academic review is now so big that even modestly ranked universities receive a statistically valid number of votes.**

## Criticism

**The THE-QS World University Rankings have been criticised by many for placing too much emphasis on peer review, which receives 40 per cent of the overall score. Some people have expressed concern about the manner in which the peer review has been carried out. In a report, Peter Wills from the University of Auckland, New Zealand wrote of the *Times Higher Education-QS World University Rankings*:**

**But we note also that this survey establishes its rankings by appealing to university staff, even offering financial enticements to participate (see Appendix II). Staff are likely to feel it is in their greatest interest to rank their own institution more highly than others. This means the results of the survey and any apparent change in ranking are highly questionable, and that a high ranking has no real intrinsic value in any case. We are vehemently opposed to the evaluation of the University according to the outcome of such PR competitions.**

**[Quacquarelli Symonds](#) has been faulted for some data collection errors. Between 2006 and 2007**



## **Washington University in St. Louis**

**fell from 48th to 161st because QS confused it with the [University of Washington](#)**

**in Seattle. QS committed a similar error when collecting data for**

***Fortune***

**Magazine confusing the University of North Carolina's Kenan-Flagler business school with one from North Carolina Central University.**

**Some errors have also been reported in the faculty-student ratio used in the ranking. At the 16th Annual New Zealand International Education Conference held at Christchurch, New Zealand in August 2007, Simon Marginson presented a paper that outlines the fundamental flaws underlying the *Times Higher Education***

**-QS World University Rankings. A similar article (also published by the same author) appeared in *The Australian***

**newspaper in December 2006. Some of the points mentioned include:**

**Half of the THES index is comprised by existing reputation: 40 per cent by a reputational survey of academics ('peer review'), and another 10 per cent**

**determined by a survey of ‘global employers’. The**  
**THES**

**index is too easily open to manipulation as it is not specified who is surveyed or what questions are asked. By changing the recipients of the surveys, or the way the survey results are factored in, the results can be shifted markedly.**

**1. The pool of responses is heavily weighted in favour of academic ‘peers’ from nations where**  
**The Times is well-known, such as the UK, Australia, New Zealand, Malaysia and so on.**

**2. It’s good when people say nice things about you, but it is better when those things are true. It is hard to resist the temptation to use the**  
**THES rankings in institutional marketing, but it would be a serious strategic error to assume that they are soundly based.**

**3. Results have been highly volatile. There have been many sharp rises and falls, especially in the second half of the**  
**THES top 200 where small differences in metrics can generate large rankings effects.**

**in China has oscillated between 72 and 195,**

**[RMIT](#)**

**in Australia between 55 and 146. In the US,**

**[Emory](#)**

**has risen from 173 to 56 and**

**[Purdue](#)**

**fell from 59 to 127.**

***THES-QS* had introduced several changes in methodology in 2007 which were aimed at addressing some of the above criticisms, the ranking has continued to attract criticisms. In an article in the peer-reviewed BMC Medicine authored by several scientists from the US and Greece, it was pointed out:**

**If properly performed, most scientists would consider peer review to have very good construct validity; many may even consider it the gold standard for appraising excellence. However, even peers need some standardized input data to peer review. The Times simply asks each expert to list the 30 universities they regard as top institutions of their area without offering input data on any performance indicators. Research products may occasionally be more visible to outsiders, but it is unlikely that any expert possesses a global view of the inner workings of teaching at institutions worldwide. Moreover, the expert selection process of The Times is entirely unclear. The survey response rate among the selected experts was only**