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Citations and its Impact to University Ranking

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www.researcherid.com/rid/C-2414-2009

<http://scholar.google.com/citations>

Read more: Ale Ebrahim, N., Salehi, H., Embi, M. A., Habibi Tanha, F., Gholizadeh, H., Motahar, S. M., & Ordi, A. (2013). [Effective Strategies for Increasing Citation Frequency](#). International Education Studies, 6(11), 93-99. doi: 10.5539/ies.v6n11p93

Abstract

Abstract: Do you know “Over 43% of ISI papers has never received any citations?” (nature.com/top100, 2014). Publishing a high quality paper in scientific journals is only halfway towards receiving citation in the future. The rest of the journey is dependent on disseminating the publications via proper utilization of the “[Research Tools](#)”. Proper tools allow the researchers to increase the research impact and citations for their publications. These workshop series will provide various techniques on how one can increase the visibility and enhance the impact of one’s research work.

Keywords: H-index, Improve citations, Research tools, Bibliometrics

WHAT DO INSTITUTIONS WANT TO FIND OUT FROM CITATION METRICS

- What is the university's research performance?
- Are we competitive compared with our peers?
- How can the university forecast growth?
- Which are our centers of excellence?
- What is our citation ranking?
- What is the influence of our research?
- Which are our most influential papers?
- Which are our top researchers?

Why citation is important?

- In the Times Higher Education World University Rankings system Citations — research influence (worth 3 per cent).
- Citations are widely recognised as a strong indicator of the significance and relevance — that is, the impact — of a piece of research.
- However, citation data must be used with care as citation rates can vary between subjects and time periods.
- For example, papers in the life sciences tend to be cited more frequently than those published in the social sciences.
- The rankings this year use normalised citation impact, where the citations to each paper are compared with the average number of citations received by all papers published in the same field and year. So a paper with a relative citation impact of 2.0 is cited twice as frequently as the average for similar papers.
- The data were extracted from the Thomson Reuters resource known as Web of Science, the largest and most comprehensive database of research citations available.
- Its authoritative and multidisciplinary content covers more than 11,600 of the highest-impact journals worldwide. The benchmarking exercise is carried out on an exact level across 251 subject areas for each year in the period 2004 to 2008.
- For institutions that produce few papers, the relative citation impact may be significantly influenced by one or two highly cited papers and therefore it does not accurately reflect their typical performance. However, institutions publishing fewer than 50 papers a year have been excluded from the rankings.
- There are occasions where a groundbreaking academic paper is so influential as to drive the citation counts to extreme levels — receiving thousands of citations. An institution that contributes to one of these papers will receive a significant and noticeable boost to its citation impact, and this reflects such institutions' contribution to globally significant research projects.
- Source: <http://www.timeshighereducation.co.uk/world-university-rankings/2010-2011/analysis-methodology.html>

THE WORLD UNIVERSITY RANKINGS

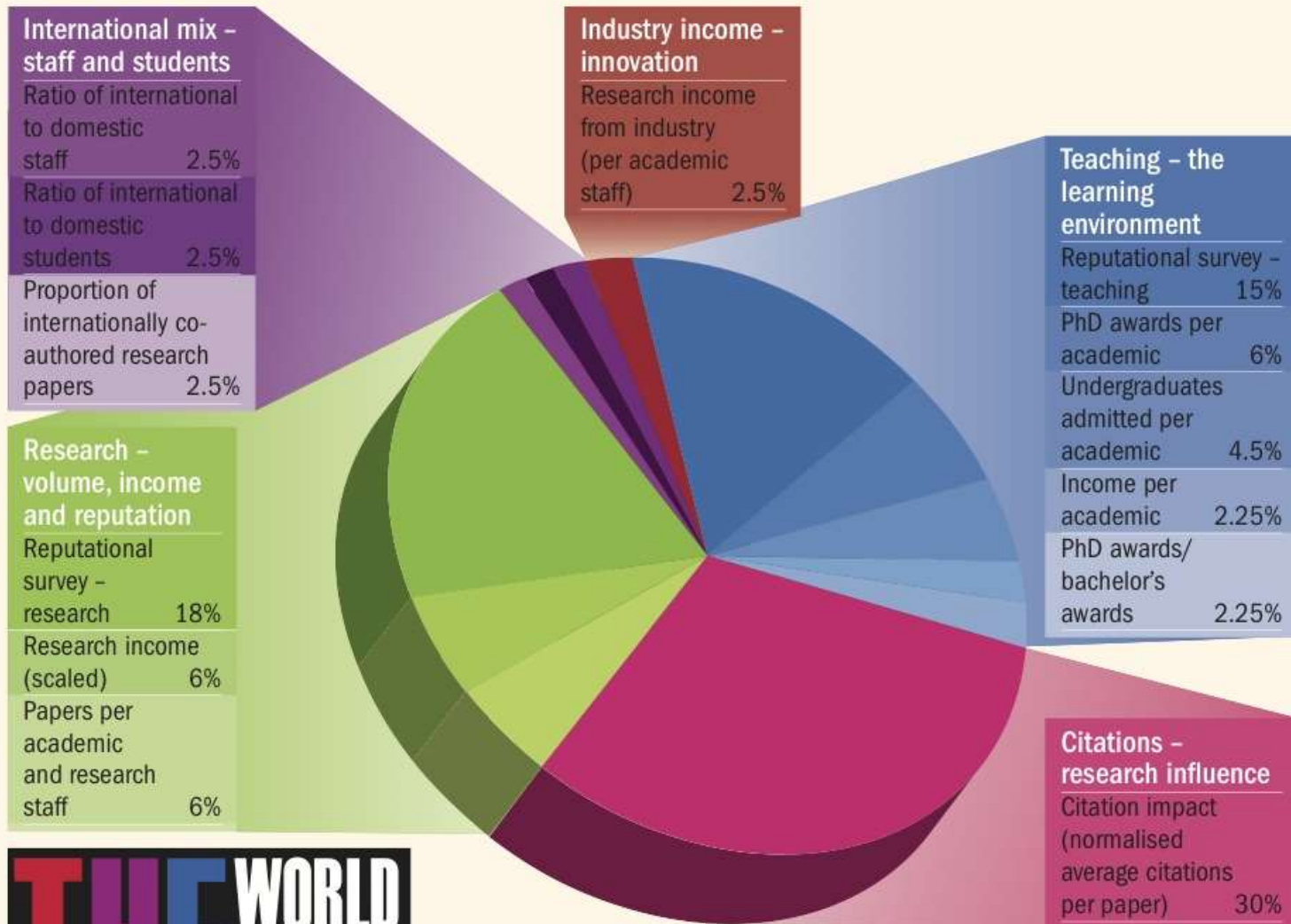
THE Rankings Methodology

THE
Times Higher Education

Source: [Phil Baty Editor, Times Higher Education World University Rankings](#)



WEIGHTING SCHEME FOR RANKINGS SCORES



For the latest World University Rankings news, debate and social networking, see www.timeshighereducation.co.uk/world-university-rankings/



World University Rankings methodology

Citations – research influence (30%)

Citation impact (normalized average citations per paper) (30%)

Source: [Phil Baty Editor, Times Higher Education World University Rankings](#)



Citations (research influence): 30%

Rank 2015

Our research influence indicator looks at universities' role in spreading new knowledge and ideas. We examine research influence by capturing the number of times a university's published work is cited by scholars globally. This year, our bibliometric data supplier Elsevier examined more than 51 million citations to 11.3 million journal articles, published over five years. The data are drawn from the 23,000 academic journals indexed by Elsevier's Scopus database and include all indexed journals published between 2010 and 2014. Citations to these papers made in the six years from 2010 to 2015 are also collected.

The citations help to show us how much each university is contributing to the sum of human knowledge: they tell us whose research has stood out, has been picked up and built on by other scholars and, most importantly, has been shared around the global scholarly community to expand the boundaries of our understanding, irrespective of discipline.

The data are fully normalised to reflect variations in citation volume between different subject areas. This means that institutions with high levels of research activity in subjects with traditionally high citation counts do not gain an unfair advantage.

This year we have removed the very small number of papers (649) with more than 1,000 authors from the citations indicator.

In previous years we have further normalised citation data within countries, with the aim of reducing the impact of measuring citations of English language publications. The change to Scopus as a data source has allowed us to reduce the level to which we do this. This year, we have blended equal measures of a country-adjusted and non-country-adjusted raw measure of citations scores. This reflects a more rigorous approach to international comparison of research publications.

The methodology for the 2014-2015 World University Rankings is identical to that used since 2011-2012, offering a year-on-year comparison based on true performance rather than methodological change.

Our 13 performance indicators are grouped into five areas:

- Teaching: the learning environment (worth 30 per cent of the overall ranking score)
- Research: volume, income and reputation (worth 30 per cent)
- Citations: research influence (worth 30 per cent)
- Industry income: innovation (worth 2.5 per cent)
- International outlook: staff, students and research (worth 7.5 per cent).

Exclusions

Universities are excluded from the *Times Higher Education* World University Rankings if they do not teach undergraduates; if they teach only a single narrow subject; or if their research output amounted to fewer than 1,000 articles between 2008 and 2012 (200 a year).

In some exceptional cases, institutions that are below the 200-paper threshold are included if they have a particular focus on disciplines with generally low publication volumes, such as engineering or the arts and humanities. Further exceptions to the threshold are made for the six specialist subject tables.

Source: <http://www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking/methodology>

■ **Overall score**

Combined score.

■ **Teaching — the learning environment**

30% of overall score.

■ **International outlook — staff and students**

7.5% of overall score.

■ **Industry income — innovation**

2.5% of overall score.

■ **Research — volume, income and reputation**

30% of overall score.

■ **Citations — research influence**

30% of overall score.

University of Tokyo

Rank 2015

43

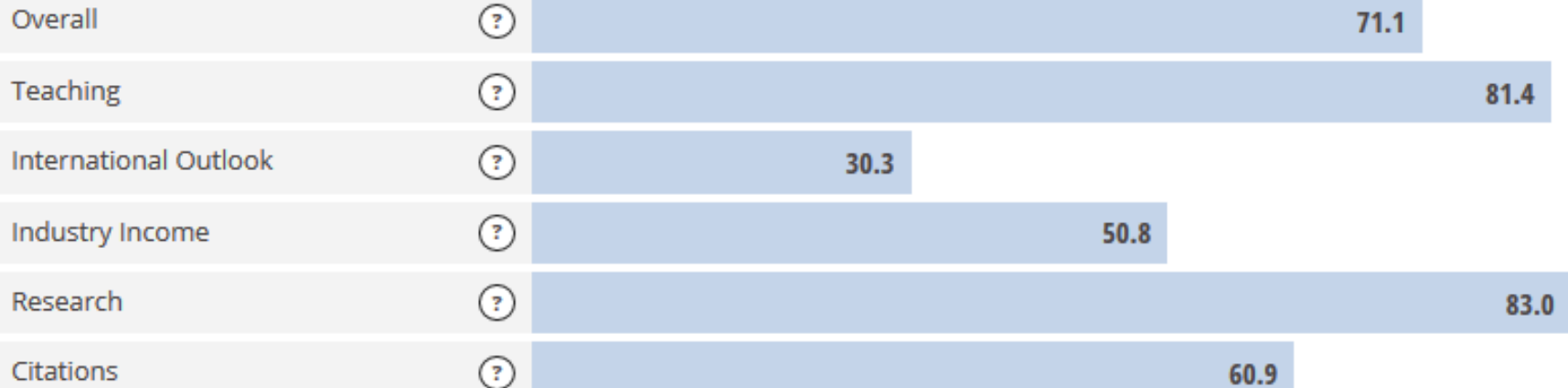
World University Rankings ▼

2016 ▼

1

Asia University Rankings ▼

2015 ▼



National University of Singapore

Rank 2015

2

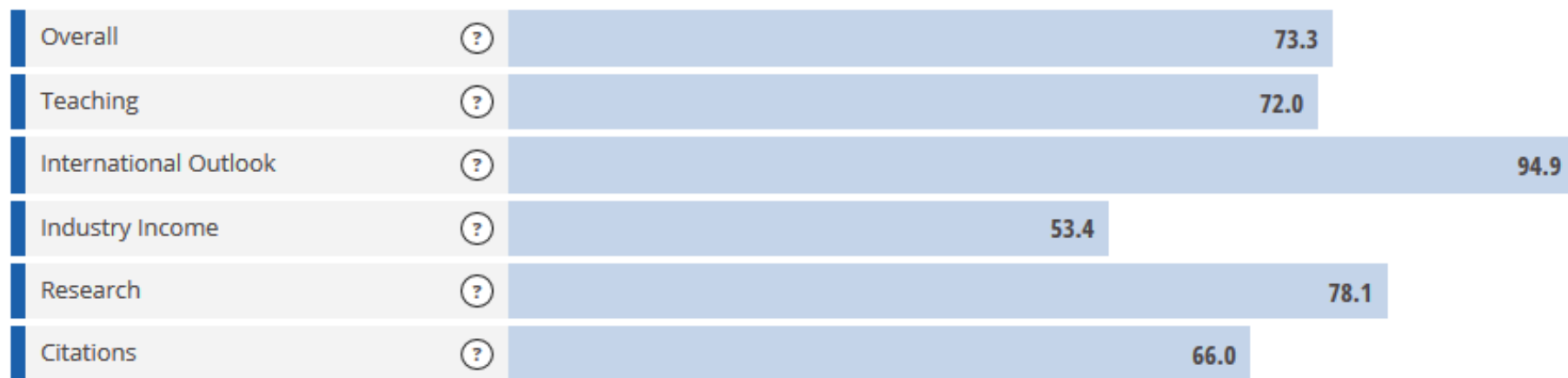
Asia University Rankings ▼

2015 ▼

25

World University Rankings ▼

2015 ▼



Academic Ranking of World Universities (ARWU)



Ranking Methodology

Indicators and Weights for ARWU



Source: <http://engineering.ucsb.edu/news/785>

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.

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 academic performance of an institution	PCP	10%
Per Capita Performance			
Total			100%

The Best Global Universities Ranking



Ranking indicator	Weight
Global research reputation	12.5%
Regional research reputation	12.5%
Publications	12.5%
Normalized citation impact	10%
Total citations	10%
Number of highly cited papers	12.5%
Percentage of highly cited papers	10%
International collaboration	10%
Number of Ph.D.s awarded	5%
Number of Ph.D.s awarded per academic staff member	5%

The Best Global Universities in Asia

#1

University of Tokyo



Japan Bunkyo-ku, Tokyo



#24 – Best Global Universities

71.3

Global Score



#2

Peking University



China Beijing



#39 – Best Global Universities

65.7

Global Score



#3

University of Hong Kong



Hong Kong Pok Fu Lam



#42 – Best Global Universities

64.7

Global Score



#4

National University of Singapore



Singapore



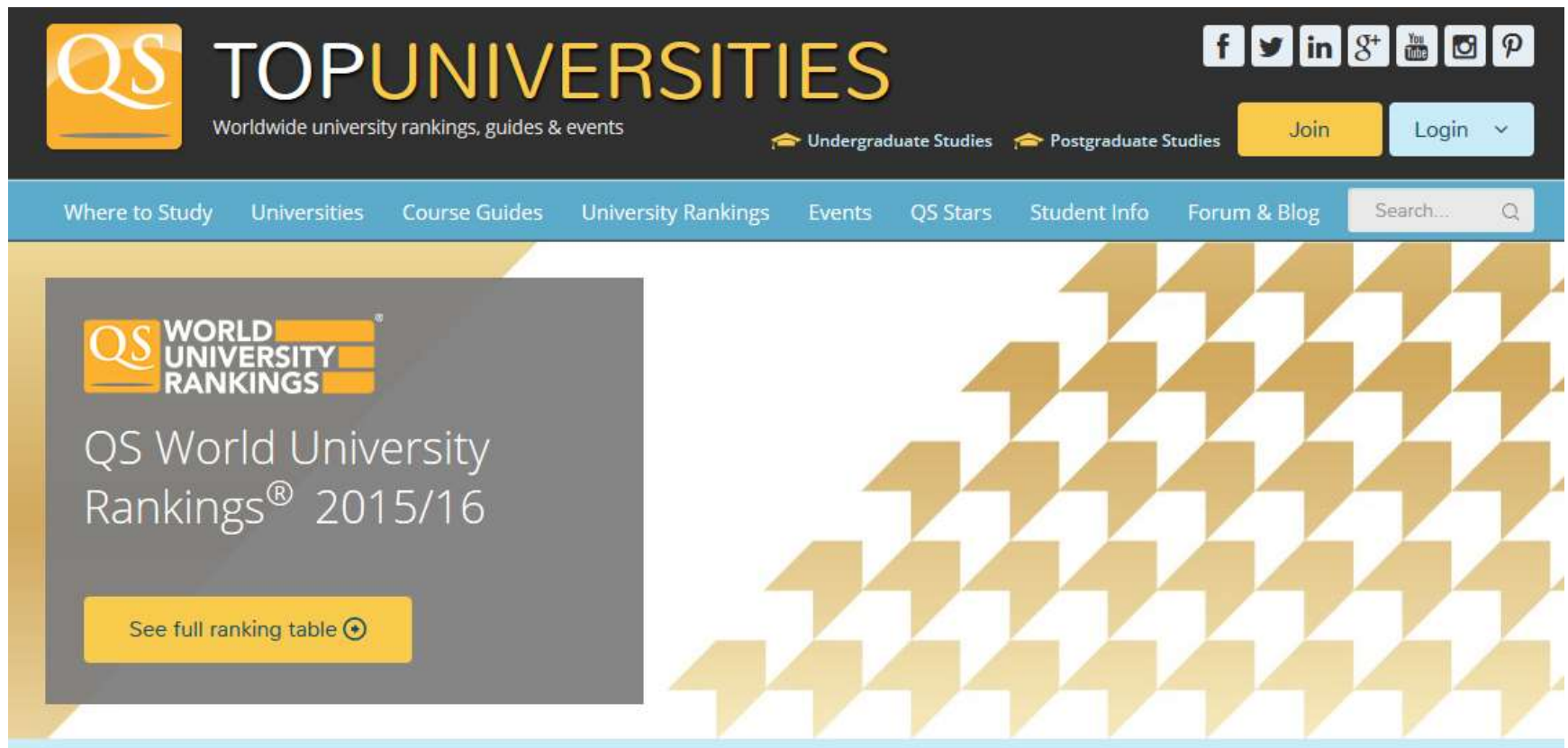
#55 – Best Global Universities

62.6

Global Score



QS World University Rankings



The image shows the top section of the QS World University Rankings website. The header is dark blue with the QS logo (an orange square with 'QS' in white) and the text 'TOP UNIVERSITIES' in large white and yellow letters. Below this is the tagline 'Worldwide university rankings, guides & events'. To the right are social media icons for Facebook, Twitter, LinkedIn, Google+, YouTube, Instagram, and Pinterest. Further right are buttons for 'Join' (orange) and 'Login' (light blue with a dropdown arrow). Below the header is a light blue navigation bar with links: 'Where to Study', 'Universities', 'Course Guides', 'University Rankings', 'Events', 'QS Stars', 'Student Info', and 'Forum & Blog'. A search bar with the placeholder 'Search...' and a magnifying glass icon is on the right. The main banner area features a large grey box on the left with the QS World University Rankings logo and the text 'QS World University Rankings® 2015/16'. Below this text is an orange button that says 'See full ranking table' with a right-pointing arrow. The background of the banner is white with a pattern of orange chevron shapes pointing upwards and to the right.

QS **TOP UNIVERSITIES**
Worldwide university rankings, guides & events

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QS **WORLD UNIVERSITY RANKINGS**
QS World University Rankings® 2015/16
See full ranking table →

QS World University Rankings: **Methodology**

- 1. Academic reputation (40%)**
- 2. Employer reputation (10%)**
- 3. Student-to-faculty ratio (20%)**
- 4. Citations per faculty (20%)**
- 5. International faculty ratio (5%)**
- 6. International student ratio (5%)**

CWTS Leiden Ranking Methodology

CWTS Leiden Ranking 2015

Overview of indicators

- Three types of indicators:
 - Output (based on publications)
 - Impact (based on citations)
 - Collaboration (based on co-authorship)
- Two perspectives:
 - Size-dependent: The *number* of publications of a university with a certain property (e.g., being highly cited or being co-authored with other organizations)
 - Size-independent: The *proportion* of the publications of a university with a certain property

National Taiwan University Ranking (NTU Ranking)

Methodology

Table 1 The Criteria and Indicators, and Their Respective Weightings, Used for the Overall Performance-Based Ranking


Criteria	2014 Overall Performance Indicators	Weighting	
Research productivity	Number of articles in the last 11 years* (2003-2013)	10%	25%
	Number of articles in the current year (2013)	15%	
Research impact	Number of citations in the last 11 years* (2003-2013)	15%	35%
	Number of citations in the last 2 years (2012-2013)	10%	
	Average number of citations in the last 11 years* (2003-2013)	10%	
Research excellence	h-index of the last 2 years (2012-2013)	10%	40%
	Number of Highly Cited Papers* (2003-2013)	15%	
	Number of articles in the current year in high-impact journals (2012-2013)	15%	

*Note: The timeframe of the three long-term indicators is consistent with that in ESI, providing cumulative data for the last 11 years.


Source: <http://nturanking.lis.ntu.edu.tw/BackgroundMethodology/Methodology-enus.aspx#2>


USA's institutions "Impact Points" on ResearchGate



07/10/2015



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 23
  1

Institutions

Explore stats for thousands of institutions on ResearchGate


United States ▼
 Impact Points - Total ▼

1		Harvard University	Σ 565,885.80
2		Harvard Medical School	Σ 517,429.90
3		University of Washington Seattle	Σ 506,220.70
4		University of California, Los Angeles	Σ 494,974.22
5		University of California, San Francisco	Σ 431,885.90

Impact Points - Total

Impact Points are calculated based on which journals a researcher has been published in. This list shows institutions based on the sum of the impact points of publications attributed to them.





YOUR INSTITUTION


University of Malaysia

[See position](#)

How do I improve my institution's stats? [Show](#)

TOP 5 BY TOTAL RG SCORE IN MALAYSIA ▼

1		University of Malaysia Kuala Lumpur	34,536.5
2		Putra University, Malaysia Putrajaya	21,413.9
3		University of Science Malaysia George Town	20,632.2
4		Universiti Teknologi Malaysia Johor Bahru	17,795.7

Webometrics Ranking

Webometrics is the largest academic ranking of Higher Education Institutions in the world. **Web presence** and **visibility** are used as indicators of global performance and take into account the teaching commitment, the research results, the perceived international prestige, the links with the community, including industrial and economic sectors, of the university. In the near future Web indicators will be an important part of the evaluation procedures and world university rankings.

Webometrics

Activity

Size

Number of webpages, rich files, academic papers, media files, languages, age

Web 2.0

Social networks presence, blogmetrics, wikimetrics

Search Engines

Size, geographical coverage, languages, biases, algorithms, updating frequency, operators

Position

Presence

Presence in search engines and directories

Position

Rank in search results

Criteria

Frequency, presence in selected html tags, title, URL, bad practices

Impact

Visibility

Number of external inlinks, Web impact factor, g-factor, PageRank

Networks

Inter-linking, co-linking, clusters, similarity, network measurements

Mentions

Names of authors, papers, institutions, journals, hot topics

Analytics (usage)

Popularity

TrafficRank

Visits, visitors

Number of visits, visitors, geographical and temporal distribution

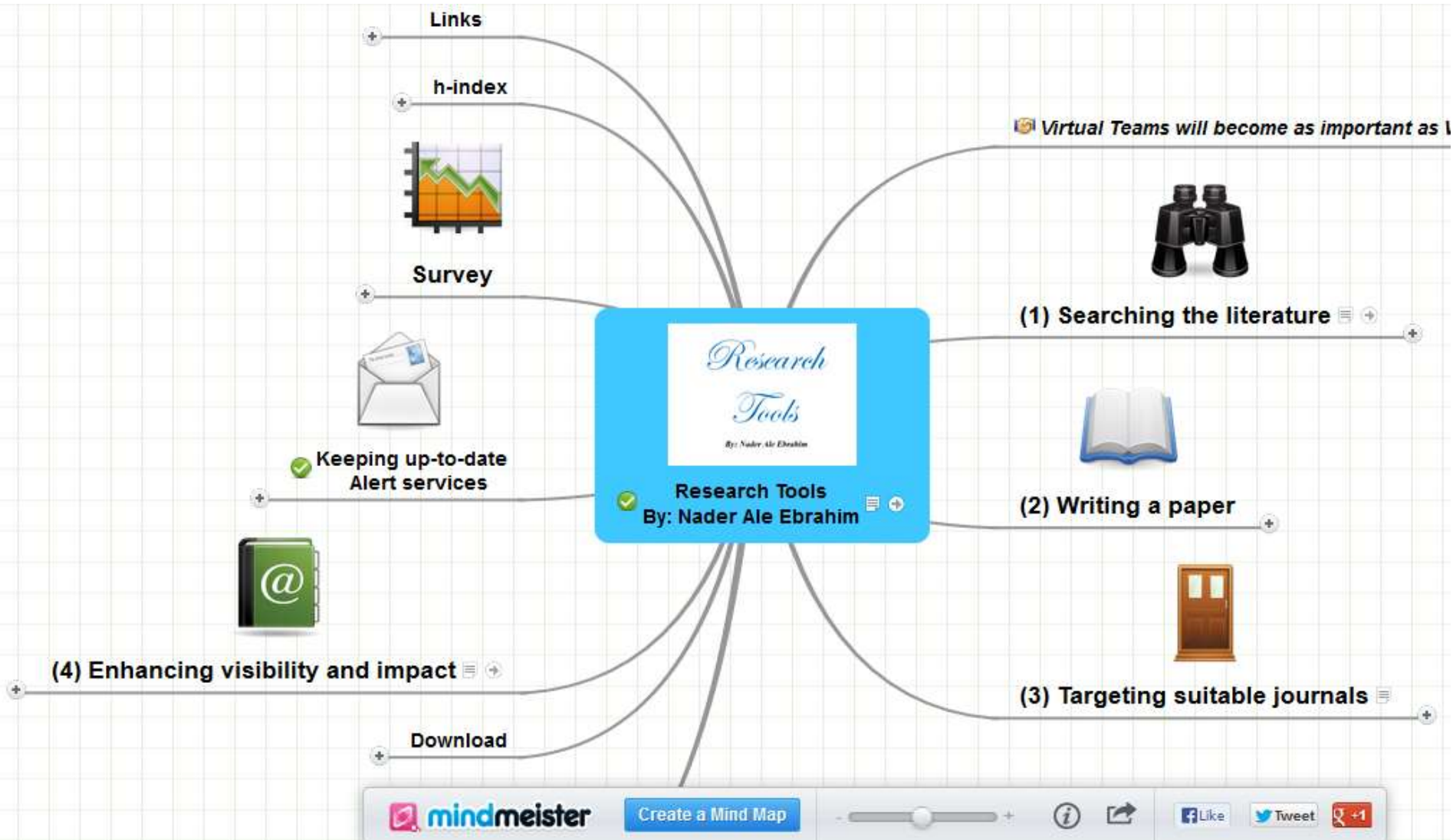
Behavior

Patterns of visits, referrers, referrals

Ranking Web of **Repositories**

- **Size (S).** Number of web pages extracted from [Google](#)
- **Visibility (V).** The total number of external links received (backlinks) by the number of referring domains for such links obtained from [MajesticSEO](#) and [ahrefs](#) databases.
- **Rich Files (R).** Files in formats like Adobe Acrobat (*.pdf*), MS Word (*doc, docx*), MS Powerpoint (*ppt, pptx*) and PostScript (*.ps & .eps*) extracted from Google.
- **Scholar (Sc).** Using [Google Scholar](#) database we calculate the normalised number of papers between 2007 and 2011.

Research Tools Mind Map







**UNIVERSITY
OF MALAYA**

The Leader in Research & Innovation

RESEARCH SUPPORT UNIT (RSU)

CENTRE FOR RESEARCH SERVICES

RESEARCH MANAGEMENT & INNOVATION COMPLEX (IPPP)

UNIVERSITY OF MALAYA



Thank you!

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www.researcherid.com/rid/C-2414-2009

<http://scholar.google.com/citations>

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