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The academic impact of research: Current and the future citation trends in developing countries

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Title: The **academic** impact of research: Current and the future citation trends in developing countries

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Abstract

Writing an article for online distribution in a way that maximized the chances of citation hits, is different from preparing one for print journals in some small, but important, respects. To be cited, articles have to be visible in an electronic environment. Therefore, publishing a high quality paper in scientific journals will be a halfway of receiving citation in the future. The rest of the way is advertising and disseminating the publications by using the proper “Research Tools”. Familiarity with the tools allows the researcher to increase his/her h-index in the short time.

The number of citations has over 30% share in academic ranking. Hence, most of the scientists are looking for a method to increase their citation record. Nader developed and introduced a method for increasing the visibility and impact of the research which directly effects on the number of citations. This talk tends to introduce some of the key points for improving the citation trends in developing countries by presenting the current situation and the future trends.

Keywords: h-index, Increase citations, Research tools
Outline

- **Abstract** - where we are today, and where we want to be in the future.
- **Introduction** - Research impact, Trends in scholarly research, A variety of indicators.
- **General explanation** - Why citation metrics?, Why citation is important?
- **Objectives** - Enhancing research visibility and improving citations records.
- **Methodology** - Compare institutions.
- **What is new** - Introduce “Research Tools” for increasing the visibility and impact of the research.
- **Result** – The gap between the developed and developing countries.
- **Conclusion & Future Works** – Use “Research Tools” and the field rankings table as a reference.
Research impact

- # of and value of Grants awarded
- # of awards (e.g. Nobel Prizes)
- Peer evaluation
- Publication counts
- Citation counts/citation metrics
  - Citation metrics are one piece of the research performance puzzle.
- Combination of factors
  - None of these measure works perfectly on its own, there are always anomalies and human judgment is required to interpret the results

Ann Kushmerick (2013), Using bibliometrics in research evaluation: An Introduction, Research Evaluation and Bibliometric Data, Thomson Reuters

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## A variety of indicators

<table>
<thead>
<tr>
<th>Metric</th>
<th>Calculation</th>
<th>Evaluator Questions</th>
</tr>
</thead>
</table>
| **Productivity** | • # papers  
• share of papers in field | • # papers  
• # papers in field/ papers in field | • What is the research output of X? (a country, subject, researcher, etc.) |
| **Impact**    | • # citations  
• h-index | • # citations  
• Number of papers (N) with at least N citations each. | • What is the overall impact and/or productivity of a body of work? |
| **Influence** | • Average citation rate (CPP)  
• Percent of papers cited | • Total citations/Total papers  
• # papers with at least one citation/ Total # papers in population | • What is the rate at which a body of work is cited?  
• How many papers get cited? Never get cited? |
| **Relative Impact** | • Journal performance ratio  
• Category performance ratio  
• Percentile in category and mean percentile  
• % papers in top x% of their field | • Sum of citations/sum of journal or category expected citation rates  
• Percentile placement of article within a journal category | • Has this body of work performed better than average vis-à-vis the journals or scientific disciplines represented?  
• How has this body of work performed compared to the disciplines represented?  
• What proportion of a body of work achieves a specific level of performance? |

Ann Kushmerick (2013), Using bibliometrics in research evaluation: An Introduction, Research Evaluation and Bibliometric Data, Thomson Reuters
Trends in scholarly research

- Competition for government research funding *increasing*
  Available funding *decreasing*
- Competition for top research faculty is on the rise
- Accountability:
  - Research spending
  - Demonstrating return on investment (ROI)
- Proving the institution’s quality of research to:
  - Prospective students
  - Prospective faculty members/research staff
  - Investors/donors

Why citation metrics?

- The primary and most common way to quantitatively track and measure research outcomes.
- Uses data on peer reviewed journals and citations received by those articles.
- Citations are an indicator of an article’s impact and usefulness to the worldwide research community; they are the mode by which peers acknowledge each other’s research.

Citation metrics are:

- Transparent
- Repeatable
- Easily understood

Ann Kushmerick (2013), Using bibliometrics in research evaluation: An Introduction, Research Evaluation and Bibliometric Data, Thomson Reuters
Why citation is important?

- **In the Times Higher Education World University Rankings system** [Citations — research influence (worth 32.5 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
**h-index** *(Jorge E. Hirsch - 2005)*

- A scientist has index $h$ if $h$ of [his/her] $N_p$ papers have at least $h$ citations each, and the other $(N_p - h)$ papers have no more than $h$ citations each.
A scientist has index $h$ if $h$ of his/her $N_p$ papers have at least $h$ citations each, and the other ($N_p-h$) papers have no more than $h$ citations each.

As an example, a researcher with an H-index of 15 has (of their total number of publications) 15 papers which have been cited at least 15 times each.

<table>
<thead>
<tr>
<th>Researcher A</th>
<th>Researcher B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper rank</td>
<td>Citations</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Neither researcher can have an H-index of more than 6.

g-index (Leo Egghe (2006))

- In order to give more weight to highly-cited articles Leo Egghe (2006) proposed the g-index. The g-index is defined as follows: [Given a set of articles] ranked in decreasing order of the number of citations that they received, the g-index is the (unique) largest number such that the top g articles received (together) at least g^2 citations. Although the g-index has not yet attracted much attention or empirical verification, it would seem to be a very useful complement to the h-index.
Table 2: Publication and citation list of scientist S1

<table>
<thead>
<tr>
<th>Rank (squared) - Publications</th>
<th>Citations</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (1) A</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2 (4) B</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>3 (9) C</td>
<td>9</td>
<td>39</td>
</tr>
<tr>
<td>4 (16) D</td>
<td>8</td>
<td>47</td>
</tr>
<tr>
<td>5 (25) E</td>
<td>6</td>
<td>53</td>
</tr>
<tr>
<td>6 (36) F</td>
<td>6</td>
<td>59</td>
</tr>
<tr>
<td>7 (49) G</td>
<td>6</td>
<td>65</td>
</tr>
<tr>
<td>8 (64) H</td>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td>9 (81) I</td>
<td>5</td>
<td>75</td>
</tr>
</tbody>
</table>

Predicting scientific success

H-index prediction


H-index calculator uses BitmapExporter by Mario Klingemann

H-index prediction chart showing future h-index over years ahead.

- **H-index**: 5
- **# articles**: 12
- **Years since first article**: 8
- **# distinct journals**: 5
- **# articles in 'top' journals***: 1


**Note**: The equations and the calculator model people that are in Neurotree, have an h-index 5 or more, and are between 5 to 12 years after publishing first article.
The single publication h index has been introduced by Schubert (2009) as the h-index calculated from the list of citing publications of one single publication.

Source: http://labs.dbs.uni-leipzig.de/gsh/
WHAT IS A GOOD SCIENTIFIC ARTICLE?

Novelty

Communication

Source: "Scientific Writing for Impact Factor Journals" By: Eric Lichtfouse

@Nader Ale Ebrahim 2013-2015
Online or Invisible?

Source: Steve Lawrence, "Free online availability substantially increases a paper's impact" in: Nature, Volume 411, Number 6837, p. 521, 2001
Increased access
= 
Increased downloads
= 
Increased citations
= 
Increased impact!

Well-Optimized Abstract:

*False* Remembering in the *Aged*

Researchers studying human *memory* have increasingly focused on *memory* accuracy in *aging* populations. In this article we briefly review the literature on *memory* accuracy in healthy older adults. The prevailing evidence indicates that, compared to younger adults, older adults exhibit both diminished *memory* accuracy and greater susceptibility to misinformation. In addition, older adults demonstrate high levels of confidence in their *false memories*. We suggest an explanatory framework for the high level of *false memories* observed in older adults, a framework based on the theory that consciously controlled uses of *memory* decline with *age*, making older adults more susceptible to *false memories* that rely on automatic processes. We also point to future research that may remedy such deficits in accuracy.

*This article appears on the first page of results in Google for false+memory+aged.*

Source: http://authorservices.wiley.com/bauthor/seo.asp

@Nader Ale Ebrahim 2013-2015
False Remembering in the Senior Population

Researchers studying human memory have increasingly focused on its accuracy in senior populations. In this article we briefly review the literature on such accuracy in healthy older adults. The prevailing evidence indicates that, compared to younger adults, older adults exhibit both diminished accuracy and greater susceptibility to misinformation. In addition, older adults demonstrate high levels of confidence in their false memories. We suggest an explanatory framework for the high levels observed in older adults, a framework based on the theory that consciously controlled uses of memory decline in later life, making older adults more susceptible to false memories that rely on automatic processes. We also point to future research that may remedy such deficits in accuracy.

Source: http://authorservices.wiley.com/bauthor/seo.asp

@Nader Ale Ebrahimi 2013-2015
Compare Keywords “Senior Population” with “Aged”
Compare Keywords
“Senior Population” with “Aged”
SOCIAL MEDIA

Share your findings...
And get cited

Source: "Scientific Writing for Impact Factor Journals" By: Eric Lichtfouse
@Nader Ale Ebrahim 2013-2015
USA’s institutions “Impact Points" on ResearchGate

<table>
<thead>
<tr>
<th>Rank</th>
<th>Institution Name</th>
<th>Impact Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Washington Seattle</td>
<td>340,632.50</td>
</tr>
<tr>
<td>2</td>
<td>University of California, San Francisco</td>
<td>287,231.62</td>
</tr>
<tr>
<td>3</td>
<td>National Institutes of Health</td>
<td>284,086.53</td>
</tr>
<tr>
<td>4</td>
<td>Harvard Medical School</td>
<td>272,421.72</td>
</tr>
<tr>
<td>5</td>
<td>Stanford University</td>
<td>271,268.70</td>
</tr>
</tbody>
</table>

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.

@Nader Ale Ebrahim 2013-2015
Iran’s institutions “Impact Points" on ResearchGate

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<tr>
<td>1</td>
<td>Tehran University of Medical Sciences</td>
<td>10,307.02</td>
</tr>
<tr>
<td>2</td>
<td>University of Tehran</td>
<td>5,213.34</td>
</tr>
<tr>
<td>3</td>
<td>Shiraz University of Medical Sciences</td>
<td>4,049.48</td>
</tr>
<tr>
<td>4</td>
<td>Tarbiat Modares University</td>
<td>3,881.38</td>
</tr>
<tr>
<td>5</td>
<td>Shahid Beheshti University of Medical Sciences</td>
<td>3,711.51</td>
</tr>
</tbody>
</table>

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@Nader Ale Ebrahim 2013-2015
Malaysian’s institutions “Impact Points" on ResearchGate
Malaysia’s H-index 1996 - 2012

<table>
<thead>
<tr>
<th>Country</th>
<th>Documents</th>
<th>Citable documents</th>
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<th>Self-Citations</th>
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<td>129,540,193</td>
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<td>1.380</td>
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<td>851</td>
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<td>6,852,785</td>
<td>16.16</td>
<td>740</td>
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<td>1,229,376</td>
<td>17,870,597</td>
<td>4,151,730</td>
<td>15.60</td>
<td>681</td>
</tr>
<tr>
<td>Canada</td>
<td>993,461</td>
<td>946,493</td>
<td>15,696,168</td>
<td>3,050,504</td>
<td>18.50</td>
<td>658</td>
</tr>
<tr>
<td>Japan</td>
<td>1,776,473</td>
<td>1,734,289</td>
<td>20,347,377</td>
<td>6,073,934</td>
<td>12.11</td>
<td>635</td>
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<td>Egypt</td>
<td>89,489</td>
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<td>7.85</td>
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<tr>
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<td>72,199</td>
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<td>24,434</td>
<td>151,748</td>
<td>37,377</td>
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</tr>
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</table>
Iran’s H-index 1996 - 2012

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<td>681</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>1,000.161</td>
<td>941.403</td>
<td>15,450.189</td>
<td>3,050.504</td>
<td>18.50</td>
<td>462</td>
</tr>
<tr>
<td><strong>Slovenia</strong></td>
<td>50.565</td>
<td>49.471</td>
<td>403.209</td>
<td>83.402</td>
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<td><strong>Slovakia</strong></td>
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<td>55.454</td>
<td>389.078</td>
<td>82.646</td>
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<td><strong>Croatia</strong></td>
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<td>55.909</td>
<td>305.003</td>
<td>71.781</td>
<td>6.45</td>
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<td>452.610</td>
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<td><strong>Bulgaria</strong></td>
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<td>44.609</td>
<td>219.449</td>
<td>56.183</td>
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<td>832.211</td>
<td>337.637</td>
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<td>100.983</td>
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<tr>
<td><strong>Egypt</strong></td>
<td>89.489</td>
<td>87.658</td>
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<td>7.85</td>
<td>125</td>
</tr>
</tbody>
</table>
University of Tokyo

WORLD RANK
2012-13

Tokyo, Japan
Region: Asia

- Overall score: 78.3
- Teaching: 87.9
- International outlook: 27.6
- Industry income: 59.0
- Research: 89.9
- Citations: 71.3
University of Tokyo

REGIONAL RANKINGS
Asia

Tokyo, Japan

Overall score 78.3
Teaching 87.9
International outlook 27.6
Industry income 59.0
Research 89.9
Citations 71.3
REGIONAL RANKINGS

Asia

Singapore, Singapore

Overall score 77.5
Teaching 74.4
International outlook 92.3
Industry income 77.4
Research 87.2
Citations 67.2

A message from National University of Singapore
Sharif University of Technology

REGIONAL RANKINGS
Asia

Tehran, Iran

- Overall score: 36.5
- Teaching: 32.9
- International outlook: 16.7
- Industry income: 93.0
- Research: 42.8
- Citations: 34.2
### Universiti Kebangsaan Malaysia

#### REGIONAL RANKINGS

Asia

#### Selangor, Malaysia

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall score</td>
<td>23.6</td>
</tr>
<tr>
<td>Teaching</td>
<td>27.7</td>
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<tr>
<td>International outlook</td>
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<tr>
<td>Industry income</td>
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</tr>
<tr>
<td>Research</td>
<td>13.5</td>
</tr>
<tr>
<td>Citations</td>
<td>21.4</td>
</tr>
</tbody>
</table>
Directory of Open Access Repositories

Proportion of Repository Organisations by Continent - Worldwide

Proportion of Repository Organisations by Continent - Worldwide

- Europe: 45.9%
- Asia: 19.6%
- North America: 18.5%
- South America: 8.5%
- Africa: 8.5%
- Australasia
- Caribbean
- Central America
- Other

Total = 2064 organisations

OpenDOAR - 18-Oct-2013

@Nader Ale Ebrahim 2013-2015
Directory of Open Access Repositories

Proportion of Repositories by Country - Worldwide

Proportion of Repositories by Country - Worldwide

Total = 2463 repositories

OpenDOAR - 18-Oct-2013

@Nader Ale Ebrahim 2013-2015
Directory of Open Access Repositories Asia

Proportion of Repositories by Country - Asia

Total = 431 repositories
OpenDOAR - 18-Oct-2013
Repositories map
Regional interest in H-Index

Data retrieved from Google Trend on 18 October 2013

@Nader Ale Ebrahim 2013-2015
## Compare Institutions
### Time Period: 1981-2012 Cumulative

<table>
<thead>
<tr>
<th>Institution</th>
<th>Web of Science Documents Cited</th>
<th>Times Cited Document per Document (Impact)</th>
<th>% Documents Cited</th>
<th>Impact Relative to World</th>
<th>% Documents in World</th>
<th>% Documents Cited Relative to World</th>
<th>Aggregate Performance Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTRALIAN NATL UNIV</td>
<td>50,428</td>
<td>1,177,826</td>
<td>23.36</td>
<td>88.36</td>
<td>0.20</td>
<td>1.09</td>
<td>1.34</td>
</tr>
<tr>
<td>NATL UNIV SINGAPORE</td>
<td>62,323</td>
<td>890,783</td>
<td>14.29</td>
<td>89.50</td>
<td>0.25</td>
<td>1.03</td>
<td>1.18</td>
</tr>
<tr>
<td>SHARIF UNIV TECHNOL</td>
<td>8,353</td>
<td>55,769</td>
<td>6.68</td>
<td>70.30</td>
<td>0.03</td>
<td>0.87</td>
<td>0.96</td>
</tr>
<tr>
<td>UNIV MALAYA</td>
<td>13,692</td>
<td>85,028</td>
<td>6.21</td>
<td>66.29</td>
<td>0.06</td>
<td>0.82</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Source: InCites – Data retrieved on 26 June 2013

@Nader Ale Ebrahim 2013-2015
## Compare Institutions
### Time Period: 2008-2012 Cumulative

<table>
<thead>
<tr>
<th>Institution</th>
<th>Web of Science Documents View Graph</th>
<th>Times Cited View Graph</th>
<th>Cites per Document (Impact) View Graph</th>
<th>% Documents Cited View Graph</th>
<th>Impact Relative to World View Graph</th>
<th>% Documents in World View Graph</th>
<th>% Documents Cited Relative to World View Graph</th>
<th>Aggregate Performance Indicator View Graph</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTRALIAN NATL UNIV</td>
<td>11,996</td>
<td>83,755</td>
<td>6.98</td>
<td>74.32</td>
<td>1.35</td>
<td>0.20</td>
<td>1.14</td>
<td>1.43</td>
</tr>
<tr>
<td>NATL UNIV SINGAPORE</td>
<td>23,016</td>
<td>167,623</td>
<td>7.28</td>
<td>72.16</td>
<td>1.41</td>
<td>0.38</td>
<td>1.11</td>
<td>1.39</td>
</tr>
<tr>
<td>SHARIF UNIV TECHNOL</td>
<td>5,276</td>
<td>19,477</td>
<td>3.69</td>
<td>60.27</td>
<td>0.72</td>
<td>0.09</td>
<td>0.92</td>
<td>0.99</td>
</tr>
<tr>
<td>UNIV MALAYA</td>
<td>7,862</td>
<td>20,243</td>
<td>2.57</td>
<td>51.00</td>
<td>0.50</td>
<td>0.13</td>
<td>0.78</td>
<td>0.88</td>
</tr>
</tbody>
</table>

Source: InCites – Data retrieved on 26 June 2013

@Nader Ale Ebrahim 2013-2015
Compare Institutions – Cite per Document
Time Period: 2008-2012 Cumulative

Source: InCites – Data retrieved on 26 June 2013

@Nader Ale Ebrahim 2013-2015
Compare World Average & University of Malaya, Citation Per Paper

Source: ESI, data retrieved on 17 October 2013

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Compare World Average & Sharif university, Citation Per Paper

<table>
<thead>
<tr>
<th>Field</th>
<th>Average Citation Rates</th>
<th>Citations Per Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMISTRY</td>
<td>11.87</td>
<td>8.94</td>
</tr>
<tr>
<td>ENGINEERING</td>
<td>5.33</td>
<td>3.51</td>
</tr>
<tr>
<td>PHYSICS</td>
<td>8.72</td>
<td>7.04</td>
</tr>
<tr>
<td>MATERIALS SCIENCE</td>
<td>8.07</td>
<td>6.56</td>
</tr>
<tr>
<td>ALL FIELDS*</td>
<td>10.69</td>
<td>5.45</td>
</tr>
</tbody>
</table>

Source: ESI, data retrieved on 17 October 2013
Compare Institutions
Time Period: 2008-2012 Cumulative - Publications

Source: InCites – Data retrieved on 26 June 2013

@Nader Ale Ebrahim 2013-2015
Compare Institutions
Time Period: 2008-2012 Cumulative - Citation

Source: InCites – Data retrieved on 26 June 2013

@Nader Ale Ebrahim 2013-2015
Compare Countries Impact Relative To World 2003-2012

Impact Relative To World 2003-2012

Source: InCites – Data retrieved on 26 June 2013

@Nader Ale Ebrahim 2013-2015
Compare Countries Impact 2003-2012 Cumulative

Source: InCites – Data retrieved on 26 June 2013

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Future

• Developed countries; present status could be future perspectives of developing countries
# Nottingham Business School - BLUE SKY VISION 2009 - 2013

<table>
<thead>
<tr>
<th>QUALITY</th>
<th>DELIVERY &amp; VOLUME</th>
<th>INCOME &amp; COST</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EDUCATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M1 Increase Student satisfaction by 10%</td>
<td>M7 New entrant UG EU - 800</td>
<td>M16 Increase margin on programmes by 5%</td>
</tr>
<tr>
<td>M2 Increase student tariff to 320</td>
<td>M8 New entrant UG Int - 300</td>
<td>M17 Increase demand volume UG</td>
</tr>
<tr>
<td>M3 Introduce GMAT and achieve 600</td>
<td>M9 Open PG EU grow to 250</td>
<td>M18 Increase demand and conversion rate -PG</td>
</tr>
<tr>
<td>M4 Increase proportion of all UG 1st class honours to 10%</td>
<td>M10 Open PG Int grow to 400</td>
<td>M19 Increase demand and conversion rate - Exec Ed</td>
</tr>
<tr>
<td>M5 Reduce failure/ referral rate by 10%</td>
<td>M11 Increase no of EQUIS/AACSB accredited partners (1:1)</td>
<td>M20 Increase ROI on travel by 5%</td>
</tr>
<tr>
<td>M6 Increase entry level of MSc progs to 2:1 minimum</td>
<td>M12 Increase no. students in double/dual degree progs to 200</td>
<td></td>
</tr>
<tr>
<td>M25 Increase no of publications in 2*(3/4)* journals</td>
<td>M13 20% UG students @ level 2 to do study abroad</td>
<td></td>
</tr>
<tr>
<td>M26 Increase citation (make decision keep/delete)</td>
<td>M14 Module commonality/prog - UG</td>
<td></td>
</tr>
<tr>
<td>M27 Improvement of 20% on RAE esteem factors</td>
<td>M15 Module commonality/prog - PG&amp;Exec Ed</td>
<td></td>
</tr>
<tr>
<td>M28 Increase no research active staff to 75% of core faculty</td>
<td>M31 Increase research income by 60% per annum</td>
<td></td>
</tr>
<tr>
<td>M29 Increase PhD completion 10/year</td>
<td>M32 Increase doctoral qualifications of staff to 75%</td>
<td></td>
</tr>
<tr>
<td>M30 Increase DBA completion 20/year</td>
<td>M33 Increase high quality research seminars to 30 across all divisions</td>
<td></td>
</tr>
</tbody>
</table>

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HOW TO MAXIMISE THE VISIBILITY AND IMPACT OF YOUR RESEARCH: PATHWAYS TO OPEN ACCESS

This workshop is aimed at all researchers who have started writing for publication or are considering writing for publication. A great amount of researchers' time and effort involves writing up their research for publication. However, once a paper is accepted for publication, it is not guaranteed that it will reach the widest possible audience, even if the journal does have a high impact factor.
Talk: Citation Matters! Realise Your Paper's Full Citation Potential: 8 April 10

Published on: 05-Apr-2010
01-Apr-2010 - 30-Apr-2010 0000hrs - 2330hrs

VENUE: LT 19 (N2-B2)

Contact Information:
Library Promotion Division
Tel: 6592 7543
email: library@ntu.edu.sg

Title: Citation Matters! Realise Your Paper's Full Citation Potential
Date: 8th April 2010, Thursday
Time: 11.00am - 12.30pm
Venue: LT 19 (N2-B2)
Speaker: Christina Low, Managing Editor, Taylor & Francis Asia Pacific
Q & A: Christina Low and Prof Eddie Kuo, Editor-in-Chief, Asian Journal of Communication

To register, visit www3.ntu.edu.sg/lib/publishing.

Researchers not only actively publish nowadays. They also have to track the impact of their research through citations and the ranking of the journals they are published in. Going beyond getting published, understanding citation metrics and journal impact will certainly help researchers succeed in today's competitive fields.
Maximize Impact through Open Access

Where you publish can maximize your impact. Many open-access articles are more immediately and more visible than non-open-access articles. Increased citation rates lead to increased impact.

The way to maximize the impact of your research findings requires increased exposure to your work.

1. Retain your copyrights. Copyright, when signed over to a publisher, limits your ability to disseminate your work. By retaining your copyright, you can retain control over dissemination, thus maximizing your work's potential reach and greater impact on your scholarship. You can retain your copyright by utilizing an author's addendum. You can also consult the SPARC information about the copyright policies and self-archiving terms for open access.
Maximizing the Visibility and Impact of Your Published Research

INTRODUCTION

Measuring the inter-and cross-disciplinary impact of your published research can be a valuable measure of the achievement of both an individual or unit and can play a role in a number of decision-making processes including:

Identifying Research Trends including:

- **Impact:** Examine the dispersion of cited and citing works both within and across discipline-specific geographic boundaries to capture the total impact of research collaboration and influence on the field.
- **Time:** Consider the longitudinal impact and value of publications i.e. the frequency and citation rate both publication output and citation impact over time.
- **Prestige:** Capture the scope and prestige of the publication in which the unit publishes.
- **Funding and Grant Applications:** Profile performance and impact to demonstrate the benefit of a research entity.
Personal impact can be measured, both quantitatively and qualitatively.

As well as contributing to academic discourse, your impact might also be reflected outside the scholarly literature. Consider your research in the context of:

- The wider community
- Uptake by practitioners
- Reach in social media (see Altmetrics)
- The adoption of a new product
- The commercialisation of a product for industry
- The discovery of a new drug
- Unsolicited feedback from the public or other experts in your field
- Impact on policy or legislation

H-Index

The h-index is a citation based attempt to measure both the productivity and impact of a scientist.

The h-index is not widely used outside of the Sciences. Humanities are advised not to use the h-index to measure personal impact.

Definition: The index h, defined as the number of papers with citations equal to h, is a useful index to characterise the scientific output of researchers.

Further reading (including limitations): Measuring and Evaluating Impact, by The University of Auckland Science Information Services team.

View a video on the Limitations of the h-index for early career researchers.

Example:

Visibility

Increasing the visibility of your publications can increase their discoverability.

Strategies to maximise your impact:

- ResearchSpace

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Publishing

Strategic publishing of your research findings has professional and institutional implications:

Professional

- Increases the visibility of your research and raises your research profile.
- Is a consideration when applying for grants, promotions or new positions.
- Is often a requirement or expectation of employment in an academic or research institution.

Institutional

- Directly impacts government funding HERDC
- Directly impacts reputation Excellence for Research in Australia (ERA)
Increase the visibility and impact of your research

28 May 2013

The issue

Universities must increase the visibility of their research to demonstrate the contribution they make to the knowledge economy, improve their chances in the competition for government research funding and position themselves well to work with industry or third sector partners.
MAXIMIZING THE IMPACTS OF YOUR RESEARCH:
A HANDBOOK FOR SOCIAL SCIENTISTS

LSE Public Policy Group

Consultation Draft 3:
Maximize Your Research Impact

Easy as 1-2-3:

- **Step 1:** Identify the right journal
  
  *But, before you submit your manuscript, make sure to...*
  
- **Step 2:** Increase the visibility/discoverability of your scholarship
  
  *Finally,*
  
- **Step 3:** Track citation-based metrics for your articles
Strategies for Enhancing the Impact of Research

Optimizing discoverability and access of your research is the surest way to enhance its visibility and impact. As follows are various strategies for authors to consider as they undertake research. The strategies are divided into three categories: Preparing for Publication, Dissemination, and Keeping Track of Your Research. Repetition, consistency, and an awareness of the intended audience form the basis of most the following strategies.

Preparation for Publication
Knowledge Exchange Office

Seminar

KE Lunch Meeting
November 3, 2011 | 12:30 pm – 2:00 pm
Room P-603, Graduate House

Increase Your Impact – How to make your research more visible and have more impact through placing your papers in Open Access and optimizing your pages in The HKU Scholars Hub?

By Professor John Bacon-Shone
Associate Director, Knowledge Exchange Office &
Mr David Palmer
10 Ways to Increase Usage and Citation of your Published Article Using Social Media

As readers’ expectations change, it is important that your article is visible where the user starts their search. Below are some of the social media sites that SAGE recommends for promoting your article and other channels that will offer a direct way to reach your readership.

1. Contribute to Wikipedia
We recognize that many students are increasingly using Wikipedia as the starting point for their research. If there are pages that relate to themes, subjects or research that your article covers, add your article as a reference, with a link to it on SAGE Journals Online. If there isn't a page in existence, why not create one. You can find out how here: [http://en.wikipedia.org/wiki/Wikipedia:Your_first_article](http://en.wikipedia.org/wiki/Wikipedia:Your_first_article)

2. Join Twitter
Twitter is a micro-blogging service that enables its users to send and read messages known as tweets. Authors are increasingly promoting their content via twitter which is then picked up by other researchers and practitioners depending on their search parameters. Look at the example [here](http://example.com). Senders can restrict delivery to those in their circle of friends or, by default, allow open access. Twitter allows you to set up search terms to enable you to monitor what is being talked about in your areas of interest. You can then comment on colleagues or faculty whose tweets you want to follow.

[Link to the article on the SAGE website]
Help Readers Find Your Article

The importance of search engines

Google and Google Scholar are the principal ways in which people will find your article online today. Between them they account for 60% of referral traffic to SAGE Journals Online. The search engine is now the first port of call for researchers and it is of paramount importance your article can be found easily in search engine results.

By taking some simple steps to optimize your article for search engines it will help your work to be discovered, then read, used and cited in others’ work. This helps with support the Impact Factor of the journal (if applicable) your article is published in and will further raise the visibility of your article.

SAGE already undertakes many measures to ensure SAGE journals are indexed in the all the major search engines. There are over 100 factors that a search engine will look at before deciding how to rank your article in their search results, but the starting point is the content that you write.

What do search engines look at?

Today’s search engines use secret complex mathematical algorithms that change every month to keep their search results as accurate as possible. They take into account over 100 different factors and do not disclose the weighting or importance of each. Below are just a few of the elements considered today by search engines:

- the volume of incoming links from related websites
- volume and consistency of searches
- time within website
Get found — optimize your research articles for search engines

Tips to boost readership and raise your profile in the academic world

By Elsevier Biggerbrains | Posted on 6 November 2012

Search engine optimization (SEO) of your journal articles is as important for you to do to market your research as it is for a company to market a retail product. Different markets and end users, but the same purpose and means. Thanks to companies like Google, SEO is almost always present as you would like to increase readership of your articles, increase citations and acknowledgment and to create an overall stronger and more effective search presence both offline and online. By optimizing your articles, you guarantee that your articles are indexed and gain a higher ranking in general search engines, such as Google and Google Scholar, Elsevier’s Scirus, SciDiver, IEEE Xplore, PubMed, SciPlore.org and more.¹

A higher ranking means that your article appears at the top of the list in the search results when someone types in one or more of the keywords or phrases you use in your article. The basis for this ranking varies from the search engine used to perform the search, as each search engine

Brought to you by Elsevier Biggerbrains

This SEO guide is from Biggerbrains, which provides career development resources for early-career researchers. The world of science is ever-changing and we at Biggerbrains are here to keep you updated with the latest trends and best practices in the field. Whether you’re a beginner or an expert, you can always rely on us to provide valuable insights and advice to help you succeed in your research and career.⁰
Optimize citations

When researchers refer to another author's work in their own published work, they cite it. Such citations can be analyzed to measure the formalized usage of the cited work.

Databases such as Thomson Scientific's Science, Social Sciences, and Arts & Humanities Citation Indexes compile the cited references from articles published during a particular year or period.

These databases allow people to determine the research impact of a researcher's publications according to the number of times they have been cited by other researchers. Citation counts are often used in research funding and promotion decisions. Boosting citation rate is thus a potentially important motivator for authors. What can you do to optimize citations to your article?

- Publish your article in one of the journals everyone in your discipline reads.
- Target a journal with a high impact factor, or with any impact factor at all!
- Target journals in rapidly growing research fields because they tend to publish papers with a short time interval from submission to acceptance.
Optimizing your article for search engines will greatly increase its chance of being viewed and/or cited in another work. Citation indexes already figure many disciplines as a measure of an article's value; there is evidence that article views/downloads are also beginning to count in the same way. The crucial area for optimization is your article's abstract and title, which are available to all online. We have compiled these guidelines to enable you to maximize the web-friendliness of the most public part of your article.

Understanding Search Engines:

Each search engine has its own algorithms for ranking a piece of content as a journal article. However, many search engines estimate the content
What is new

- Nader developed and introduced “Research Tools” for increasing the visibility and impact of the research which directly effects on the number of citations.
Conclusion

Publishing research output in high-impact journals is a primary concern of researchers. But once their works are published, they are concerned about citation which is directly related to the paper’s quality and visibility. The institutions in the developing countries should provide open access repository for their researchers. Next, the institutions/researchers can apply Nader’s method (Research Tools) for increasing the visibility of their papers.

The field rankings table can be a reference for developing countries to select a field of study in the future.

Please contact me through:
Email: aleebrahim [At] um [Dot] edu [Dot] my
Website: http://aleebrahim.com/
References

11. Jones, K., & Evans, K. (2013). Good Practices for Improving Citations to your Published Work (pp. 2). University of BATH.
13. SAGE. (2012). 10 Ways to Increase Usage and Citation of your Published Article Using Social Media. Retrieved 9 May, 2013, from http://www.sagepub.com/authors/journal/10ways.sp

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