A new research impact measuring system

Nader Ale Ebrahim
A new research impact measuring system

Nader Ale Ebrahim, PhD
Visiting Research Fellow
Research Support Unit
Centre for Research Services
Research Management & Innovation Complex
University of Malaya, Kuala Lumpur, Malaysia

aleebrahim@um.edu.my
@aleebrahim

www.researcherid.com/rid/C-2414-2009
http://scholar.google.com/citations
A new research impact measuring system

Nader Ale Ebrahim, PhD

Research Support Unit
Centre for Research Services
Research Management & Innovation Complex
University of Malaya, Kuala Lumpur, Malaysia

www.researcherid.com/rid/C-2414-2009
http://scholar.google.com/citations

Available online at: http://dx.doi.org/10.6084/m9.figshare.1580090

Abstract:

For years, scientists have been trying to measure the quality of scholarly work by the number of times an article is cited in other articles or the impact factor of the journal which published an article. However, citation is a lagging indicator and journal impact factor may be misleading since a Journal's citation count is usually caused by a small number of articles in that journal.

With the rise of the web as the archiving and emerging interaction platform, there is a need for new ways to measure articles and books impact. Altmetrics attempts to use the online activity to measure impact, buzz, word of mouth for scientific information and it includes new ways to measure usage at the citation level. In this workshop, I will explain about application of altmetrics tools such as: Altmetric.com, Impactstory.org, Plumanalytics.com, and PLoS metrics.

Keywords: Altmetric, H-index, Improve citations, Research tools, Bibliometrics
Informetrics, scientometrics, bibliometrics, webometrics, cybermetrics and altmetrics

Bibliographies – largely references

Whole Internet, cyberspace

Science of Science

Web presence, visibility and impact – links, pages, documents

Alternative metrics – views, downloads, web citations, etc

What it’s like being a researcher

What were your recent publications?
Where did you publish them?
Are they Open Access?
Is the data open too?
How did you pay the APC?
Was it well received?
Did it have any impact?

Where is your Research heading?
Are you doing anything interdisciplinary?
Where is your grant money?
How many grants have you applied for so far?
How many grant applications were successful?
How are you going to sustain your grant income profile?
What did you do with the grant income you received?
How did you cost your overheads?

Does it have an international dimension?
Did it make a spinoff?
Did it have any impact?

What’s your next project?

How many students are you teaching?
How many students are you supervising?

Does it have any IMPACT?

What it’s like being a researcher

What were your recent publications?
Where did you publish them?
Is the data open too?
How did you pay the APC?
Where is your grant money?
What did you do with the grant income you received?
Did it have any impact?
How many grants have you applied for so far?
How many grant applications were successful?
How are you going to sustain your grant income profile?
Where is your Research heading?
Are they Open Access?
Was it well received?
Did it have any impact?
How many students are you teaching?
How many students are you supervising?
Did it make a spinoff?
Does it have any IMPACT?

WILL IT HAVE ANY IMPACT?


©2015-2016 Nader Ali Ebrahim
Problems with citation-based indicators

Problem 1: Time
Problem 2: Journals
Problem 3: Impact

Science IMPACT ON:

Altmetrics

Created by researchers

Created by the public

Altmetrics

Created by researchers

Indicating future scientific impact?

Indicating other types of impact, such as societal impact?

Created by the public

Altmetrics Tools

- Altmetric.com
- Impactstory.org
- Plumanalytics.com
- PLoS metrics
- Usage Count (webofknowledge.com)
- Bookmetrix (http://www.bookmetrix.com)
- Article Metrics in Scopus

©2015-2016 Nader Ale Ebrahim
### Scopus

<table>
<thead>
<tr>
<th>Search</th>
<th>Alerts</th>
<th>My list</th>
</tr>
</thead>
</table>

**Metric details**

Effective strategies for increasing citation frequency  
Ebrahim N.A., Salehi H., Emadi M.A., Tanha P.H., ... Ordi A.  

<table>
<thead>
<tr>
<th>Overview</th>
<th>Citations</th>
<th>Scholarly Activity</th>
<th>Social Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Citation Count</strong></td>
<td><strong>Field-Weighted Citation Impact</strong></td>
<td><strong>Citation Benchmarking</strong></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>5.01</td>
<td>97th percentile</td>
<td></td>
</tr>
</tbody>
</table>

- Cited by in Scopus
- Compared to Social Sciences (all) articles of the same age and document type

**Engagement highlights**

- **Scholarly Activity** - 74 readers from 1 source
- **Social Activity** - 10 mentions from 1 source
My passion is connecting people to chemistry and I am known as the ChemConnector in the social network. I have almost a decade of experience of analytical laboratory leadership and management. I am a prolific author with over a hundred and fifty scientific publications, book chapters and books, and hundreds of public presentations. I am one of the original founders of the ChemSpider database and am now the VP Strategic Development for the Royal Society of Chemistry.
Antony Williams
Connections in Chemistry

My passion is connecting people to chemistry. Over the past decade I held many jobs and responsibilities including the direction of the development of scientific software applications for spectroscopy and general chemistry, directing marketing efforts, sales and business development collaborations for the company. I have almost... + More
PlumX Metrics

**Analyze**

You can aggregate metrics at any level to help you understand what is happening with your grant-funded research. For example, you can see output and metrics by:

- Researcher
- Grant
- Department
- Journal

**Metrics by publication year**

In this example, it is apparent that citations (red bars) are a lagging indicator; there are substantially fewer citations in the recent years, especially 2013 and 2014. The other categories of metrics help you see what has been going on recently.
On Friday, June 27, 2014 6:07 PM, The Impactstory team <team@impactstory.org> wrote:

Your new research impacts this week

Dr. Nader Ale Ebrahim impactstory.org/aleebrahim

1000+ SlideShare views on Effective virtual teams
This slides attracted 73 new SlideShare views this week, bringing it up to 1003 total. It marks your 8th product to get this many views on SlideShare. Nice work!
Enhancing Research Visibility and Improving Citations: Publication Marketing Tools Mpws publication marketing tools by nader ale ebrahim 2013

This slides attracted 394 new SlideShare views this week, bringing it up to 7030 total.

It marks your 1st product to get this many views on SlideShare. Nice work!

slides milestone
Introduction to altmetrics and Altmetric

Nader Ale Ebrahim, PhD
Visiting Research Fellow
Research Support Unit
Centre for Research Services
Research Management & Innovation Complex
University of Malaya, Kuala Lumpur, Malaysia

aleebrahim@um.edu.my
@aleebrahim
altmetric.com
Altmetric Ambassador of the Month: Nader Ale Ebrahim

Our Ambassador of the Month for September is Nader Ale Ebrahim, a visiting research fellow at the University of Malaya. He has run over 100 workshops for researchers in Malaysia, and is considered an authority on research promotion practices and metrics tools. Learn more about what Nader has done so far as an Altmetric Ambassador on our blog.
In this session, we’ll cover…

1. Introduction to altmetrics
2. Altmetric tools
3. Altmetrics use cases
4. Examples of using altmetrics data
5. Questions?
Part 1: Introduction to Altmetrics
What are altmetrics?

- Attention to research outputs in non-traditional sources, e.g. policy documents, news, blogs and social media
- Indicators of research impact
- Help understand how research is being received and used
- Complementary to traditional citation-based analysis

ACADEMIC ATTENTION

- Journal Impact Factor
- Citation counts
- H-index
- Number of publications

Traditional bibliometrics

BROADER ATTENTION

- Mentions in news reports
- References in policy
- Mentions in social media
- Wikipedia citations
- Reference manager readers… etc.

Alternative metrics “altmetrics”
Why altmetrics?

- Provide a more coherent understanding of research attention
- Understand the broader reach and *early* impact of research
- Track attention to a broad range of research outputs, including articles, posters, data sets and working papers, etc.
- Help researchers get credit for impact activities
Advantages of metrics for single research outputs

1. Real-time, immediate feedback on attention to scholarly content
2. Useful for early career researchers whose work may not have accrued citations
3. Showcase attention to a research output beyond academia
4. Not biased by an over-arching metric
Each day, we track ~44,000 new mentions of research across sources incl. social media, news, and policy docs.

That's 1 mention every 2 seconds!

Each week, ~50k unique items are shared.

Mentions range in complexity, from quick shares to comprehensive reviews.

18m mentions of ~3.7m scholarly outputs

Altmetric data, March 2015

©2015-2016 Nader Ale Ebrahim
What sources does Altmetric track?

**News outlets**
- Over 1,300 sites
- Manually curated list
- Text mining
- Global coverage

**Social media and blogs**
- Twitter, Facebook, Google+, Sina Weibo
- Public posts only
- Manually curated list

**Post-publication peer review**
- Publons
- PubPeer

**Reference managers**
- Mendeley, CiteULike
- Reader counts
- *Don’t count towards the Altmetric score*

**Other sources**
- Wikipedia
- YouTube
- Reddit
- F1000
- Pinterest
- Q&A

**Policy documents**
- NICE Evidence
- Intergovernmental Panel on Climate Change
- Many more…
How does Altmetric aggregate online attention?

Collecting attention data

Follow a list of sources.

Search for links to papers.

Automatically link searching and text mining.

Reporting attention data

Collate attention.

Disambiguation of mentioned items across different versions.

Display data in “Altmetric details pages”.

All research outputs with mentions have an Altmetric Details Page in our database.

©2015-2016 Nader Ale Ebrahim
Part 2: Altmetric Tools
The Altmetric Bookmarklet

The free Bookmarklet lets you instantly retrieve altmetrics data for any article.

To install, go to: http://altmetric.it
Virtual R&D Teams: A New Model for Product Development
Nader Ale Ebrahim

Abstract

Increased global competitions have urged small and medium enterprises (SMEs) to develop new products faster. Virtual research and development (R&D) teams in SMEs can offer a solution to speed up time-to-market of new product development (NPD). However, factors that affect the effectiveness of virtual teams for NPD are still not adequately verified. This paper presents the correlations between virtual R&D team constructs and virtual team effectiveness by developing a “Virtual Research and Development Team” (VR&D) model. The items, which may influence the
Deep impact: unintended consequences of journal rank

Björn Brems, Katherine Button and Marcus Munafò

Most researchers acknowledge an intrinsic hierarchy in the scholarly journals ("journal rank") that they submit their work to, and adjust not only their submission but also their reading strategies accordingly. On the other hand, much has been written about the negative effects of institutionalizing journal rank as an impact measure. So far, contributions to the debate concerning the limitations of journal rank as a scientific impact assessment tool have either lacked data, or relied on only a few studies. In this review, we present the most recent and pertinent data on the consequences of our current scholarly communication system with
Nonlanguage factors affecting undergraduates' judgments of nonnative English-speaking teaching assistants
1. See all the conversations and mentions.
2. Monitor mentions in the mainstream news.
3. Estimate attention with the “Altmetric score”.


Overview of attention for article published in The Lancet (British Edition), May 2014

So far, Altmetric has seen 108 news stories from 68 outlets.

This map shows you're more likely to find obese people in Pakistan or Afghanistan than India.

And yet, India is the third-most obese country on earth, the first two being US and China.

An American Plate That Is Palatable for Human and Planetary Health

What we eat determines our health. It also decides the health of our planet. In the newly proposed Dietary Guidelines, the US...

Doctors need to move beyond 'one-size-fits-all' approach to tackling obesity, say scientists in Sheffield.

Rice, the base for cuisines all over the world, contains a lot of starch. That makes it delicious but also high in calories.

Should parents of obese children be punished?

Investigadores afirman la descripción de la ruta que empuja estar saciado. Han bloqueado en ratones la ingesta...

©2015-2016 Nader Ale Ebrahim
What is the Altmetric donut?

The Altmetric donut visualizes which are sources discussing an item.

In the Altmetric Explorer, hover the cursor over the donut visualization to see the appropriate legend for an item.

Each source is colour coded:

**The Colours of the Donut**

- Policy documents
- News
- Blogs
- Twitter
- Post-publication peer-reviews
- Facebook
- Sina Weibo
- Wikipedia
- Google+
- LinkedIn
- Reddit
- Faculty1000
- Q&A (stack overflow)
- Youtube
- Pinterest

©2015-2016 Nader Ale Ebrahim
The Altmetric score provides an indicator of the attention surrounding a research output. It represents a weighted approximation of all the attention we’ve picked up for a research output and is calculated according to three facets:

<table>
<thead>
<tr>
<th>Volume</th>
<th>Sources</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>The score for an article rises as more people mention it.</td>
<td>Each source category contributes a different base amount to the final score.</td>
<td>How often the author of each mention talks about scholarly articles influences the contribution of the mention.</td>
</tr>
</tbody>
</table>

Read more about the score here: [altmetric.com/blog/scoreanddonut/](http://altmetric.com/blog/scoreanddonut/)
What can the data tell you?

- What type of attention is this research receiving?
- Where has this article received the most traction?
- Which countries are engaging most with the content?
- Has this article influenced policy, spurred new research, or engaged a new audience?
- Are reactions to this article positive or negative?
Remember that the numbers don’t tell you...

- Quality of the paper
- Quality of the researchers
- Whole story
Part 3: Altmetrics Use Cases
Uncover conversations about your research


Overview of attention for article published in The Lancet (British Edition), May 2014

Set up email alerts for your output in the Summary tab

©2015-2016 Nader Ale Ebrahim
Cochrane Library paper investigated use of probiotics to treat eczema: There is not enough evidence to recommend using probiotics for the treatment of eczema.

The paper has a relatively low score of attention but received mentions across policy documents and Wikipedia:

- **Royal College of Paediatrics and Child Health** - *Allergy Care Pathways for Children*: core competency for health professionals treating children with eczema.
The University of Pittsburgh has embedded PlumX widgets in their [D-Scholarship](https://d-scholarship.pitt.edu) institutional repository. You can see metrics across their institution at [Plu.mX/Pitt](https://plumx.pitt.edu). They have also built profiles for researchers across a variety of disciplines. Some sample profiles:

Peter Brusilovsky
Rebecca Crowley
Michael Pinsky

©2015-2016 Nader Ale Ebrahim
A Comparison between Two Main Academic Literature Collections: Web of Science and Scopus Databases

The Altmetric score is one measure of the quality and quantity of online attention that this article has received. You can read about how Altmetric scores are calculated here.

This article scored 3.75

The context below was calculated when this article was last mentioned on 13th May 2013

Compared to all articles in Asian Social Science

So far Altmetric has tracked 20 articles from this journal. They typically receive a little less attention than average, with a mean score of 1.0 vs the global average of 4.2. This article scored the same or higher as 28 of them. It's actually the highest scoring article in this journal that we've seen so far.

All articles of a similar age

Older articles will score higher simply because they've had more time to accumulate mentions. To account for age we can compare this score to the 73,149 tracked articles that were published within six weeks on either side of this one in any journal. This article has done well, scoring higher than 78% of its contemporaries.

All articles

More generally, Altmetric has tracked 1,645,693 articles across all journals so far. Compared to these this article has done well and is in the 79th percentile. It's in the top 25% of all articles ever tracked by Altmetric.
Genome Engineering of *Drosophila* with the CRISPR RNA-Guided Cas9 Nuclease

Scott J. Gratz*, Alexander M. Cummings†, Jennifer N. Nguyen‡, Danielle C. Hamm§, Laura K. Donohue¶, Melissa M. Harrison*,**, Jill Wildonger* and Kate M. O'Connor-Giles**,***

**Author Affiliations**

*Corresponding authors: 6204B Biochemical Sciences Bldg., 440 Henry Mall, Madison WI 53706. E-mail: mhayashii@wisc.edu, 2204B Biochemical Sciences Bldg., 440 Henry Mall, Madison, WI 53706. E-mail: wildonger@wisc.edu. 2270 Robert M. Bock Labs, 1525 Linden Dr., Madison, WI 53706. E-mail: oconnorgiles@wisc.edu

**Abstract**

We have adapted a bacterial CRISPR RNA/Cas9 system to precisely engineer the *Drosophila* genome and report that Cas9-mediated genomic modifications are efficiently transmitted through the germline. This RNA-guided Cas9 system can be rapidly programmed to generate targeted alleles for probing gene function in *Drosophila*.

Received May 9, 2013. Accepted May 23, 2013.

Copyright © 2013 by the Genetics Society of America
"The Golden Age? What the 100 Most Cited Articles in Terrorism Studies Tell Us"
Teaching Elementary Students Who Speak Black English Vernacular to Write in Standard English: Effects of Dialect Transformation Practice

Howard Fogel, Linnea C. Ehri
CUNY Graduate Center

Abstract

Although nonstandard dialects of English are legitimate forms of spoken language used by many Americans, students in U.S. schools must acquire writing competence using Standard English (SE). Participants in this study were 3rd- and 4th-grade African-American students who exhibited Black English Vernacular (BEV) features in their written work. Six syntactic features differing in BEV and SE were targeted. Students received one of three treatments to increase their use of the SE features in their writing: (1) exposure to SE features in stories; (2) story exposure plus explanation of SE rules; and (3) story exposure, SE rule instruction, and guided practice transforming sentences from BEV to SE features. The third treatment proved most effective in enabling students to translate BEV sentences into SE forms and to employ the targeted SE features in their free writing. Results indicate that having students practice translation constant clauses that bridge their own writing and providing corrective feedback are
Discover popular new content to read

 Shermaine Waugh @ok_shermaine

Neat study found via @altmetric on the use of personas in academic libraries. Go user research! crl.acrl.org/cgi/content/lo... #citylis

4:47 AM - 10 Nov 2014

©2015-2016 Nader Ale Ebrahim
Use in grant applications and funder reporting
Find potential collaborators
Embed badges on your website or CV

LSE Research Online is experimenting with all article level metrics as a way to measure the wider usage of research. Taking risky opportunities improves teenagers' use of social media privacy and self-expression.

Score in context
Puts article in the top 5% of all articles ranked by attention

Twitter Facebook Instagram Score

Wilen Bauer @iwilenn 188 followers
Marina Nushalev @MarinaNushalev http://itp.suN urmon

Badge type: Medium donut
Condensed style?

Popover: Right
Details: None

Hide no mentions?

Hide if score less than

DOI: 10.1038/nature.2014.14583

The HTML to copy into your page for the above embed:

```html
<div data-badge-popover="right" data-badge-type="medium-donut" data-doi="10.1038/nature.2014.14583" data-hide-no-mentions="true" class="altmetric-embed"></div>
```

©2015-2016 Nader Ale Ebrahim
How are institutions using Altmetric?

Researchers
- Track attention to your research immediately
- Uncover (unknown) conversations about your research
- Use in grant applications & funder reporting

Librarians
- Support researchers in all of the above
- Enhance department liaison activities
- Encourage staff to deposit in your research information system

Research Administrators
- Integrate data into your existing performance reports
- Identify key impacts across institution (i.e. policy docs)
- Benchmarking (thoughtfully!)

Marketing Comms.
- Identify research to promote
- Evaluate success of promotion activities
- Identify key researchers

©2015-2016 Nader Ale Ebrahim
Questions?

E-mail: aleebrahim@um.edu.my

Twitter: @aleebrahim

www.researcherid.com/rid/C-2414-2009
http://scholar.google.com/citations

Nader Ale Ebrahim, PhD

Research Support Unit
Centre for Research Services
Research Management & Innovation Complex
University of Malaya, Kuala Lumpur, Malaysia
www.researcherid.com/rid/C-2414-2009
http://scholar.google.com/citations

©2015-2016  Nader Ale Ebrahim


9. Jaslyn Tan, (2014), Maximizing the impact of your research paper, WILEY


©2015-2016 Nader Ale Ebrahim