

# Awareness, reality and incorporation of responsible use of metrics

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BIBLIOMETRICS AND RESEARCH IMPACT COMMUNITY CONFERENCE

# BRIC 2019

# Three Frameworks of Responsible Metrics

❖ San Francisco Declaration on Research Assessment: DORA (2012)  
<https://sfdora.org/>

❖ Leiden Manifesto (2015)  
<http://www.leidenmanifesto.org/>

❖ Metric Tide (2015)  
<https://responsiblemetrics.org/the-metric-tide/>

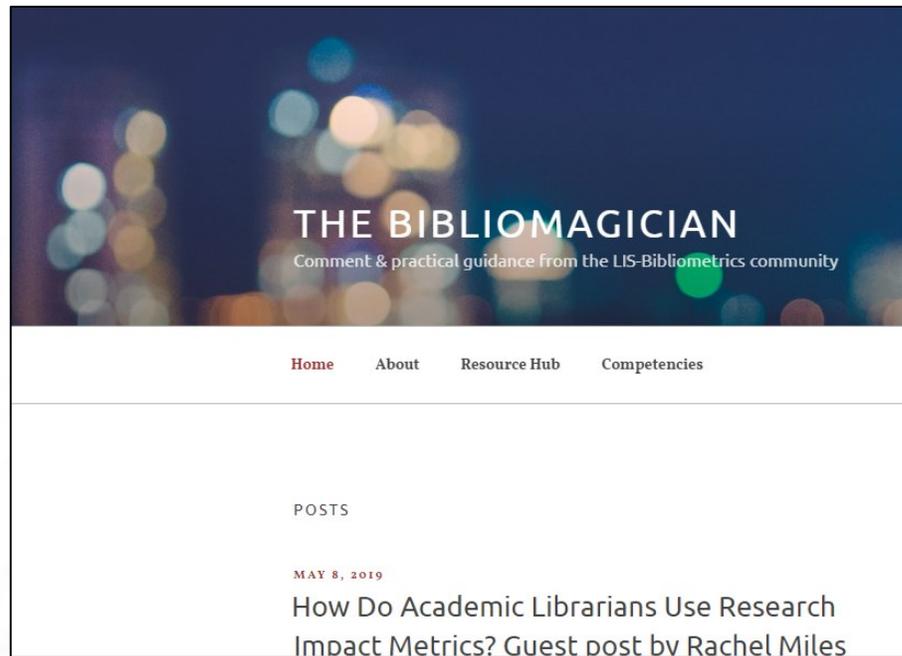
# Guidelines/Recommendations

- Quantitative evaluation should support & not replace qualitative, expert assessment
- Inappropriate indicators create perverse incentives
- Keep data collection and analytical processes open and transparent, so those being evaluated can test and verify the results
- Suite of indicators is preferred – reduces gaming

# Guidelines/Recommendations

- One size does not fit all: different fields/disciplines have different publication & citation practices
- Encourage responsible authorship practices & provision of information about specific contributions of authors
- Cite primary literature in favour of reviews in order to give credit to author(s) who first reported a finding
- Value all research outputs: articles, data, policy, code, etc.

# Sites for Discussion



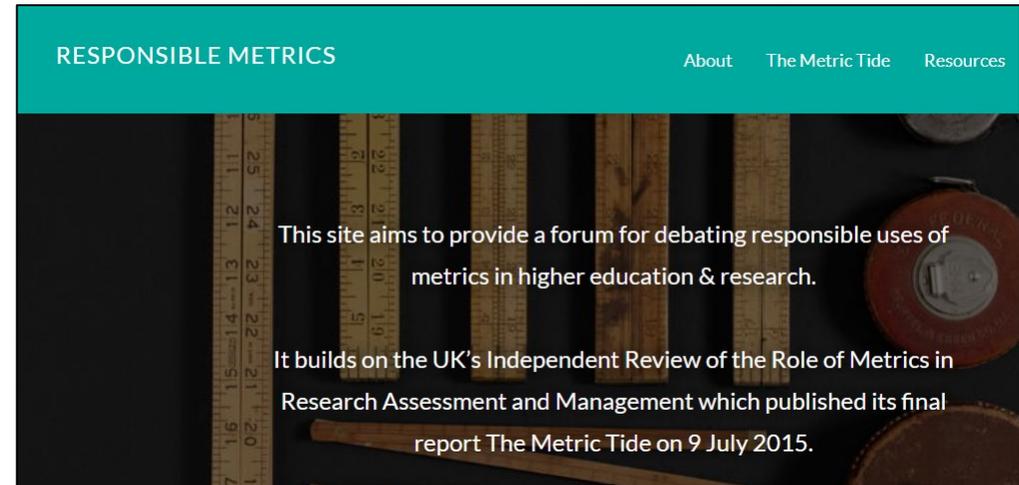
**THE BIBLIOMAGICIAN**  
Comment & practical guidance from the LIS-Bibliometrics community

[Home](#) [About](#) [Resource Hub](#) [Competencies](#)

POSTS

MAY 8, 2019

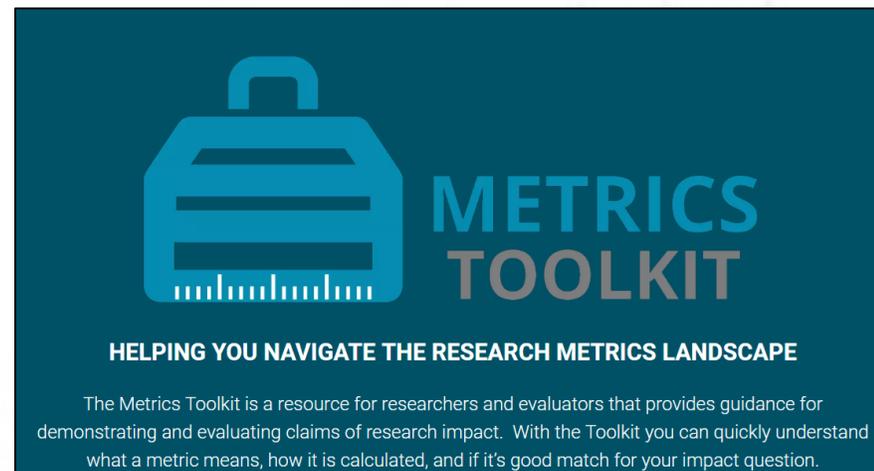
How Do Academic Librarians Use Research Impact Metrics? Guest post by Rachel Miles



RESPONSIBLE METRICS [About](#) [The Metric Tide](#) [Resources](#)

This site aims to provide a forum for debating responsible uses of metrics in higher education & research.

It builds on the UK's Independent Review of the Role of Metrics in Research Assessment and Management which published its final report *The Metric Tide* on 9 July 2015.



 **METRICS TOOLKIT**

**HELPING YOU NAVIGATE THE RESEARCH METRICS LANDSCAPE**

The Metrics Toolkit is a resource for researchers and evaluators that provides guidance for demonstrating and evaluating claims of research impact. With the Toolkit you can quickly understand what a metric means, how it is calculated, and if it's good match for your impact question.



[Home](#) > [News](#) > [CARL Joins Thousands Calling for Improvements to Research Assessment](#)

## CARL Joins Thousands Calling for Improvements to Research Assessment

**April 3, 2018.** – The Canadian Association of Research Libraries (CARL) has signed on to the San Francisco Declaration on Research Assessment (DORA), which recommends changes in practices by the research community regarding the use of research metrics.

Research metrics (or bibliometrics) are a variety of techniques that provide a statistical analysis of publications' use, and which are regularly referred to by the various stakeholders in the scholarly research community for assessing research impact.

## ● NEWS

May 9, 2019

**Announcing CARL's Visiting Program Officer and Working Group for Equity, Diversity, and Inclusion**

May 8, 2019

**Call for Applications – CARL Research Grants for Equity, Diversity, and Inclusion**

# DORA Signatories



## DORA Signers

Organizations and individuals

Consortium of National and University Libraries  
(CONUL)

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Canadian Association of Research Libraries /  
Association des bibliothèques de recherche du  
Canada

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Research Libraries UK (RLUK)

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Association of Research Libraries (ARL)

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LIBER, the Association of European Research  
Libraries

“Libraries are an important hub of bibliometric practices as well as indispensable executors and drivers of responsible research assessments.”

Coombs, S.K., & Peters, I. (2017). The Leiden Manifesto Under Review: What Libraries Can Learn From It. *Digital Library Perspectives* Vol. 33 Issue: 4, pp.324-338, <https://doi.org/10.1108/DLP-01-2017-0004>



# **The University of Alberta and responsible metrics.**

# Some Context





**Why is this important?**

**Institutional governance at the University of  
Alberta is a long and complicated process.  
(and I'm not sure why this surprises me)**

# But until the bigwigs work their magic, what are some possible ways we can act responsibly in the work we do?

NO	YES
JIF	Aggregate level data for faculties/departments
Researcher level data, unless appropriate	More/better targeted education
No comparative data on individuals	Push for explicit criteria be provided for internal grants
Of course, not compare fields of research	Provide a multiple number of indicators
	Be transparent about methodologies we use
	Make sure Faculty/Department members know that an assessment is taking place and allow them to double check data
	More conversations

# Places where I foresee some problems

*The need to eliminate the use of journal-based metrics, such as Journal Impact Factors, in funding, appointment, and promotion considerations.*

*Quantitative evaluation should support qualitative, expert assessment.*

*Measure performance against the research missions of the institution, group or researcher*

*Avoid misplaced concreteness and false precision*

# And what would this actually mean?

- Shared governance model
- Contract?
- Behavior change is difficult

# A new look at the Journal Impact Factor: ISI's *Profiles*, not *metrics* report

Marisa Ruccolo, MLIS  
16.05.2019

BRIC Conference, Université Laval

**“Some question whether journals, as we know them, will continue to exist or whether they will be displaced by Open Access or other forms of depository publication [...]. In that event, “journal evaluation” per say may be no more, but don’t hold your breath. Here come research fronts, co-citation clusters, semantic categories, page ranks, and other forms of classification, which is what conventional journals are inherently about.”**

**Dr. Eugene Garfield, 2007**

*Whither Journals and Impact Factors? Forward – Impact Factor of Scientific and Scholarly Journals: Its use and misuse in research evaluation. *Scientometrics Guidebooks Series*, Vol:2*

# Web of Science

Trust the difference

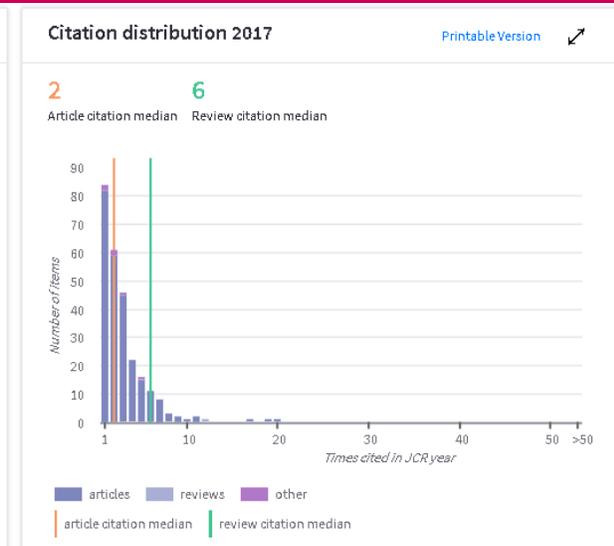
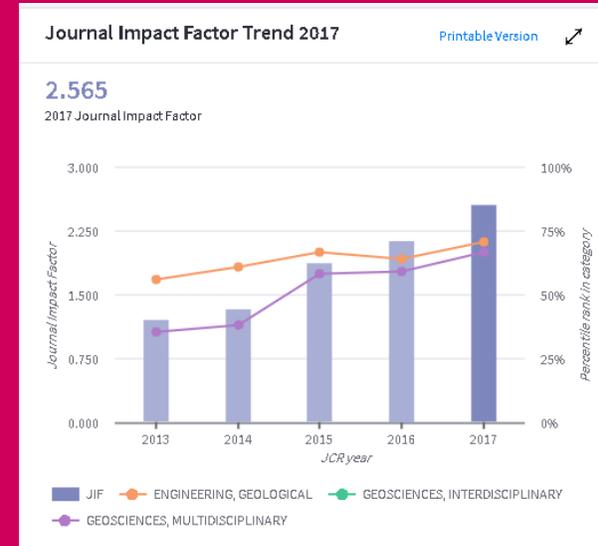
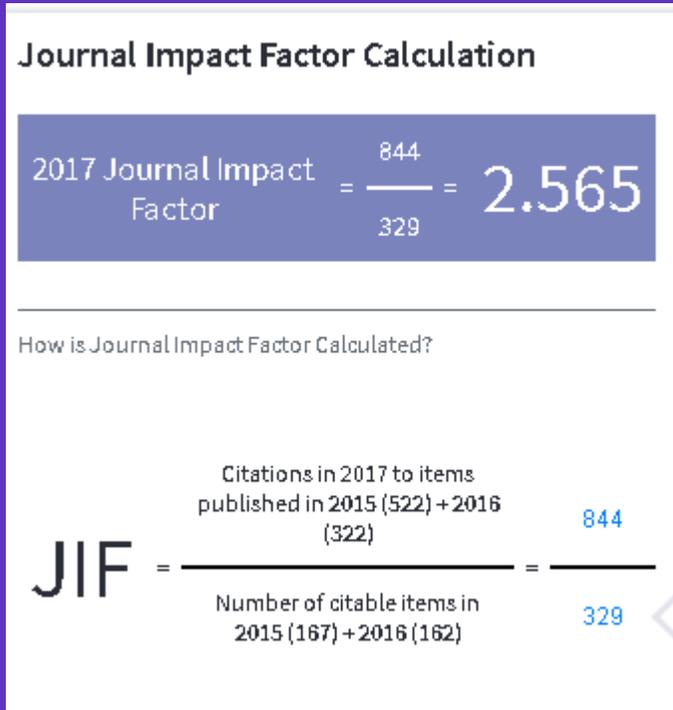
- **Lost information** when data is squeezed into a single, unique and simplified metric
- Research administrators request such simplified metrics, **disregarding counter-arguments** offered by informed analysts
- The innate appeal of **summarized statistics and unique indicators** such as the Journal Impact Factor used to evaluate human researchers or individual publications, and the h-index
- We need to educate to **steer away from one-dimensional rankings**, an unfavourable stance with institutional missions
- **For every misused metric, there is a better alternative**

# Web of Science

Trust the difference

Using Journal Impact Factor scores as a measure (or proxy) of performance for individual papers or authors represents **IMPROPER USE** of the metric in research evaluation.

# Journals: The Journal Impact Factor versus Journal Citation Reports distributions



A single metric only shows you a past reference, without context.  
The JIF is a statistic summary for a complete journal.

# Journals: The Journal Impact Factor versus Journal Citation Reports distributions

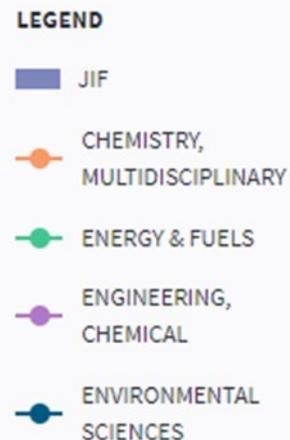
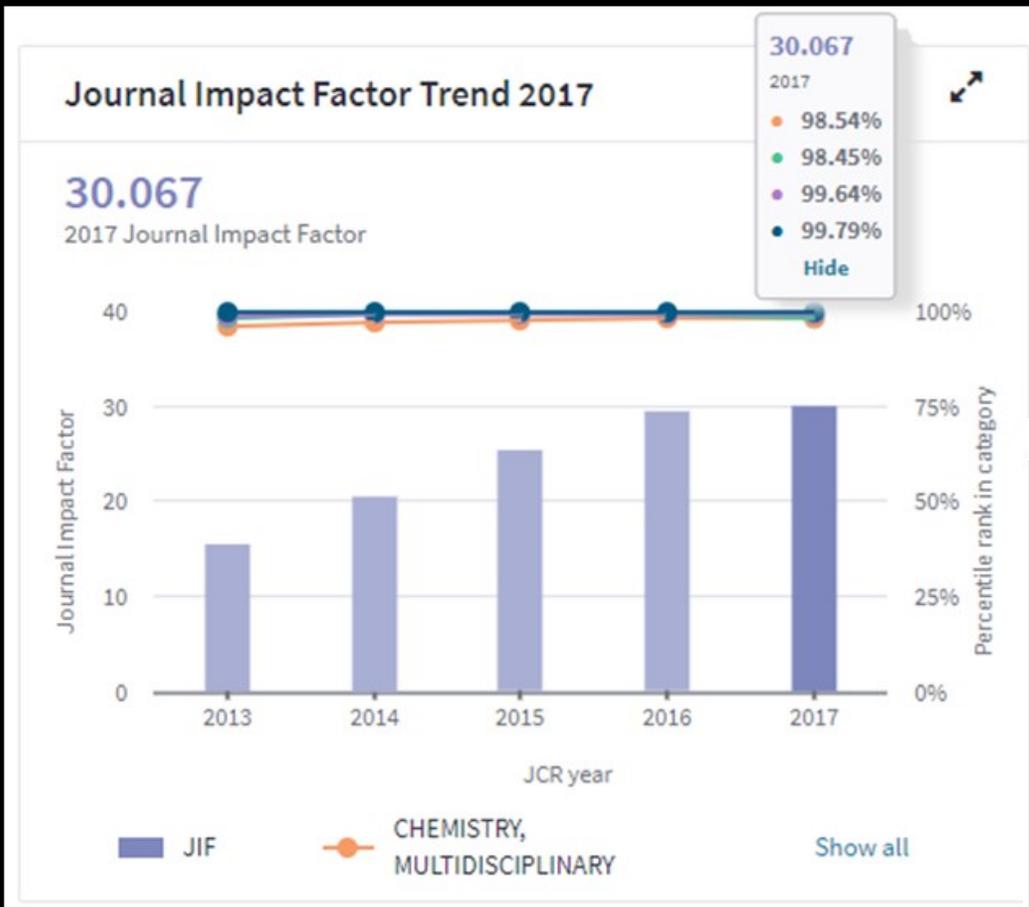
## The JIF does NOT give information on:

- The content within the journal, especially not at a single publication level
- Even less, does it give research impact information on a human being (J in JCR = Journal)
- JCR offers much more than the JIF
  - Immediacy Index
  - Eigenfactor Score
  - The 5-year JIF
  - Journal Source Data
  - Cited & Citing Journal Data
  - Journal relationships
  - Historical JIFs

## The JCR Reports distribution gives you:

- The median (orange line) : Demonstrates the number of the papers in the denominator were cited fewer and more than « x » number of times
- The median (green line): Demonstrates the same, for reviews
- Other figures such as:
  - Contributions by country & region
  - Contributions by organizations

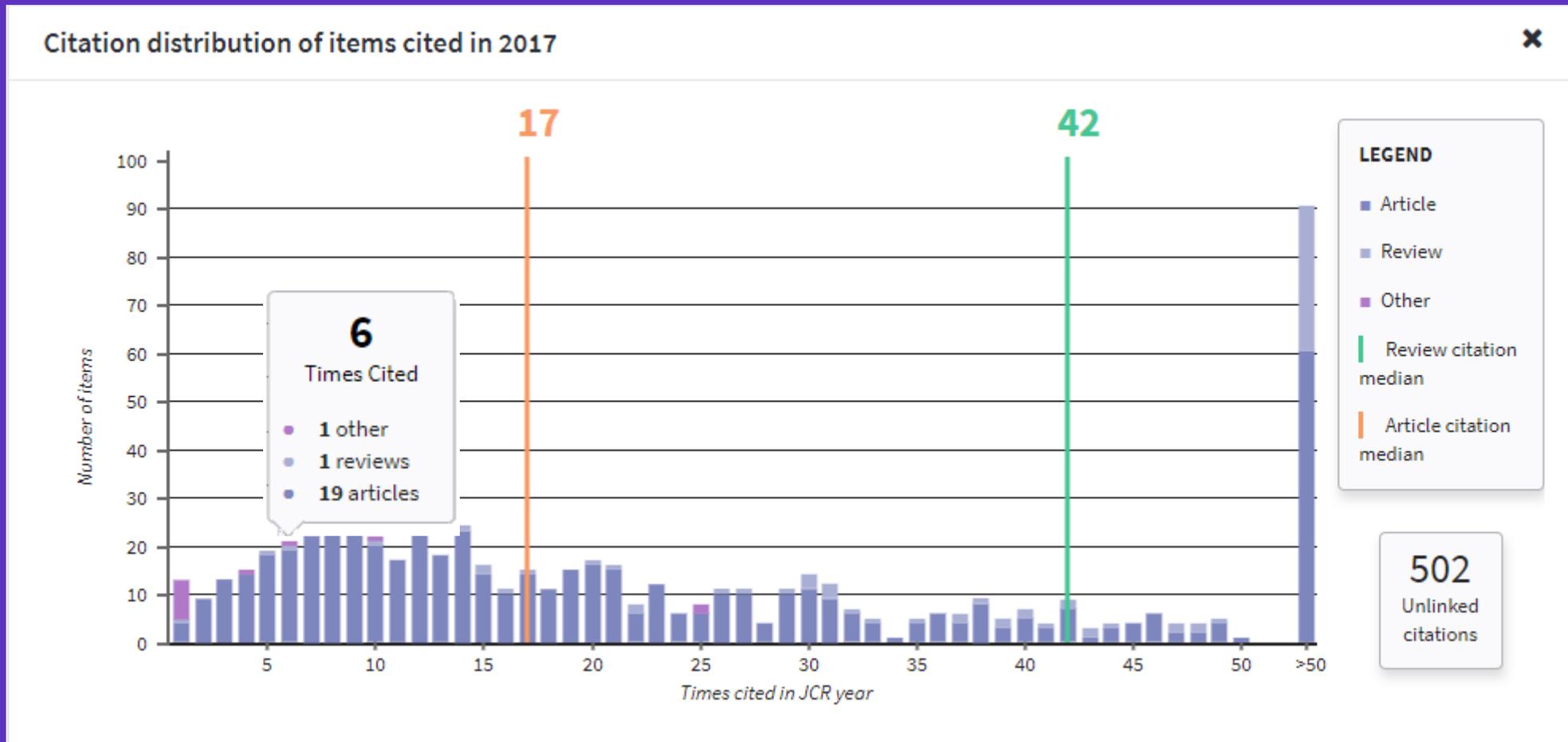
# Impact Factor Trend Graph



The Impact Factor in the context of its performance over time helps determine if journal's influence in the literature is growing, declining, or remaining stable.

# Histogram: Overview

Each bar on the graph represents the number of citable items in the journal that have accrued a particular number of citations in 2017. All graphs display 1-50 citations, plus one bar for papers with more than 50 citations.



# Positive Market Feedback



**Stephen Curry** @Stephen\_Curry · Jun 26

Pleased to see that Clarivate now provides the citation distribution for every journal in the JCR. Hope that many more journals will now publish these! Key to showing how citation performance of papers varies within every journal ([biorxiv.org/content/early/...](https://www.biorxiv.org/content/early/...))

**Clarivate Analytics** @clarivate

Every #journal has a story to tell. @Clarivate reveals the world's most influential journals in the 2018 #JournalCitationReports, created using more than 90M data points in @WebofScience: [bit.ly/ClarivateJCR1](https://bit.ly/ClarivateJCR1)



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**Responsible Metrics** @ResMetrics · Jun 27

With great metrics comes great responsibility: good piece by @JAdams\_Research. Excellent to see @clarivate releasing citation distribution data alongside journal impact factors



With great metrics comes great responsibility  
[timeshighereducation.com](https://www.timeshighereducation.com)



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# Profiles, not metrics.

isi | Institute for  
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Information

## The Plan S footprint: Implications for the scholarly publishing landscape

Nandita Quaderi, James Hardcastle,  
Christos Petrou and Martin Szomszor

April 2019

Institute for  
Scientific  
Information

## Navigating the Structure of Research on Sustainable Development Goals

Masafumi Nakamura, David Pendlebury,  
Joshua Schnell, and Martin Szomszor

# Thank you

Marisa Ruccolo, MLIS  
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[clarivate.com/products/webofscience](https://clarivate.com/products/webofscience)

# Questions & Discussion

The background of the slide is a blurred, high-angle photograph of a modern building's interior. It shows a staircase with a glass railing on the right side, leading down. The floor is made of light-colored tiles or wood. Large windows are visible on the right, letting in bright light. The overall aesthetic is clean and architectural.



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Image by Maklay62 from Pixabay