RESEARCH ON RESEARCH INSTITUTE

The changing role of funders in responsible research assessment (RRA): progress, obstacles & the way ahead

ISI-BMBF impact conference, 11 May 2021

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http://www.researchonresearch.org/

What I'll aim to cover:

- From responsible metrics to responsible research assessment
- Momentum, movers and shapers
- Experiments in responsible assessment: some interim results
- Global Research Council: autumn 2020 survey
- Where next? Three priorities

From responsible metrics….

DORA eua EUROPEAN UNIVERSITY ASSOCIATION SPARC Europe

CASE STUDY REPORT

Reimagining Academic Career Assessment: Stories of innovation and change

Bregt Saenen (EUA), Anna Hatch (DORA), Stephen Curry (DORA), Vanessa Proudman (SPARC Europe) and Ashley Lakoduk (DORA)

January 2021

eua EUROPEAN UNIVERSITY ASSOCIATION SCIENCE EUROPE

The European University Association and Science Europe Join Efforts to Improve Scholarly Research Assessment Methodologies

14 May 2019

Evaluating research and assessing researchers is fundamental to the research enterprise and core to the activities of research funders and research performing organisations, as well as universities. The European University Association (EUA) and Science Europe are committed to building a strong dialogue between their members, who share the responsibility of developing and implementing more accurate, open, transparent and responsible approaches, that better reflect the evolution of research activity in the digital era.

Today, the outcomes of scholarly research are often measured through methods based on quantitative, albeit approximate, indicators such as the journal impact factor. There is a need to move away from reductionist ways of assessing research, as well as to establish systems that better assess research potential. Universities, research funders and research performing organisations are well-placed to explore new and improved research assessment approaches, while also being indispensable in turning these innovations into systemic reforms.

EUA and Science Europe are committed to working together on building a strong dialogue between their members, with a view to:

- support necessary changes for a better balance between qualitative and quantitative research assessment approaches, aiming at evaluating the merits of scholarly research. Furthermore, novel criteria and methods need to be developed towards a fairer and more transparent assessment of research, researchers and research teams, conducive to selecting excellent proposals and researchers.
- recognise the diversity of research outputs and other relevant academic activities and their value in a manner that is appropriate to each research field and that challenges the overreliance on journal-based metrics.
- consider a broad range of criteria to reward and incentivise research quality as the fundamental principle of scholarly research, and ascertain assessment processes and methods that accurately reflect the vast dimensions of research quality and credit all scientific contributions appropriately.

EUA and Science Europe will launch activities to further engage their members in improving and strengthening their research assessment practices. Building on these actions, both associations commit to maintaining a continuous dialogue and explore opportunities for joint actions, with a view to promoting strong synergies between the rewards and incentives structures of research funders and research performing organisations, as well as universities.

RoRI RESEARCH ON RESEARCH INSTITUTE

RoRI Working Paper No.3

The changing role of funders in responsible research assessment:

progress, obstacles and the way ahead

Stephen Curry, Sarah de Rijcke, Anna Hatch, Dorsamy (Gansen) Pillay, Inge van der Weijden and James Wilsdon

November 2020

Produced in partnership with:

GLOBAL RESEARCH COUNCIL DORA UK Research and Innovation NRF National Research Foundation

…to responsible research assessment

Defining RRA

Responsible research assessment (RRA) is an umbrella term for approaches to assessment which incentivise, reflect and reward the plural characteristics of high-quality research, in support of diverse and inclusive research cultures.

RRA draws on broader frameworks for responsible research and innovation (RRI), and applies these to the development and application of evaluation, assessment and review processes.

While RRI is commonly used as a broad scaffold for the governance of research, and notions of 'responsible metrics' can be applied at a micro level to indicators themselves, the idea of RRA encourages funders, research institutions, publishers and others to focus attention on the fundamental aspects—methodologies, systems and cultures—of research assessment.

A moment of opportunity?

Concern has intensified over several long-standing problems linked to research assessment:

- the **misapplication of narrow criteria and indicators of research quality or impact**, in ways that distort incentives, create unsustainable pressures on researchers, and exacerbate problems with research integrity & reproducibility.

- this narrowing of criteria and indicators has **reduced the diversity of research missions and purposes**, leading institutions and researchers to adopt similar strategic priorities, or to focus on lower-risk, incremental work.

- **systemic biases against those who do not meet—or choose not to prioritise—narrow criteria and indicators** of quality or impact, have reduced the diversity, vitality and representative legitimacy of the research community.

- a **diversion of policy & managerial attention to things that can be measured**, at the expense of less tangible or quantifiable qualities, impacts, assets and values – a trend exacerbated by flawed university league tables.

Fifteen movers and shapers

DORA

science in transition

HuMetricsHSS
HUMANE METRICS INITIATIVE

inorms

SCIENCE GRANTING COUNCILS INITIATIVE SGCI IOSRS INITIATIVE DES ORGANISMES SUBVENTIONNAIRES DE LA RECHERCHE SCIENTIFIQUE

GLOBAL YOUNG ACADEMY

Helsinki Initiative on Multilingualism

Hi!

FOLEC Latin American Forum for Research Assessment
CLACSO

SCIENCE EUROPE
Shaping the future of research

eua EUROPEAN UNIVERSITY ASSOCIATION

wellcome

CHEERFUL WHISTLING PERMITTED

Experiments in responsible assessment: interim results

- Cosmetic appropriation
- Calibrating the machine
- Can openers
- Advocacy coalitions
- Institutional culture change
- System change..?

RoRI RESEARCH ON RESEARCH INSTITUTE

RoRI Working Paper No.3

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progress, obstacles and the way ahead

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GLOBAL RESEARCH COUNCIL · DORA · UK Research and Innovation · NRF National Research Foundation

Cosmetic appropriation?

Calibrating the machine

Next-generation metrics:

Responsible metrics and evaluation for open science

RECOMMENDATIONS

#1: Ahead of the launch of its ninth research framework programme (FP9), the EC should provide clear guidelines for the responsible use of metrics in support of open science.

#2: The EC should encourage the development of new indicators, and assess the suitability of existing ones, to measure and support the development of open science.

#3: Before introducing new metrics into evaluation criteria, the EC needs to assess the likely benefits and consequences as part of a programme of 'meta-research'.

#4: The adoption and implementation of open science principles and practices should be recognised and rewarded through the European research system

#5: The EC should highlight how the inappropriate use of indicators (whether conventional or altmetrics or next generation metrics) can impede progress towards open science.

##10: The EC should identify mechanisms for promoting best practices, frameworks and standards for responsible use of metrics in support of open science

FUTURE DIREC

cación / Comunicados de prensa / Inaugura el Conacyt taller Rethinking
a el Conacyt taller Rethinkin
on
sibilizar las diferentes acciones y procesos que se realizan para contar c
ca en nuestro país
Ciudad
asa de la Universidad de California como sede, el Consejo Nacional de Ciencia
ntific Evaluation, el cual tiene como objetivo visibilizar las diferentes accion
funcionamiento de evaluación científica en nuestro país.
Casa de la Universidad de California en México

HA Webinar
sive exercise is underway to formulate the 4th Medium-term Goals and Plans
tions and inter-university research institute corporations in Japan. This exerc
ing appropriate assessment indicators that can be incorporated within new
uation Subcommittee of the Science Council of Japan, however, has recently
s fresh questions about the use of metrics, especially for determining proce
concerns about metrics, assessments and goal setting have understandably
ous issues linked to research evaluation.
d Social Sciences Research Promotion Forum and the various meetings orga
Network for Social Sciences, Humanities and Arts (JINSHA), which have been
d in incubating discussions on research evaluation issues in the social scienc
e "Responsible Research Assessment (RRA)" is one of the key ideas that the n
rehensive concept that requires all stakeholders to review the assessment ex
2021, the JINSHA meetings will focus on this RRA to deepen its understandin
ous discussions on evaluation.
this webinar aims to discuss the role of RRA in the formulation of goal setting
tutions. In particular, we will focus on debating how and when metrics can be
activities and guiding management outcomes. This much needed conversat
ill be initiated by two talks that will be delivered by overseas speakers and w
s by local speakers.
Responsible Research Assessm
Discussing the role of RRA in Universi
Research Institutions

News
Topics
Service
Organis
We Scientists Shape Science
Activities
Beyond impact factor conference 2
Conference 2018 «Beyond impa
h-Index and university rankings
Image: Valérie Chételat
The last few decades saw an unpreceder
number of scientists and scientific institu
limited resources in terms of employmen
research funding. The ambition to alloca
to the best scientists and science favour
of quantitative metrics to assess the scie
sheer volume of research output. Impact
related to journals and publications as w
institutions are the best-known such too
Inadvertently, however, these measurements potentially undermine the q
because they incite violations of globally accepted research integrity prin
effects: scientific progress is hampered, the value of science to society ar
trusted and authoritative source is jeopardised, and public research fundi
effectively.
The international conference held on 21 November 2018 in Bern highlight
current metrics in capturing scientific quality, introduced elements of alte
approaches, and considered whether steps are necessary to maintain the
Swiss science landscape long-term.
Conference report "Beyond impact factor, h-Index and university ranki
Ellen Hazelkorn: Challenging science – The geopolitics of knowledge a
agenda

Tin openers

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Home > Policy and analysis > Research policy > Open science > The UK Forum for Responsible Research Metrics

The UK Forum for Responsible Research Metrics

A group of research funders, sector bodies, and infrastructure experts are working in partnership to promote the responsible use of research metrics.

The Forum for Responsible Research Metrics, chaired by Professor Max Lu (Vice-Chancellor at the University of Surrey, supports the responsible use of research metrics in higher education institutions and across the research community in the UK. The Forum have a programme of activities, including:

- Advice to the higher education funding bodies on quantitative indicators in the Research Excellence Framework (REF) 2021
- Advice on, and work to improve, the data infrastructure that underpins metric use
- Advocacy and leadership on the use of research metrics responsibly
- International engagement on the use of metrics in research and researcher assessment

The group was established in 2016, on the recommendation of the independent review on the role of metrics in research assessment and management. The review panel, chaired by Professor James Wilsdon, published their final report 'The Metric Tide' which identified 20 specific recommendations for further work and action by stakeholders across the UK research system.

Advice, reports, and meeting papers will be made available on this webpage in due course. Full membership can be found below.

inorms

Research Evaluation Working Group

What makes a fair and responsible university ranking?
Rating the rankings criteria
Version 2. August 2019

Introduction

The International Network of Research Management Societies (INORMS) established a two-year Research Evaluation Working Group (REWG) in 2018. It consists of representatives from a range of global member research management societies all seeking to work towards better, fairer and more meaningful research evaluation. One of the group's two areas of focus is the burgeoning influence of University Rankings on the behaviours of universities despite often poor methodological approaches and practices. The purpose of this work-package is to consider what we, as an international group of research managers, think the characteristics of a fair and responsible University Ranking should look like. The idea is to then 'turn the tables' on the rankings and rate them against our agreed criteria.

Responsible Research

Promoting responsible research at
The Federation of Finnish Learned Societies

Subject term search

Suomi Svenska English

Home » News » Support for more responsible research

Support for more responsible research

11.11.2020

Responsible Research

The Responsible Research website is a one-stop source for information and tools to support responsible research in Finland.

Advocacy coalitions

Institutional culture change

GHENT UNIVERSITY

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Home > News > Ghent University is changing course with a new career model for professorial staff

Ghent University is changing course with a new career model for professorial staff

(07-12-2018) Ghent University dares to think. Ghent University also dares to push its own boundaries.

On December 7 the Board of Governors has approved a new career and evaluation model for professorial staff (ZAP) as well as the accompanying regulations.

Rik Van de Walle, Rector: "This is a very important decision for Ghent University and its staff. With the new career and evaluation model, our aim is to restore the confidence of our professorial staff instead of excessively measuring and controlling their activities. The starting point is that those who perform well will be promoted - with a minimum of formal procedures for accountability and administrative inconvenience."

"A predominantly quantitative and output-driven academic evaluation process makes way for talent development and growth, prioritizing vision development and strategy – at the personal as well as the group level. Quality prevails over quantity. Needless to say, we are confident that the intrinsic motivation of each ZAP member ensures that no one needs a priori objectives in order to perform well in the core tasks of our university: education, research and institutional or social engagement."

Home Strategy and policy Initiatives Evaluation News Support for staff About Coronavirus

UCL Home » UCL Research » Strategy and policy » Bibliometrics at UCL » UCL Bibliometrics Policy

UCL Bibliometrics Policy

UCL Bibliometrics Policy

In early 2020, UCL's academic committee approved a policy on the responsible use of bibliometrics at UCL. Below you will find an introduction to the policy, and the policy's eleven principles

Introduction

Skip ahead to the policy's principles

Bibliometrics is a term describing the quantification of publications and their characteristics. It includes a range of approaches, such as the use of citation data to quantify the influence or impact of scholarly publications. When used in appropriate contexts, bibliometrics can provide valuable insights into aspects of research in some disciplines.

Policy Link

UCL's Bibliometrics Policy

Quick Links

- Bibliometrics at UCL (OVPR)
- Bibliometrics Training
- External Initiatives
- Help and Guidance
- Bibliometrics at UCL (Library)
- OVPR Strategy and Policy
- UCL Office for Open Science and Scholarship

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Reimagining academic assessment: stories of innovation and change

Case studies of universities and national consortia highlight key elements of institutional change to improve academic career assessment.

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Home > News > Academia in motion: a different form of recognition and reward

Academia in motion: a different form of recognition and reward

18 January 2021

A better balance between teaching and research duties, greater recognition of team performances and the elimination of simplistic assessment criteria. The 'Academia in Motion' paper published by the Leiden University Recognition and Rewards describes the main problems with recognition and rewards in academia and makes some recommendations.

With Academia in Motion, Leiden University has joined the national initiative for a new form of recognition and rewards in academia. This was sparked by worries at all universities about the heavy workload, the quality of assessment and the lack of transparency in career policy. The paper is the result of many discussions that the members of the steering group held at the faculties. Manon van der Heijden and Sara de Rijcke are the chairs of the steering group. Van der Heijden is Academic Director and a professor at the Institute for History. De Rijcke is Professor of Science and Evaluation Studies at the Centre for Science and Technology Studies. What do they hope to

System change?

NB. This slide is used with thanks to Stephen Curry, and is adapted from a paper on the intersections between DORA, open scholarship and equity https://sfdora.org/2020/08/18/the-intersections-between-dora-open-scholarship-and-equity/

Global Research Council Survey methodology

Online survey: 23 questions

Open from September-October 2020

Completed by 55 organisations / 46% response rate

	N	%
Africa and Middle-East *(Sub-Saharan Africa, North Africa & Middle East)*	10	18.2
Asia-Pacific	14	25.5
Americas	10	18.2
Europe	21	38.2
Total	*55*	*100*

Table 1: Respondents by geographical region

Endorsements of existing RRA Frameworks

Research Assessment Indicators

Figure 3: Research assessment indicators (to be) used by GRC participating organisations who responded to the survey (n=50, missing n=5)

Changes in the way research proposals are assessed

Priority 1: Continue to build international coalitions for responsible research assessment

Priority 2: Experiment, evaluate and amplify good practices

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PERSPECTIVE

Assessing scientists for hiring, promotion, and tenure

David Moher, Florian Naudet, Ioana A. Cristea, Frank Miedema, John P. A. Ioannidis, Steven N. Goodman

Version 2 Published: March 29, 2018 • https://doi.org/10.1371/journal.pbio.2004089

Article | Authors | Metrics | Comments | Related Content

Abstract
Introduction
Methods
Results
Supporting information
Acknowledgments
References

Reader Comments (2)
Media Coverage (3)
Figures

Abstract

Assessment of researchers is necessary for decisions of hiring, promotion, and tenure. A burgeoning number of scientific leaders believe the current system of faculty incentives and rewards is misaligned with the needs of society and disconnected from the evidence about the causes of the reproducibility crisis and suboptimal quality of the scientific publication record. To address this issue, particularly for the clinical and life sciences, we convened a 22-member expert panel workshop in Washington, DC, in January 2017. Twenty-two academic leaders, funders, and scientists participated in the meeting. As background for the meeting, we completed a selective literature review of 22 key documents critiquing the current incentive system. From each document, we extracted how the authors perceived the problems of assessing science and scientists, the unintended consequences of maintaining the status quo for assessing scientists, and details of their proposed solutions. The resulting table was used as a seed for participant discussion. This resulted in six principles for assessing scientists and

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Home / Annual Review of Statistics and Its Application / Volume 7, 2020 / Hardwicke

Calibrating the Scientific Ecosystem Through Meta-Research

Annual Review of Statistics and Its Application
Vol. 7:- (Volume publication date March 2020)
Review in Advance first posted online on November 1, 2019. [Changes may still occur before final publication.]
https://doi.org/10.1146/annurev-statistics-032219-041104

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Abstract

While some scientists study insects, molecules, brains, or clouds, other scientists study science itself. Meta-research, or research-on-research, is a burgeoning discipline that investigates efficiency, quality, and bias in the scientific ecosystem, topics that have become especially relevant amid widespread concerns about the credibility of the scientific literature. Meta-research may help calibrate the scientific ecosystem toward higher standards by providing empirical evidence that informs the iterative generation and refinement of reform initiatives. We introduce a translational framework that involves (*a*) identifying problems, (*b*) investigating problems, (*c*) developing solutions, and (*d*) evaluating solutions. In each of these areas, we review key meta-research endeavors and discuss several examples of prior and ongoing work. The scientific ecosystem is perpetually evolving; the discipline of meta-research presents an

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Reimagining academic assessment: stories of innovation and change

Case studies of universities and national consortia highlight key elements of institutional change to improve academic career assessment.

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Research on research gains steam

New metascience institute aims for larger studies

by Dalmeet Singh Chawla, special to C&EN

OCTOBER 1, 2019

In 2005, John Ioannidis, a professor of medicine at Stanford University, opened a can of worms. In a paper published in *PLOS Medicine*, he argued that most published scholarly literature is false (**DOI: 10.1371/journal.pmed.0020124**).

To date, Ioannidis's "landmark study" has attracted thousands of citations and helped solidify a whole field in its own right, says Jelte Wicherts, who studies research methodology at Tilburg University.

The use of scientific methodology to study science itself is called metascience. The discipline has become mainstream in recent years, tackling some of the thorniest problems science faces, including a lack of reproducibility of academic literature, biases in peer review, and the fair allocation of research funding. "Metascience is now a distinct species," although it has ancestors in medical science, psychology, and other disciplines, Wicherts says.

Credit: Courtesy of James Wilsdon

James Wilsdon, founding director of the Research on Research Institute

Ioannidis, who launched the **Meta-Research Innovation Center at Stanford (METRICS)** in 2014, however, is hesitant to frame metaresearch as a separate field. "In a way, every researcher is a metaresearcher, since the issues involved are at the core of how to do science and apply the scientific method and maximize the yield of reproducible and useful information," he says.

GRANTS

AI is selecting reviewers in China

The tool is already saving time for the country's major grant funding agency.

BY DAVID CYRANOSKI

China's largest funder of basic science is piloting an artificial intelligence (AI) tool that selects researchers to review grant applications, in an attempt to make the process more efficient, faster and fairer. Some researchers say the approach by the National Natural Science Foundation of China (NSFC) is world-leading, but others are sceptical about whether AI can improve the process.

Choosing researchers to peer review project proposals or publications is time-consuming and prone to bias. Several academic publishers are experimenting with AI tools to select reviewers and carry out other tasks. And a few funding agencies, including some in North America and Europe, have trialled simple AI systems, some of which match keywords in grant applications to those in publications of other scientists to identify potential reviewers.

The NSFC is building a more sophisticated system that will crawl online scientific-literature databases and scientists' personal

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Humanities & Social Sciences Communications

ARTICLE

https://doi.org/10.1057/s41599-020-00703-8 OPEN

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AI-assisted peer review

Alessandro Checco[1], Lorenzo Bracciale[2], Pierpaolo Loreti[2], Stephen Pinfield[1] & Giuseppe Bianchi[2]

The scientific literature peer review workflow is under strain because of the constant growth of submission volume. One response to this is to make initial screening of submissions less time intensive. Reducing screening and review time would save millions of working hours and potentially boost academic productivity. Many platforms have already started to use automated screening tools, to prevent plagiarism and failure to respect format requirements. Some tools even attempt to flag the quality of a study or summarise its content, to reduce reviewers' load. The recent advances in artificial intelligence (AI) create the potential for (semi) automated peer review systems, where potentially low-quality or controversial studies could be flagged, and reviewer-document matching could be performed in an automated manner. However, there are ethical concerns, which arise from such approaches, particularly associated with bias and the extent to which AI systems may replicate bias. Our main goal in this study is to discuss the potential, pitfalls, and uncertainties of the use of AI to approximate or assist human decisions in the quality assurance and peer-review process associated with research outputs. We design an AI tool and train it with 3300 papers from three conferences, together with their reviews evaluations. We then test the ability of the AI in predicting the review score of a new, unobserved manuscript, only using its textual content. We show that such techniques can reveal correlations between the decision process and other quality proxy measures, uncovering potential biases of the review process. Finally, we discuss the opportunities, but also the potential unintended consequences of these techniques in terms of algorithmic bias and ethical concerns.

Priority 3: RRA needs to anticipate and keep pace with new tools & technologies of measurement & evaluation

http://researchonresearch.org

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