University of St Andrews

Principles for the use of indicators in research assessment and management

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3.3	Amend review date, add link to new strategy	For approval	Jackie Proven, Head of Open Research, L&M	19/05/2023

Introduction

Research assessment is a long-standing and necessary activity to support research excellence and integrity throughout the research lifecycle: by hiring committees, by journal referees, by grant reviewers, by university managers, by research funders and by prospective students and staff. Expert judgement and peer review are well-embedded and trusted elements of the research and publication process. More recently, they have been joined by a variety of indicators (sometimes known as 'metrics'). Such indicators, whether quantitative or qualitative, can present an attractive shortcut for assessing research quality, but there are recognised pitfalls and unintended consequences that need to be avoided.

The University has therefore developed the following set of principles to guide the use of indicators for any form of research assessment or evaluation by central committees and services in support of strategic goals as well as by Schools/Departments and individual academics and managers. These principles form the framework to guide the responsible and informed use of indicators in a manner consistent with University values and the strategic ambitions for World-leading, Diverse and Digital St Andrews.

Our principles

***Expertise**: any use of indicators can only inform and not override expert judgement*

Expert judgement and peer review are a well embedded part of the research and publication process and remain the primary method for assessing research performance at the University. Any indicators used for assessment of research must be carefully chosen according to the purpose of the assessment, and can be used to inform decision-making and challenge preconceptions, but not to replace expert judgement.

Research should be assessed on its merits and not on the basis of where it is published or the medium of its publication. We acknowledge that where research is published may affect its visibility and therefore its citation rate, but we will not assume that this necessarily indicates high quality. We recognise that excellent research may be made public through a variety of channels.

***Diversity**: any use of indicators must take differences between disciplines and career stages, or related to equality and diversity, into account*

Disciplinary differences in research input, processes and outputs have to be taken into account when using indicators. Any biases must be explicitly acknowledged in analyses and indicators must be normalised by discipline, where relevant. It should be recognised that it is not always appropriate to use certain types of indicators.

When assessing individuals or small groups of researchers, any indicators used must be correctly interpreted to take into account any potential source of bias, including career stage, full-time equivalent status, gender, race or disability, and the value and impact of all types of research should be considered.

Research performance is multi-faceted and cannot be represented by a single indicator. For example, overall research performance should not be determined using a single figure such as the h-index.

***Data:** any use of indicators should be underpinned by data that is reliable, statistically valid, multi-faceted and its limitations understood*

Wherever possible, data sources should be clearly understood, accurate, up to date and have sufficient coverage for the purpose intended. Any limitations in data sources should be explicitly acknowledged. For example, false precision must be avoided, such as presenting a number calculated to several decimal places to avoid ties where the nature of the underlying data renders discriminating between such values pointless.

Those undertaking assessment using quantitative indicators should have basic statistical training and an understanding of the limitations of the data sources being used. In particular, those undertaking research assessment should understand the highly skewed nature of citations and its impact on both averages and the volatility of the data.

Integrity: *any use of indicators must abide by research integrity standards and follow the University's Principles of Good Research Conduct*

The University expects everyone involved in research assessment to behave with integrity, in accordance with the University's Principles of Good Research Conduct (Policy).

If indicators are shared this should be done with the appropriate ethical and legal safeguards, and only at an individual identifiable level in exceptional circumstances.

Transparency: *any use of indicators must be clearly understood by those being assessed, with the methodologies and data available where possible*

Assessment criteria and any data used should be transparent, with those being assessed given information on the method, data and reasons for the assessment. Those being assessed should also be given the opportunity to verify and correct the data related to their activity, where possible before the assessment is carried out. For example, if a School is assessing its publication portfolio, researchers should be given information on how publications are sourced (e.g. Web of Science, Scopus) and be able to see the publication and citation data included. They should also be given guidance on how to correct errors in the data in these external systems. Similarly, where possible, researchers should have access to their research grant data, supervision history or any other data source, used in any assessment and have a clear, simple route to query or correct the data.

Resources

The bibliometrics team provide expert advice and support on the responsible use of metrics and can help the University and Schools understand publication profiles using various tools.

Bibliometrics service and contact details: https://www.st-andrews.ac.uk/research/support/open-research/bibliometrics-service/

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3.0	First published version with all feedback from ORWG, RIIC and School consultation	Approved	Anna Clements	07/10/2019
3.1	Extended review date and change of owner	Approved	Jackie Proven	06/04/2022
3.2	Minor changes and to introduce bibliometrics service in resources.	Approved	Head of Open Research	07/06/2022
3.3	Amend review date, add link to new strategy	For approval	Jackie Proven	19/05/2023