

Policy statement on the Responsible Use of Bibliometrics

Version:	v1.00
Created:	June 2022
Authors:	Jenny Coombs, Alan Cope, Mandy Thomas, with input from the University-wide Bibliometrics Working Group
Originating Departments:	Research Services; Library & Learning Services
Approved by:	URIC and Academic Board
Date of approval:	12 October 2022
Review date:	June 2023
Status:	Final

Introduction

DMU is committed to academic excellence across the diverse contexts of its research. Evaluation of research is crucial to accessing research funding, accreditations, and to exercises such as the Research Excellence Framework. However, both internal and external drivers can sometimes result in this evaluation being carried out in an inappropriate way, in particular through the superficial use of bibliometrics. In order to clarify our position on this, DMU has signed up to the [San Francisco Declaration on Research Assessment \(SF DORA\)](#), as outlined in the University's Knowledge Creation Implementation Plan (2022). DMU's Statement on the Responsible Use of Bibliometrics is informed by SF DORA and the [Leiden Manifesto](#), and by our commitment to equality and diversity in all aspects of our activities.

This Policy Statement is deliberately broad and flexible to take account of the diversity of contexts and is not intended to provide a comprehensive set of rules. The purpose of this statement is to ensure that if bibliometrics are used in research evaluation they are used responsibly and in accordance with the principles set out below.

Background

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 and altmetrics 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.

However, bibliometrics are sometimes used uncritically, which can be problematic for researchers and research progress when used in inappropriate contexts. For example, some bibliometrics have been commandeered for purposes beyond their original design. The journal impact factor was developed to indicate average journal citations (over a defined time period) but is often used inappropriately as a proxy for the quality or research impact potential of individual articles within a journal. Further, research "excellence" and "quality" are abstract concepts that are difficult to measure directly but are often inferred from bibliometrics. In some discipline areas, research data is simply not captured in Bibliographic tools, meaning the raw data is incomplete and inaccurate, impacting on the validity of any bibliometric data produced.

Therefore, when applied in the wrong contexts, such as hiring, promotion, funding and redundancy decisions, irresponsible use of bibliometrics can incentivize undesirable behaviours, such as chasing publications in journals with high impact factors regardless of whether this is the most appropriate venue for publication or discouraging the use of open research approaches such as preprints or data sharing.

Superficial use of bibliometrics in research evaluations can also be misleading. Inaccurate evaluation of research can become unethical when bibliometrics take precedence over expert judgement, where the complexities and nuances of research or a researcher's profile cannot be quantified. Bibliometric data may be affected by a researcher's age and stage in their career, and by gaps in employment. This potentially disadvantages those most likely to have employment gaps, e.g. women and carers, as well as early career researchers.

The University's position

An inclusive, fair and supportive research environment is contingent upon a fair and measured approach to the use of bibliometrics and evaluation tools – to ensure that this is just one part of our understanding of the quality of our research. The University is committed to equality and diversity across all staff members and recognises that the injudicious use of bibliometrics would risk

undermining this commitment. DMU adheres to the evaluation of research and researchers based on their own merits, not the merits of bibliometrics.

In line with the San Francisco Declaration on Research Assessment and the Leiden Manifesto, DMU will observe the following principles and support individual researchers to adopt them in any usage of bibliometrics. These principles apply to all processes involving research or researcher evaluation, from recruitment and selection to promotion, funding and redundancy. This supports priorities 1 and 2 of the University's Knowledge Creation Implementation Plan (2022)

1. **Bibliometrics will only ever supplement rather than supplant qualitative, expert assessment, and assessment of individual research performance will be carried out on the portfolio of research.** (Leiden Manifesto Principle 1 and 6; SF DORA Principle 1 and 4)

While bibliometrics can sometimes be useful in challenging bias, they can sometimes also reflect and enhance bias. When assessing the research performance of individuals, or the quality of research outputs, bibliometric indicators should not be seen as a substitute for informed judgement and, should only be used to supplement rather than replace qualitative assessment. H-indices should never be used as a measure to compare researchers against each other, instead a portfolio approach based on both quantitative and qualitative assessment should be used in assessing research performance. Journal Impact Factors, or other journal ranking systems should not be used as a surrogate measure for the quality of individual research articles. DMU recognises that the scholarly content of a research publication is much more important than publication metrics or the identity of the journal in which it was published.

2. **Any assessment of research must recognise the disciplinary context** (Leiden Manifesto Principle 6; SF DORA Principle 5)

Different disciplines have different publication practices and citation norms, as well as different perspectives on what constitutes research quality. All research outputs must be considered on their own merits, in an appropriate context that reflects the needs and diversity of research fields and outcomes. In fields where bibliometrics are not appropriate nor meaningful, DMU will not impose their use. Where bibliometrics are deemed to be a relevant way of evaluating research performance, those used should be the most discipline-appropriate. Furthermore, in recognition of the fact that most citation counting tools are inherently biased towards English-language publications, the university will seek to ensure that work produced in languages other than English is not viewed disadvantageously.

3. **Performance will be measured against pre-defined research missions, either at individual researcher, group or institutional level** (Leiden Manifesto Principle 2; SF DORA Principle 5)

Any bibliometrics used to evaluate performance should relate to pre-defined research missions. The University strategy drives our ambition to deliver research of the highest quality, impact and visibility, and indicators around research outputs are helpful in monitoring progress against our key research themes/priority areas. This should include the value and impact of all forms of research outputs, as well as research publications. Working within an agreed framework that accommodates variation in missions and the suitability of bibliometrics to the research area, goals will be set by each theme/research institute. Individuals will be supported to set their research plans in line with university aspirations and relevant review processes. A broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice, should be considered.

4. **Data collection and the analytical use of bibliometrics will be open and transparent** (Leiden Manifesto Principles 4 & 5)

It is recognised that data can be distorted and simple indicators may not reflect the complexity of the research process. Where used, bibliometric indicators should be selected for their reliability (i.e. accuracy, quality, transparency and coverage). Any limitations inherent in data sources must be explicitly acknowledged. Furthermore, thematic priority areas/institutes will be able to select the bibliometrics used to support evaluation of their performance at the individual and collective levels. Bibliometrics selected should be used consistently across all areas of research performance monitoring, and details of bibliometrics should be openly available to all researchers.

5. **DMU recognizes the systemic effects of assessment and indicators** (Leiden Manifesto Principle 9)

It is accepted that any measurements can, in themselves, affect the system they are used to evaluate through the inevitable incentives they establish. To minimize such effects, DMU will regularly review bibliometrics used, in the light of our research ambitions, consider any unintended consequences of those indicators and update them to ensure they incentivise appropriate behaviours. To mitigate negative impacts a suite of indicators will be used, wherever practical.

6. **The use of indicators will be scrutinised regularly and updated** (Leiden Manifesto Principle 10)

The university realises that some bibliometrics may become less useful over time, and new bibliometrics will emerge. It is important for the university to review the bibliometrics that it uses on a regular basis. This will be the responsibility of the University Research and Innovation Committee, supported by Library and Learning Services and the Research Services Directorate.

7. **DMU will apply the Responsible use of Bibliometrics to internal research funding and time allocation processes** (SF DORA Principles 2 and 3)

Allocation and evaluation of internal funding and research time should include a broad range of value and impact measures, including qualitative indicators. Researchers will have the opportunity to explain the value of their chosen outputs and the value of research being undertaken. The evaluation criteria should be made explicit and clear to applicants

8. **DMU will support those who generate and interpret research metrics in order to ensure that they do so in line with this statement** (SF DORA Principles 15, 16, 17 and 18)

Training in the responsible use of bibliometrics will be provided to all staff who generate and interpret research indicators to ensure understanding of, and adherence to, this policy. Training and guidance will also be provided to individual researchers to adopt good academic practices and utilise bibliometrics in a responsible way. The University will support researchers in challenging any research assessment practices that do not adhere to this statement