University of Reading

RESPONSIBLE METRICS

Statement on responsible metrics for adoption by the University of Reading

Responsible use of bibliometrics

Bibliometric indicators are increasingly becoming a component in the assessment and monitoring of research outputs for individuals, groups and organisations. Citation counts from bibliometric databases such as Scopus and Web of Science are already included in several public University rankings (for example QS World University Rankings and THE World University Rankings).

In response to this growing use of bibliometrics, there have been calls for clear guidelines on their usage, particularly in assessing the outputs of individuals. The San Francisco Declaration on Research Assessment (DORA), the Leiden Manifesto and The Metric Tide report all seek to address the responsible use of metrics in research assessment.

At the University of Reading, bibliometric indicators are one of the components used to monitor the performance of our research outputs in order to improve the quality, visibility and discoverability of our research in line with the University's 2020 Research Plan and the 2026 University Strategy. They are also being used, in conjunction with peer review, to assist Research Divisions in the planning of research outputs and in the professional development of staff.

Given the limitations of bibliometric data, it is important that bibliometric indicators are used appropriately and responsibly at the University of Reading. It is our ambition to follow the principles for the responsible use of metrics as outlined in the Leiden Manifesto for Research Metrics.

The Leiden Manifesto outlines ten principles to which the University of Reading subscribes:

1. **Quantitative evaluation should support qualitative, expert assessment**

The use of metrics can strengthen peer review by adding to the information available to assessors. However, metrics should not be used as a substitute for informed judgement. Bibliometric data, if available, may be used in processes relating to recruitment, promotion and performance reviews. The data should be used in context, appropriately and should not replace but complement expert opinion on research outputs.

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

The indicators chosen to evaluate performance should be clearly related to the research goals of the institution, group of researchers or individual researcher. It should be clear from the outset of any research evaluation which metrics are being tracked. The mode of evaluation should be relevant to the goal of the research. For example, counting citations to a publication may not be relevant if the intention is that the main usage of the research will be by practitioners.

The metrics used in the Tableau Dashboards provided to Research Deans and Research Division leaders will be consistent and updated on a regular basis. The sources and guidance on the interpretation of the metrics are available to staff.

A move towards publishing in fully open access journals is being encouraged by the University of Reading's Open Research initiatives and by our Open Access funding policies. These policies may indirectly affect journal-level metrics such as the percentage of publications in the top journal percentiles by SCImago Journal Ranking (SJR) for individuals, research groups and the organisation as a whole, but will increase the availability and discoverability of University of Reading research outputs. Being mindful of these policies, researchers should continue to consider a range of factors in determining the most suitable outlet for their publication, particularly where there may be concerns about the quality of some journals in the discipline.

3. Protect excellence in locally relevant research

The largest available databases that provide bibliometric data are biased towards research published in English. It is important to recognise this bias and to take this into account when assessing the research outputs of academics who publish in other languages and in journals that may be managed by smaller, locally significant publishers.

4. Keep data collection and analytical processes open, transparent and simple

Bibliometric data used at the University of Reading will be predominantly obtained from the Scopus database using SciVal as an analytical tool. For research areas that are not well represented in Scopus, alternative metrics from Google Scholar etc may be provided. For all bibliometric data provided to staff at the University of Reading, the source of the data should be clearly stated.

5. Allow those evaluated to verify data and analysis

All staff and students at University of Reading have access to Scopus, SciVal and Web of Science and so are able to check the coverage of their publications and obtain relevant bibliometric data from these databases. Information and help is also available from the Research Publications Adviser on how to correct mistakes and omissions in these databases. The Research Theme/Research Division structures used to calculate metrics in SciVal are available to staff on request. For all bibliometric data provided, the source and methods used for any additional analyses should be clearly stated.

6. Account for variation by field in publication and citation practices

Bibliometric databases do not provide comprehensive information across all subject areas or all output types. Whereas coverage of journal articles in STEM subjects may be almost complete, non-English language content and other output types such as books, book chapters and conference proceedings are often not as well represented in bibliographic databases. No data are likely to be available for outputs such as art exhibitions or performances. Differences in citation and publication practices between disciplines should also be recognised in any analyses based on bibliometric data. Where possible and appropriate, bibliometric indicators should be normalised and based on percentiles rather than averages.

7. Base assessment of individual researchers on a qualitative judgement of their portfolio

Bibliometric indicators such as the h-index and citation counts are often affected by the career stage of a researcher, their discipline, their gender, their actual or perceived race or ethnicity, and their status in relation to other protected characteristics. One should always be wary when using them to judge the performance of an individual or to compare one individual against another. Such metrics should therefore be used in context, recognising the range of activities that a researcher may be conducting around their research, including research communication, which may be impossible to assess using metrics.

8. Avoid misplaced concreteness and false precision

A 'basket of metrics' approach will be used to avoid over-reliance on one indicator. The limitations of the metrics will be recognised, for example, the meaning and interpretation of citation counts and the problems of false accuracy and variability associated with some journal-level metrics. The limitations of small sample sizes should also be recognized in any analyses.

9. Recognize the systemic effects of assessment and indicators

To avoid the possibility of gaming and goal displacement, a 'basket of metrics' approach will be adopted when possible.

10. Scrutinize indicators regularly and update them

The use of metrics in research assessment is an evolving discipline and is likely to develop over time. The University of Reading will follow the work of bodies such as the UK Forum for Responsible Research Metrics and the suppliers of bibliometric data in order to keep up-to-date with best practices in the use of bibliometrics.

Acknowledgements

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