

## Independent review of the role of metrics in research assessment: Call for evidence

### Summary of areas for advice

1. This template provides a summary of the areas on which the steering group is seeking advice. You may use this template to respond with your advice if you would find it helpful.
2. Please send responses to [metrics@hefce.ac.uk](mailto:metrics@hefce.ac.uk) by **noon on 30 June 2014**.

<b>Independent review of the role of metrics in research assessment: Call for evidence</b>	
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<b>Identifying useful metrics for research assessment:</b>	
<ul style="list-style-type: none"> <li>• What empirical evidence (qualitative or quantitative) is needed for the evaluation of research, research outputs and career decisions?</li> <li>• What metric indicators are currently useful for the assessment of research outputs, research impacts and research environments?</li> <li>• What new metrics, not readily available currently, might be useful in the future?</li> <li>• Are there aspects of metrics that could be applied to research from different disciplines?</li> <li>• What are the implications of the disciplinary differences in practices and norms of research culture for the use of metrics?</li> <li>• What are the best sources for bibliometric data? What evidence supports the reliability of these sources?</li> <li>• What evidence supports the use of metrics as good indicators of research quality?</li> <li>• Is there evidence for the move to more open access to the research literature to enable new metrics to be used or enhance the usefulness of existing metrics?</li> </ul>	
<p>million+ is a university think-tank which provides evidence and analysis on policy and funding regimes that impact on universities, students and the services that universities provide for business, the NHS, education and the not-for-profit sectors. We welcome the opportunity to respond to this call for advice.</p> <p>In a response to a consultation by the Department for Education and Skills in 2006, we expressed concerns about the use of metrics to assess research quality. We remain</p>	

unconvinced that it is an appropriate way to assess research quality in all institutions.

Research assessment remains primarily an exercise of peer review. HEFCE's work on this in 2008 and 2009 concluded that data on bibliometric indicators were not robust enough to use for research assessment. While there has been some improvement in citation indices, we do not consider a new system will improve on the one currently in place. The approach of using peer review to assess research is common to the funding councils and the research councils (and other research grant awarding organisations) as they believe it best serves their purposes. The review of metrics needs to take this as its starting point, and ask if a new system will be at least as good as the one currently in place.

Metrics fundamentally rely on quantitative measurements of quality, often looking at citations. However, as pointed out by HEFCE in its invitation letter, the growth of social media and web-based analyses means that increasingly it is possible to capture a wider view of the impact of research. We believe that citations are a limited way of capturing research quality, including in respect of translational and applied research. The impact of research in the wider non-academic world is an important measure of quality. The use of metrics is likely to limit the assessment of impact, in that proxies are other used to assess the latter.

In addition, million+ has concerns that a greater use of metrics would unfairly disadvantage some disciplines. For example, sociology as a discipline lacks a shared theoretical or methodological paradigm that most researchers will engage and cite. Therefore citation counts for sociology will be lower than more 'unified' disciplines. In other disciplines many of the outputs would be single rather than multi-authored, again reducing citation counts. Arts, social sciences and humanities research have long publishing cycles, can be practice-based, and tend to be more qualitative in scope, design and results. The pilot exercise organised by HEFCE in 2008 and 2009 acknowledged this issue through the disciplines that were selected for inclusion. Creative, performing arts and professional practice research are further examples of work that do not lend themselves easily to a metrics based approach would be disadvantaged if metrics were used as a primary indicator of quality. It is also difficult to see how metrics can capture effectively the contract and consultancy research undertaken by institutions.

#### **How should metrics be used in research assessment?**

- What examples are there of the use of metrics in research assessment?
- To what extent is it possible to use metrics to capture the quality and significance of research?
- Are there disciplines in which metrics could usefully play a greater or lesser role? What evidence is there to support or refute this?
- How does the level at which metrics are calculated (nation, institution, research unit, journal, individual) impact on their usefulness and robustness?

Any examination of how metrics can be used in research assessment will also need to take into account the impact a new system could have on funding allocations. There has been a trend of concentrating research funding over recent years, with an increasing proportion of funding going to a small number of institutions. The use of metrics has the potential to undermine the principle of funding research excellence wherever it is found and also to lead

to further concentration of research funding, whether by institutions or by disciplines. Citations are also often used in ranking tables, and the limitations of the latter are well known.

million+ believes that there are major disadvantages in using metrics to assess performance as the impact of research in discrete, yet important, areas of research may not be captured through bibliometric data. Some research outputs might not generate high numbers of citations but can influence policy decisions made by end users – for example, a critical intervention in evidence to a public inquiry - which would be impossible to capture through bibliometric data. Other pathways to impact include confidential advice to law enforcement agencies and publication via trade journals rather than peer reviewed publications. These would be equally difficult to capture through metrics.

There would also appear to be little justification to move to a new system without a full evaluation of the results of the forthcoming Research Evaluation Framework.

Metrics are more easily applied to STEM disciplines, which mean they are likely to concentrate research funding even more than is already the case. Metrics would not be a particularly useful in capturing the excellence, quality and diversity of research in all institutions. Accordingly we continue to consider that funding research excellence wherever it occurs is a fundamental principle and that the use of metrics is likely to undermine this principle and be disadvantageous to the whole system.

**‘Gaming’ and strategic use of metrics:**

- What evidence exists around the strategic behaviour of researchers, research managers and publishers responding to specific metrics?
- Has strategic behaviour invalidated the use of metrics and/or led to unacceptable effects?
- What are the risks that some groups within the academic community might be disproportionately disadvantaged by the use of metrics for research assessment and management?
- What can be done to minimise ‘gaming’ and ensure the use of metrics is as objective and fit-for-purpose as possible?

The greater use of bibliometric data is likely to create perverse incentives for institutions to generate outputs primarily for the purposes of improving their performance in assessment exercises. For example, if patents were used as a measure during research performance assessment, this could encourage institutions to file IP rights for discoveries which would be better disseminated to end users through open access.

Beyond our underlying concerns about a greater use of metrics, million+ considers that there are practical resource implications for institutions in the greater adoption of bibliometric measurement. To capture the information data required to measure the full spread of bibliometric data would require, at the very least, significant enhancement of university management information systems. For smaller, less research intensive institutions these costs are likely to be disproportionate and would divert resources from the university core mission of teaching and research.

**International perspective:**

In addressing the issues and questions above, please include relevant evidence and examples from outside of the UK, where appropriate.

It is worth noting that metrics linked with a citation system based on the developed world is widely regarded as likely to disadvantage the developing world. Internationally as well as within the UK, the use of metrics is also likely to disadvantage institutions not engaged in STEM and those working outside of the 'elite' institutions.

**Would you be interested in participating in a workshop/event to discuss the use of metrics in research assessment and management?**  Yes / No