Responsible metrics

Traditional metrics – numerical counts of productivity – have been used for many years to demonstrate the impact of research. They have been used to measure everything from the individual output of a researcher to the effectiveness of large, global institutions. Although metrics may initially seem like useful tools a number of criticisms have been raised – namely that they are not fit for purpose and that too much emphasis is being placed on them. Vitally important decisions are being made on the strength of metrics such as which researcher to hire and even the international rankings of a university. These decisions can have far reaching consequences so it is important that the information they are based on is sound.

In response to these concerns a call for the responsible use of metrics has emerged. This position argues that although metrics have value and can still be used, this should be done as part of a wider process which takes into account multiple factors. There influential independent report *The Metric Tide* outlined are five key points which the responsible metrics movement is built on…

**Robustness**

*Basing metrics on the best possible data in terms of accuracy and scope*

Any assessment tool is only as good as the data it is built upon and metrics are no exception. Current measures have been accused of being too narrow in their focus and although Altmetrics is working to address some of this, there is still more work to be done.

**Humility**

*Recognising that quantitative evaluation should support – but not supplant – qualitative, expert assessment*

There is room in any toolkit for a variety of tools. This point addresses the fact that measuring quantitative information such as number of papers or the frequency of citations only tells part of the story. Qualitative assessment tools provide a lot of rich data and the expert opinion through mechanisms such as peer review should also be fully utilised.

**Transparency**

*Keeping data collection and analytical processes open and transparent, so that those being evaluated can test and verify the results*

In line with the move toward more transparent research practices, the report states that metrics should be no exception. The methods used to calculate metrics should be readily available, as should the data sources used, so that they can be checked and verified as needed.
Diversity
Accounting for variation by field, and using a range of indicators to reflect and support a plurality of research and researcher career paths across the system

No metric should rely too much on any one source. Instead a range of different sources representing the range of different outputs should be used. Researchers and the research process are not one-size fits all so their metrics shouldn’t be either. The different sources should take into account the variations between disciplines as well as the circumstances of the researcher.

Reflexivity
Recognising and anticipating the systemic and potential effects of indicators, and updating them in response

Finally, the report recommends that metrics are more responsive to change. Research in the 21st century is a very fast changing area and the assessment methods need to be able to respond to this in an effective way.

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