Guidance on citation metrics and the REF

Overview

The UCL bibliometrics policy sets out some principles for the use of citation metrics in research assessment at UCL. As part of the overall guidance, this paper sets out some general advice on appropriate ways to use citation metrics for supporting selection of papers for the REF.

In the 2021 REF exercise, citation metrics will be used by panels to support assessment in some units of assessment. These metrics are deliberately constrained – panels will be supplied with citation counts for each paper in a standardised format, and contextual tables to indicate what that value means in context – for example, they will be told that a certain paper has 17 citations, but will also be able to see that this would put it in the top 10% of papers by subject and publication year. Panels will not be provided with impact factors, or any other journal-based metrics, and are instructed not to take account of such metrics. Formal guidance on this is provided by Research England.

Researchers and institutions are free to use metrics for their own selection and internal assessment purposes, within the constraints of their own codes of practice. Even if metrics are not being used by the assessment panel, they may be seen as useful for selection purposes. Conversely, they are also free *not* to use metrics for selection purposes; there is no requirement either way.
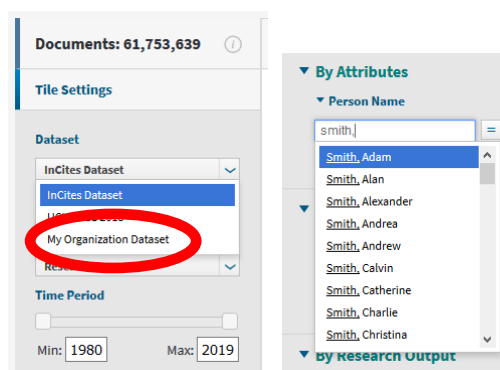
At UCL, the REF Code of Practice (section 4.1) states that "reviewers may use metrics to inform output review so long as they are used responsibly and only as part of an array of applied assessment methodology … nevertheless, reviewers will not use journal-based metrics as a surrogate measure of the quality of individual research articles". This is in keeping with the UCL bibliometrics policy, which emphasises that journal-based metrics should not be used for assessment of articles. Individual researchers and departments are free to choose to use metrics if they feel it would be helpful, so long as inappropriate metrics are avoided, and decisions are not based solely or primarily on citation counts.

Where can we find appropriate metrics?

To see more advanced metrics than simple citation counts, we recommend you use the InCites tool. This aggregates data from Web of Science, and is available to all UCL users. This walkthrough will focus on the InCites "MyOrganisation" data, which is derived from papers in RPS and thus known to be by UCL authors.

InCites can be accessed through a link in the top bar of Web of Science, or else by going to https://incites.clarivate.com. It requires registration when you first use it – we recommend you use your UCL address here. You will need to be on the UCL network when you first register, so be sure to use a remote desktop or VPN if you are off-site.

To get papers for a particular individual, select "researchers" and then, under "dataset" in the top right, select "My Organization Dataset". Scroll down to the "By Attributes" filter, and enter the name (as "Surname, Forename") - you can enter several names at once here if desired, and you will get a list for each one. Then click "Update Results". You can now view the list of papers and citation information by clicking the number under "Web of Science Documents" in the data results on the right-hand side. Download the list with the arrow icon on the top right of this list.

To get papers for a particular department or other research unit, the approach is very similar - select the "Organisations" button on the front page, and then, under "dataset" in the top right, select "My Organization Dataset". Scroll down to the "By Attributes" filter, and enter the department name - you can enter several units at once here if desired, and you will get a list for each one. Then click "Update Results". You can now view the list of papers and citation information by clicking the number under "Web of Science Documents" in the data results on the right-hand side. Download the list with the arrow icon on the top right of this list.

Once you have this list downloaded, you can manipulate it in Excel to find details for individual papers, or to compare all of the papers from a person/unit.

Interpreting the metrics

The key metrics here are Times Cited (col M), Category Normalised Citation Impact (col R), and Percentile in Subject Area (col S)

- **Times Cited**. This metric is a simple count of the number of times an item has been cited. You can use the [Research England reference tables](#) to look up where a paper sits among others from the same year and subject area. Note that the Web of Science subject area(s) are given in Col G, "Research Area".

- **Category Normalised Citation Impact (CNCI).** This is a relative citation ratio, comparing the number of cites this paper has recieved to the mean of all papers in the same field and same publication year. (The mean is shown as "Category Expected Citations", col P).
  A CNCI of 1 is equal to the world average; the overall CNCI for most UCL publications is around 2, varying by subject area.

- **Percentile in Subject Area**. This is an indication of where the paper sits in relation to all the others of the same field and same publication year. This is a reverse percentile, where the lower the value, the more highly ranked the paper - for example, a value below 10 would indicate it is in the top 10% of comparable outputs. Papers with no citations will be shown with a percentile of 100, and due to rounding, some papers which are incredibly highly cited may be shown as zero.
  Percentile rank is similar to the results that you will get by looking up a paper in the Research England REF citation reference tables, but gives a specific position rather than a broad band.

The CNCI and percentile, taken together, can give a good sense of where a paper fits in comparison to the rest of the field. We recommend looking at both to help avoid anomalies – for example, if a field contains a small cluster of incredibly highly-cited papers, this may mean that others which are still in the top 10% appear to have an unusually low CNCI, because the CNCI is driven by a simple arithmetical average.

For assessment of recent papers, it is important to bear in mind that the small number of citations involved can make statistics over a short period (the past 1-2 years) unreliable. In particular, for papers less than a year old, relative citation numbers can be very strongly affected by unrelated factors like the exact month of publication.

FAQS:

1. *My paper isn't in here!*

   Not all papers are included in InCites. Generally speaking, it only covers papers that are indexed in Web of Science - if a paper is in RPS but not in Web of Science, it won't be imported. This most commonly affects things like conference papers and book chapters.

   If the paper has been added to RPS very recently, it may take a while to show up as it has to be manually imported. We are aiming to update InCites regularly during the REF selection period, but it does take time to process the data.

   If the paper was added to RPS some time ago, and you would expect it to be covered in Web of Science, please get in touch (bibliometrics@ucl.ac.uk) and we can look into it.

2. This download includes the Journal Impact Factor and something called the "Journal Normalized Citation Impact" - what about those metrics?

> We recommend you **do not** use these. The Journal Normalised Citation Impact shows how a paper compares to others in the same journal, not the field as a whole; this is not very informative. The Journal Impact Factor is an averaged measure of citations for all papers in the journal, and does not necessarily indicate anything about that one paper. Research England has strongly discouraged use of the impact factor for REF selection, and UCL has committed to not using it. See the [UCL Metrics Policy](#) for more information.

3. The metrics are very low for a paper but I know it is really important and I want to submit it - what should I do?

> Metrics are never perfect - some very significant work can have few indexed citations, and conversely some work can be highly cited simply through being famously wrong. We recommend you treat them as supporting information to help make your decisions. If you disagree with them, feel free to ignore them!

> If you would like to know more about the underlying citations for a particular item, the "link" field (col N) will take you to a Web of Science record for that paper, where you can look at the individual citing papers.