Responsible use of new and alternative metrics

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 recommendations for the use of new and alternative metrics ("altmetrics").

In an age where data is being created and shared at scale, new and alternative metrics are continuously being developed to inform many aspects of the research system, including the reception, usage, and value of all types of research output. This creates a challenge to responsible metrics use initiatives, because it's impossible to predict future metrics creation and misuse for specific metrics. Instead, we rely on the general framework of UCLs bibliometrics policy and accompanying guidance to assist UCL personnel make informed decisions when considering new or alternative metrics.

In short, any new or non-standard metric or indicator must be used and interpreted in keeping with the other principles listed here for more traditional metrics. And remember to consider the sources and methods behind such metrics and whether they are vulnerable to being gamed, manipulated, or fabricated.

Further, the table below shows UCL's own good practice interpretations of use cases, and provides a more systematic framework to assist in the assessment and use of new and alternative metrics.

In 2016 the National Information Standards Organization[1] identified three main use cases for new and alternative metrics ("altmetrics")

- Showcase achievements: Indicates stakeholder interest in highlighting the positive achievements garnered by one or more scholarly outputs.
- Research evaluation: Indicates stakeholder interest in assessing the impact or reach of research.
- Discovery: Indicates stakeholder interest in discovering or increasing the discoverability of scholarly outputs and/or researchers.

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[1] Outputs of the NISO Alternative Assessment Metrics Project - A Recommended Practice of the National Information Standards Organization

Use	Examples	Good practice and pitfalls
Showcase achievements	Researcher: assess the reach, engagement, and influence of my own research outputs, by, for example, incorporating altmetrics in my portfolio to complement my other accomplishments	✓ Formulate specific attention, engagement and impact goals *before* you start looking at your actual altmetrics[2] – then identify and use metrics as just one way of assessing your success and to provide insight. ✓ Use altmetrics to identify channels through which you can achieve your goals, not goals in themselves ✓ Assess a mix of metrics ✓ Look at the *content* of the attention you are receiving – what is the sentiment of the attention? High numbers of mentions might follow critical as well as favourable reaction. ✓ Look beyond *how many* to understand *who* is talking about your research – particularly for social media. ✓ Twitter isn't *all* cats and celebs – get to know how serious researchers are using it to hold global conversations around your research area[3]. ✗ Passively 'tracking' numbers that happen to be available ✗ Using metrics in the absence of a strategy or goal ✗ Passively tracking numbers just because they happen to be available ✗ Mistaking metrics that signify a process or pathway (such as blogs or tweets) as eventual societal impact
	Administrator: showcase the achievements of my organisation to other stakeholders. E.g. to demonstrate the achievements of my institution's researchers to potential hires, students, collaborators, and other researchers.	✓ Find out what metrics work best for each audience – ask them or consult their organisation strategy and stated goals. ✓ Re-use existing data – for example ResearchFish returns[4] ✓ Initiate a unit-wide conversation to develop overall goals and strategy around engaging and impact ✓ Use metrics as pointers to help you initially identify specific tangible and more narrative examples of impact. Follow these up with the researchers to check your understanding and what story UCL can tell. ✗ Use numbers without context – especially if you aren't really sure where they come from or what they really represent ✗ Drawing spurious comparisons, between institutions or over time, is tricky due to changes in and partial nature of coverage of the tools over time, the underlying growth of social media / blogs etc. Without understanding this vital context quantified comparison is likely to be flawed at best.

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[2] E.g Social media strategy for researchers - http://www.fasttrackimpact.com/single-post/2015/10/27/Create-a-social-media-strategy-for-your-research-that-delivers-real-impact
[3] E.g http://blogs.lse.ac.uk/impactofsocialsciences/2011/09/30/academic-tweeting-your-suggestions-and-tips-collected/ https://www.slideshare.net/UniofYorkLibrary/twitter-for-researchers-22963915
[4] Access / log in details can be requested from Jacob Sweiry, Head of Research Metrics.

	Administrator: support researchers in applying for competitive funding by effectively showcasing positive achievements of their research outputs.	✓Look at funders annual reports etc. to see what metrics they choose, if any ✓Search for existing more narrative impact stories from your area[5] ✓Talk to your Strategic Research Facilitation team[6] ✓ Look at case studies of how researchers can responsibly incorporate altmetrics in funding bids[7][8] ✓ Provide context and examples – for example, for public policy citations, what is the spread of countries? If your research were cited as influential in a public policy report, how did that actually come about? For example, do you have formal links with the government body such as advisors – (or was it just luck?) ✓ If your funder cares about demonstrating impact, show that you care about it too – hold training sessions and be a champion ✓ Combine metrics with qualitative information – for example, "Over 100 schools have downloaded the guide – unsolicited feedback from one said it was "one of the best guides to raise teachers capability they had seen". ✕ Citing numbers blindly, assuming they are 'good' when in fact they show little impact
Research evaluation	Librarian: Support the institution in their promotion / recognition exercises by offering impact-report services.	✓ Position altmetrics a starting point for discussion / further investigation ✓ Use altmetrics as a way to identify potentially interesting but unrecognised impact – but that expert-led and discipline-specific discussion is needed to interpret the data ✓ Recognise that researchers have different goals; E.g some excel in mass media and some excel through smaller highly specialist research-focussed groups. ✓ Use metrics as a learning opportunity to understand audiences and set direction ✓ Use caution and guard against high stakes decisions being unduly influenced by 'spammable' metrics such as downloads or retweets. ✕ Positioning metrics as 'scores' that can be used to rank performance between researchers or passively measure success ✕ Inadvertently set perverse incentives, such as to 'self-spam' downloads or retweets, by making the numbers alone seem an important part of promotion.

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[5] http://iris.ucl.ac.uk/rics/search/impact-record (UCL log in required)
[6] http://www.ucl.ac.uk/research/contact
[7] https://www.altmetric.com/case-studies/?audience=researchers
[8] https://www.altmetric.com/blog/metrics-grant-application/

	Researcher: Gauge the performance and achievements of my / my institution's scholarly outputs	✓ Know what you want to achieve as a researcher and set this out *before* you set about assessing your current altmetrics. By all means then iterate your goals, but do be clear on those *first*. ✓ Ensure you are clear in your own mind what altmetrics do and do not measure. For example, the coverage of the tools. ✓ Always examine the actual content (who, when, where, what are they saying?) that lies behind the numbers ✕ Conflate altmetrics (or indeed other bibliometrics) with research quality
Discovery	Researcher: Identify potential collaborators at other institutions with whom to partner on grant applications and other projects.	✓ Usually a straightforward task – see which countries, institutions and researchers are reading or accessing your work. ✓ Don't limit your discovery to researchers – stakeholders, users, audiences and beneficiaries can also be discovered; forming relationships with them often key to maximise the societal value of research
	Researcher: Discover influential research and associated debate that is important / interesting in my field	✓ Usually a straightforward task – e.g use Mendeley downloads to spot the most read papers in your area of interest long before citation metrics become available ✓ Consider using altmetrics to refresh readings lists ✕ As with citations, high attention can be a marker of controversy or negative reaction as much as good research, so read the paper / views.
	Press officer: Identify popular / newsworthy papers or topics	✓ Discuss a press / media strategy before you start – who do you want to target, in which geographies, with which research topics, through which channels, and to what ends? ✓ Make use of geographical information to identify which countries UCL research has made the news – are any countries you would want to target missing? ✕ Generating and measuring 'news for the sake of news' ✕ Confusing newsworthiness with research quality or research worth
	Administrator: identify strong candidates or supporting evidence for a REF Impact Case Study	✓ Think through all of the uses you and your unit might have for a case study – not just to meet the needs of a REF Impact Case Study. E.g. sharing best practice and lessons with colleagues, telling your story to funders and the public. ✓ Only progress an Impact Case Study if you have been formally asked to do so for UCL – very few are required. If you have been asked to do so, the Research Impact Curation and Support team will provide 1:1 assistance and guidance. ✕ Thinking of impact only in terms of REF (a very small sub-set)