

**EIS-ULA Memorandum of Comments
to the House of Commons
Science and Technology Committee's
Inquiry on Research Integrity**

Executive summary

- The Research Excellence Framework (REF) undermines research integrity by corrupting and distorting the practice of science.
- The REF's instrumental focus on certain types of short-term and easily identifiable research "impact" is a danger to the quality of research in the long run.
- The process of reviewing REF submissions is not as rigorous as the blind-peer reviewing processes used in other academic spheres.
- REF is stifling scientific innovation and debate.
- REF encourages scientists to "game-play" and this may range from relatively innocuous practices such as generously attributing authorship to peers so they can boost their publication profile, through to selectively reporting data or even fabricating it.
- Scientists, policy makers and the wider public urgently need a widespread discussion about how publicly funded research is assessed
- There is an urgent need for the creation of an oversight body with statutory powers to investigate, penalise and correct the consequences of research misconduct.

Background to EIS-ULA

The EIS is the largest education union in Scotland with approaching sixty thousand teacher members including over five thousand members in Further Education Colleges and around fifteen hundred members as academics and academic related staff within Higher Education Institutions within Scotland.

The EIS HE members form a Self-Governing Association called the 'Educational Institute of Scotland University Lecturers' Association (EIS-ULA)' with its own Executive to deal with HE matters including determining HE policy for Institute. The

EIS is therefore unique amongst trade unions in having HE policy matters determined solely in Scotland.

The EIS welcomes the opportunity to contribute to the House of Commons Science and Technology Committee's Inquiry on Research Integrity and has the following comments to offer:

The REF distorts and corrupts the practice it claims to measure

The REF is intended as a means of quantifying an abstract quality, the excellence of research, but in a process of goal-displacement it has become an end in-itself, often to the detriment of the ultimate ends those means were meant to serve. This happens in many ways.¹

For example, REF has forced universities to consider the "impact" of their research. In 2014, the most common kinds of impact related to "informing government policy", "parliamentary scrutiny", "technology commercialisation", and "print and media publishing". Terry Eagleton has wryly observed, "Such impact is rather easier to gauge for aeronautical engineers than ancient historians. Pharmacists are likely to do better at this game than phenomenologists."²

The instrumental focus on a certain conception of economic and social impact in the short term is a danger to the quality of research in the long term. After all, much advancement has been made by blue skies, curiosity-driven research (such as the mathematical modelling central to contemporary computing). Critics have also argued that the emphasis on impact has turned HE institutions into the unofficial and unremunerated research and development arm of industry.³

¹ Collini, *Speaking of Universities*:

² Eagleton, 'The Slow Death of the University'.

³ Scrivener, 'Boycott the REF'.

Further, REF encourages apparent novelty and clear cut, casual impacts, but offers no incentives to replicate studies. ⁴ It is therefore leading to sloppy science in which claims made in scientific journals are not being retested or cross-checked by other researchers. Where cross-checking has occurred reproducibility is often lacking, leading to a crisis in scientific research which had become the subject of a parliamentary inquiry until this was disrupted by the 2017 election. ⁵

Game-playing is also widespread. Playing REF ranges from the relatively innocuous practice of generously attributing authorship to colleagues, so they can pad their CVs, to hyper-inflation in the number of outputs rated as “world leading” (four star rated) and “internationally excellent” (rated three star). ⁶

But, worryingly, this game-playing goes even further. With REF targets to meet and careers on the line, research suggests ⁷ “many academics admit to engaging in at least one questionable research practice in order to achieve publication.” ⁸ Examples of this range from selectively reporting data to simply fabricating it. Evidence of this nature was also recently submitted to the parliamentary inquiry into reproducibility and scientific integrity. ⁹ REF therefore distorts and corrupts the practice it claims to measure.

REF isn't as rigorous as peer review

Plans for a cheaper and less-time consuming metrics based research assessment exercise were abandoned by government prior to REA 2008 at the behest of leading academics, who argued that rigorous research evaluation required expert peer review. But, according to Derek Sayer, the REF “falls very far short of international peer

⁴ Jones and Kemp, ‘Why Is so Much Research Dodgy?’

⁵ Science and Technology Committee (UK House of Commons), ‘Research Integrity Inquiry’.

⁶ Marginson, ‘Game-Playing of the REF Makes It an Incomplete Census’.

⁷ John, Loewenstein, and Prelec, ‘Measuring the Prevalence of Questionable Research Practices With Incentives for Truth Telling’.

⁸ Jones and Kemp, ‘Why Is so Much Research Dodgy?’

⁹ Fenton, ‘Written Evidence Submitted by Dr Brian Fenton’.

reviewing standards in other academic contexts like publication, research funding or promotions.”¹⁰

Each of the thirty-six disciplinary sub-panels for the REF 2014 were, Sayer says, composed almost entirely of “in-house” academics from British institutions.¹¹ Though these panel members were eminent in their fields, they often lacked specialist expertise and the time required to assess all of the outputs falling under their remit.

One REF 2014 panelist told the Times Higher that: “I needed to peruse around 75 books and 360 articles or sections, and various different yields, including cross-referrals from different boards. I was not given any leave from my organization, and in spite of the fact that I spent the majority of spring and summer at my work area, I could frequently give just a hour or so to “perusing” books, and close to 20 minutes to articles or parts. A few associates had a significantly heavier appraisal load.”¹²

REF discourages innovation and difference

With the pressure to publish in only the most esteemed journals, the REF is stifling scientific debate and restricting innovation to fewer and fewer intellects.

In disciplines such as economics, for example, the REF is accused of silencing “heterodox” or non-mainstream voices. Bruce Philp, the coordinator for the Association of Heterodox Economics, suggests that “no economic journals which generally accept heterodox submissions are rated at world leading (4*) ... The inference from those who have compiled these lists is clear: there is no world leading economics research in the Austrian, feminist, green, institutionalist, Marxian, post-Keynesian, radical or Sraffian economic traditions (or, indeed, any other heterodox approach).”¹³ This narrowing of

¹⁰ Sayer, ‘Five Reasons Why the REF Is Not Fit for Purpose’.

¹¹ Ibid.

¹² Anonymous contributor, ‘Why I Had to Quit the Research Excellence Framework Panel’.

¹³ Philp, ‘Research Assessment’.

the field makes it “more likely that significant economic events that do not conform to the mindset are missed - such as the 2008 economic crisis.”¹⁴

Lord Stern recently examined the REF in a review, but will the implementation of Stern’s proposals make things any better?

We believe the answer to this question is, no.

Changes recommended by the Stern review could in specific areas mitigate some of the worst effects of the REF. For example, Stern recognises some of the pressure placed on staff and attempts to refocus the REF as institutional assessment rather than individual one. Stern also aims for the next REF to be cheaper and less onerous on institutions. This is all very welcome. At the same time, REF 2021 is likely to look very much like previous such exercises. Stern’s recommendations tinker with the rules of “the game”, but don’t fundamentally alter very much.

Recommendations

We believe the following steps could go some way toward addressing the problems identified above.

Moving beyond REF

REF 2014 was estimated to have cost £250 million of tax-payers money, which is 2.4% of the total spent on research by funding councils.¹⁵ Not only that, academic staff spend countless hours in meetings, preparing REF submissions, writing “impact” case studies and conducting mini-REF exercises. This is time that could be spent in the laboratory, library or classroom - doing the things that tax-payers assume academics do.

Few would doubt the need for a research assessment exercise, of some form, that would determine how taxpayer’s money is spent on research. Research must be

¹⁴ Lee cited in Jump, ‘REF “Risks Narrowing Economics”’.

¹⁵ Atkinson, ‘Assess the Real Cost of Research Assessment’.

democratic, accountable and responsive to the needs of society. But, for all the reasons discussed above, REF is broken and Stern's recommendations do not go anywhere near far enough.

Just playing "the REF game" is no longer an option. The academic community urgently needs to debate how research is assessed, funding distributed, and related issues: should metrics play a role, how can we incentivise research that doesn't have clear and obvious routes to impact, and how to maximise innovation and diversity?

Instead of allocating the £250 million per year to institutions where administrators have played the REF game well, we believe this money should be open to all researchers from all institutions through peer reviewed grant applications. To ensure that the peer reviewers can do a thorough job, their time and effort must be properly recognised and rewarded by their institutions. Therefore, another use of £250 million could be to provide financial support for the institutions of reviewers approached by the research councils to review grant applications by for example ring fencing some of the overheads from grants for this purpose.

The creation of an oversight body

The Science Select Committee has carried out investigations into peer review and research integrity and on each occasion has concluded there is the need for an independent oversight body, as has been developed in the US and other countries. However, this was resisted by the RCUK (Research Councils UK) and UUK (Universities UK). Under pressure to do something, they offered a research concordat.

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As part of gathering evidence, members of the ULA Executive were asked if they were clearly aware of the detailed mechanisms of how their organisations would handle a research misconduct investigation, but few were. The current response of the Universities to research integrity continues to downplay the importance of the problem. They use the curate's egg approach. Not all of the egg is rotten, so the egg is fine.¹⁷

¹⁶ Universities UK, 'The Concordat to Support Research Integrity'.

¹⁷ Arrowsmith, 'Research Misconduct: How Universities Are Addressing the Issue'.

The problem is nobody real knows how rotten the egg is. Some studies suggest the repeatability of research could be as low as 11%.¹⁸

The research councils also produce updated statements in response to integrity issues, yet many of the Institutes that used to follow their procedures have been passively or actively removed from central control. They now work at a local level and are free to develop random processes to investigate research misconduct. Research Councils such as BBSRC no longer hold any power over their Institutes or the Universities where their research grants are spent.¹⁹

The EIS is committed to the principle of professional regulation and supports the regulatory framework for teachers through the General Teaching Council for Scotland (GTCS). For professions where integrity is being identified as such a key issue it seems an anomaly that individuals are not regulated at all or regulated by staff within the same organisation.

Therefore, the creation of an oversight body with statutory powers to investigate and penalise research misconduct could make sure that published research is based on solid foundations and any post hoc analysis by exercises such as the REF are based on fact, not fiction. This body would be composed of experienced academics and would have oversight of all publicly funded research.

The purpose of this body would be to maintain a set of independent research standards for those involved in publicly funded research in the UK. At an institutional level it should be a statutory requirement on these bodies that publicly funded research is conducted without fraud and correspondingly reporting science malpractice is unambiguously protected by the Public Interest Disclosure Act 1998.

Funding of an oversight body

Individual scientists could pay a means tested levy that will form the entire basis of the funding for the body. This would counteract concerns over resources from RCUK that they did not have the resources. Membership could be funded directly or interlinked with payment for membership of other professional societies or bodies including our

¹⁸ Begley and Ellis, 'Drug Development'.

¹⁹ RCUK, 'RCUK Policy and Guidelines on Governance of Good Research Conduct - Research Councils UK'.

own the Educational Institute of Scotland. However, while the levies could be paid by this route, the body itself would be independent of both employer and employee relationships. An up-to-date registration would be required to conduct any research by a research establishment. This is in essence the model used for other professional bodies such as medicine and dentistry.

Individual benefits

The body will make sure that its members have appropriate indemnity insurance provision protecting from both their employers and any third parties with whom they interact. This could be achieved either by providing this directly through membership or negotiating central deals with insurance providers.

Functions:

1. Investigating any allegations of misconduct by a researcher or group of researchers. This would be done on a case by case basis and involve specialist in the appropriate fields with a permanent member of oversight body staff as the coordinator. It would be implemented at post graduate level onwards. All bodies, University, Research Institutes etc. would submit to the same body and therefore same set of standards. There would be various penalties for any offence, with the most severe being having a license revoked. There would be no time limit on what was investigated and any misinformation would be corrected by the body in conjunction with press regulators. This has become all the more important in a society where alternative 'facts' based on the latest research findings are being used to create sensationalist headlines designed to frighten the public.

2. Checking the integrity of data. Currently many institutions are supposed to adhere to operating standards, which includes logging the results of experimentation. Audits do occur in organisations to make sure the technical processes of maintaining records are working. Lab books can be checked and samples traced by quality assurance staff. However, this is an entirely technical process and there is no connection between this process and the external peer review publication process.

This could be remedied by working with scientific journals to add to any submitted manuscript an Appendix table that details where the primary sources of information can be found.

3. Linked to above, audits could take place at the reporting institutions by the oversight body for a piece of work to check that the raw data actually matches what has been described in a manuscript. This could be done on any piece of work that has made a major impact, but random audits could also take place. This would be similar to drug testing in athletics.
4. If a referee is concerned that some data has been manufactured, instead of reporting it to the Journal, it is reported directly to the oversight body who then coordinate an investigation.
5. If third parties are concerned that a group of scientists may be colluding to bias a particular piece of research for political motives then the body could investigate. If a researcher or group of researchers are clearly hiding some inconvenient facts then this can be exposed. This would help deal with obfuscation which is probably the most common form of malpractice and the most difficult to deal with.
6. The body will learn from cases and improve in its detection of science malpractice.
7. The body will get involved in educating researchers about the long-term damage that is done by publishing misinformation.

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