Higher Education Policy Institute

REF2028: Outputs Matter

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Introduction

The REF2028 'initial decisions' proposes a cut in the percentage of the exercise given over to research outputs from 60 per cent in the 2021 exercise to what, in extremis admittedly, might be as little as 40 per cent in 2028. At the same time, another decision will no longer ascribe outputs directly to individuals. Taken together, these two decisions make me more than a bit nervous.

The UK has seen many years of public and private investment into research, much of it focussed on its universities, universities which are acknowledged to be leading global research and education players and one of the UK's most significant international assets. As with all public investment, an accountability mechanism is required to justify efficient use of the public funds invested in universities and that is and remains the primary function of the REF. Indeed, without the REF – one of the rare accountability mechanisms which is largely based on the trust of those in receipt of the funding – some alternative and likely more granular and intrusive mechanism would almost certainly be put in its place by government.

In allocating public funds over the years, there has been a consistent view from across the political spectrum that investment in research is there to address national and international societal goals and an enlightened (for a government) view that researchers should be supported to deliver the underpinning knowledge breakthroughs that can facilitate and drive those goals, while also working in collaboration with various other bodies on implementation. In short, public funds are about outcomes, and outcomes depend critically on the excellence of research outputs.

There is also greater awareness in the UK government of the need for new ideas and technologies that can address global issues such as climate change and inequality (to pick just two). Thankfully, at a time when international relations are being tested in many ways, the Government remains keen to support research collaborations across borders although limited investment is clearly a significant factor in constraining the UK's ability to be a bigger player in the global research sphere.

But while it is true that the REF in its previous guises has fulfilled other purposes as well, including providing steers on the research process, the danger must be that government may be less enthusiastic about making research investments when its primary purpose – rewarding outputs – is significantly undermined. One of the main lines of defence for the research carried out by British universities will have been removed as will one of the main arguments for increased investment. Furthermore, in an era when the UK has pulled back from freedom of movement, there is still general government sympathy for attracting talented individuals to carry out their research in the UK. So moving the exercise away from outputs and simultaneously away from individuals is a potential double whammy when it comes to attracting increased government support.

Is it really wise, then, for the main research funding body in a small country with such a large international research reputation, based mainly on demonstrating the high standards of its research outputs and the academics who produce them, to seemingly downplay their importance? It is a question that is at least worth asking of current plans for REF2028, not least because so much rides on the answer. After all, Britain's universities are locked in a global research competition, as the Government often notes, and there are plenty of other countries only too willing to take our place in the research hierarchy.

This latter point is even more important now because UK research output, supposedly a core national asset, may be in a less favourable position than is often thought. Recent work at least casts some doubt on the triumphalist 'science superpower' narrative with which we have all become so familiar (see, for example, Nightingale and Phillips, 2023). Whether or not the triumphalist narrative is justified, it is something of a gamble to downplay such a significant argument.

Outputs

In other words, without a significant role in the REF for outputs – the *lingua franca* of scientific interchange – that science superpower reputation will be put at risk. It is all very well to write about reshaping the incentives within the research system but, against this general background, that needs to be a means of producing even better outputs. A good part of the UK's scientific reputation comes from the outputs it produces, outputs which encompass many different approaches, ideas and innovations. As a result, many countries look to the UK as a beacon of research. It has been a hard-won achievement for which past REFs can take some credit. But REF2028 now seems to be offering something less than total enthusiasm for research outputs, even in the face of admittedly limited but still worrying evidence that a decline in research productivity may be occurring: it takes more people to get to good ideas, perhaps the result of the amount of research being carried out by large teams.

In other words, the *quality* of research carried out in the UK by the best academics is a deadly serious business. It is about *standards*. But this response raises an issue which has been a perennial concern for many decades: the uneasy balance between *excellence* and *democracy*. Way back in the 1990s, AH Halsey (1992) argued that there is an abiding tension between the two in universities. Here is where we get to the nub of the matter. Surely there has to be some degree of judgement about the quality of the actual research coming out of British universities?

The old REFs were a proving ground for research excellence, understood as quality rather than quantity. Indeed, their results fed into the distribution of QR, *quality*-related funding. They were about proving the high standards of UK university research and innovation to government (and especially the Treasury), business, the taxpayer, and the world at large, all in exchange for QR. But REF2028 now seems inclined to believe that having one's work individually judged produces undue pressure and is inherently condemnatory. Individual merit (and, by inference, competition) should be laid aside. So, for example, the link between individuals and submissions is to be broken 'by allowing for research activity submitted for assessment to relate to any staff'. Outputs are being depersonalised and made the property of a unit. Collegiality needs to be given much greater weight since the warmth it provides fosters creativity. I am the first to admit that, in academe, individual merit can be a slippery concept. But it is not that slippery. Just consider the CVs of a number of Oxford, Cambridge, UCL and Imperial's leading Science and Medicine professors. In other words, REF2028 doubles down on research democracy but it could be argued that this comes at the expense of research excellence. Yet it is an inescapable fact that some people, teams, departments and institutions do produce better outputs than others.

But in the face of questions over the quality of UK research, REF2028 seems to have become more interested in process rather than product and, in line with this response, the place of the *quality* of research produced in the UK, as expressed in outputs, has been downgraded to what currently seems to be at most a measly 45 per cent of the REF score. This world turned upside down has been a long time coming, with reductions occurring through successive REFs. Diminish the role of academic products and disrespect the role of academic judgment as demonstrated by peer review in favour of … what?

So let us talk a bit more about why 'outputs' are important. Outputs can cover a multitude of different ways of transmitting knowledge but still the paper or book is their main form. Writing a paper is how academics announce to the world new results and new ways of thinking about the world. In many disciplines writing a paper or book is not simply reportage of the outcome of an experiment. It is how academics think. They often lavish love, care and effort into getting a paper into shape so that it says the right things in the right way. But REF2028 wants to diminish the role of outputs – effectively to crowd them out – because of a tendency to generalise from practices in experimental science and medicine to the whole of academe.

The current system of producing outputs undoubtedly has many flaws – for example, pressure to publish resulting in too many outputs instead of fewer higher quality outputs (although I am a little puzzled by those who seem to think that any pressure to publish is an assault on their psyche – after all, that is what academics on research contracts are employed to do: these university academics should be able to expect supportive working conditions but, equally, universities should be able to expect good work from academics who, for all of the difficulties they might face, are being given the opportunity to be employed in a job which offers the freedom to follow their interests. They have rights but they also have obligations.) Some of the flaws in the system of producing outputs are being corrected in various ways. Some need a lot more work. Some so-called solutions have brought new problems with them (for example, hard-to-get-into journals are under attack as somehow elitist but the upshot of more democracy courtesy of an explosion of new journals is as or even more problematic, while open access has been complicated by the rise of predatory publishing.)

But the REF2028 message to individual academics is, effectively, your outputs – the outputs you have poured blood, sweat and tears into – are in danger of becoming just a footnote to the main event. We value what you are producing but there are other more important things. You can see what is happening in the REF2028 initial decisions. Driven by an international group of eight members, chiefly in Research Administration positions (under the title of Future Research Assessment Programme or FRAP), a Programme Board of funding body administrators, some limited consultations and an open institutional survey, UK funding bodies with UKRI have evolved a REF whose raison d'etre is 'chang[ing] the emphasis of national research assessment from the performance of individuals to the contributions institutions and disciplines make to healthy, dynamic and inclusive research environments' by 'shifting away from published research outputs as the main way in which research excellence is demonstrated'. To carry out this mission 'engagement and impact' is very similar in content to impact in REF2021, retaining the 25 per cent weighting it was given then. The real difference arises from an expansion in the former environment category from a weighting of 15 per cent in REF2021 to a 25 per cent weighting given to an amorphous entity called 'people, culture and environment' in REF2028. This change arises especially out of the addition of a new element to this category, namely 'research culture'. To make way for this expanded category, the 60 per cent weighting of outputs in REF2021 is being reduced to 50 per cent in REF2028 but could actually be reduced to as little as 40 per cent in one proposal, not least because what is now called 'contributions to knowledge and understanding' may include an additional sub-section of 'at least 10 per cent' devoted to evidence of 'broader contributions to the advancement of the discipline', whatever that means. (To be fair, on outputs FRAP wanted to go lower than even these percentages.) Let us put to one side the errant thought that the 40 per cent figure might be a feint, there to make everyone feel relief when the actual figure for contributions to knowledge and understanding is reduced by less but is still smaller than 60 per cent.

Roughly speaking, research culture embodies an important critique of stressful or dubious academic work practices like pressure to publish, heightened levels of competition, the unequal make-up of the academic workforce, research integrity, flaws in the publication system, precarity, and … well just about anything that can be marked as bad really (see Thrift, 2022 for an extended discussion). In empirical laboratory-based Science and Medicine, in particular, all of these are seen to be at fault (cf. Baumgarten, 2018). (Without downplaying the fact that all of these issues bite and have negative consequences which need positive solutions, one of the most immediate concerns of research academics has been the stress generated by the expansion in the time that has to be devoted to teaching and administration – if UKRI was to do something about this aspect of contemporary university life it would gain their undying gratitude.)

The question is whether REF2028 in its current form is pushing the process of the assessment of research excellence, at least as originally conceived as a means of demonstrating the intellectual and applied power of British universities, off the end of the table. Let us be clear. There are real problems with research culture. That it needs to be more humane is undeniable. The problems need sorting. That is undeniable too. But is the REF the right mechanism to be doing this? I am not so sure. For example, one problem is that a number of the main problems of research culture can be linked to finance. Take the longstanding issue of a knowledge precariat of contract researchers. Universities cannot afford to put as many contract

research staff as they might like on permanent contracts, and one reason is because UKRI pays nowhere near a full overhead. The knowledge precariat is in part a result of UKRI's own policies.

All good leaders know that, if you disrespect the essentials, you rot from the base. And the essential for research universities is that the standard of research outcomes produced by their research academics has to be high if they are going to continue to be successful. That means some degree of judgement and some degree of competition. But this simple fact seems to bring on an attack of the vapours among some research constituencies even including, so it can seem, the funding bodies who formally own the REF and UKRI. For what I am sure are the best of motivations, they are willing to downgrade academic judgement to the point where less than half of the outcome of the REF will rest on assessments of academic products. We have reached a tipping point. In effect, the importance of academic research *standards* is being sidelined. I do find this genuinely shocking. It seems as though the standards academics have baked into them, especially in the shape of peer review, are being put on the back burner. Increasingly, judgement of academic worth is going to be a second-hand affair. It can seem like those reinventing the REF failed to stand back and think about the impact of 'contributions to knowledge and understanding' – surely the central mission of university research – taking up so little of an exercise supposedly devoted to judging the quality of research in UK universities. Or they thought that it was a slam dunk that UK research outcomes were so good that they did not need demonstrating again and it was therefore possible to move on to other issues. Or they just thought that it was the boring and expensive bit.

So what has brought us to this pass?

Here I want to mention just three tentative explanations of how we have got to this position.

One is that the adversities of empirical lab-based Science, Medicine and Engineering have been misrecognised as general (see Baumgarten, 2018). In its current form, REF2028 is, unknowingly perhaps, an attempt to impose solutions to complaints made chiefly about the working norms of empirical science and medicine on all disciplines. But as I have pointed out, this one-size-fits-all approach only covers a part of university knowledge production. It does not apply equally to nearly half of all research-active staff. For example, just looking at REF2021, 48.6 per cent of Category A staff submitted were in disciplines in the Social Sciences and Humanities for whom these norms were often different or even irrelevant. Even in Science, Medicine and Engineering, there is considerable differentiation (Pignarre, 2023). Some disciplines include segments where these norms may apply only partially, such as Mathematics, Biological Sciences, Psychology and Neuroscience, Earth Systems and Earth Sciences, and Public and Allied Health and where different methodologies are important like fieldwork and certain kinds of computer modelling.

There is another related issue. It is true that some empirical lab-based Science and Medicine has a quasi-industrial character in which teams are the motive force. Work takes place in large teams from centrally furnished facilities which gather together multiple forms of equipment that allow what is often high throughput experimentation (much of which will soon, I am sure, be automated) and demand multiple attributions in outputs. These teams are increasingly characterised as collectives in which everyone has a role to play in producing results which are then disseminated through preprints, papers and other media. Fair enough, but that said, not all empirical lab-based science is like this. Not all teams are alike. Many teams are smaller and focus on bespoke approaches to less well-defined problems. In other words, there is no one model: team science is a moveable feast. As importantly, there is some evidence that smaller teams are more likely to produce disruptive research while the larger teams produce incremental research.

Secondly, and following on, the production of ideas has been relegated to the same status as any other research role. Possibilities are no longer realised through individual feats of imagination. Why did individual ideas get downgraded? In part, because of the damage caused by the 'lone genius' – white, male, careerist, domineering, even bullying, leeching off other people's ideas, treating short-term researchers as vassals and so on. It is quite right to want to combat this species of academic but in the process there is a danger of uncritically taking up the notion of just about everyone involved in a piece of research making a 'net contribution' to a team such that the ideas of particular individuals become a footnote. In the team, ideas are apparently no more or less important than any other part of the production process. The team is a

democracy, at least in the sense that all contributions must be acknowledged (a taste of this approach was foreshadowed in the UKRI Octopus initiative). Now, without a doubt, teams are one important model of knowledge acquisition and many people with different skills may make contributions to them (and so far as I know there is no good reason why they cannot be attributed already). Yet there are so many other modes of knowledge acquisition – some collective, some not, all the way from two or three people cooperating on a specific piece of work for a limited time to someone in the Humanities or Social Sciences spending several years writing a stellar research monograph which may well go on to grab public attention. In other words we need to be wary of turning observations of team science into a fixed ideology.

In among all of this, whatever the mode, the uncomfortable fact remains that some people are better at research than others. Some people are a lot better at research than others. Even now, what produces research excellence is great people, as universities recognise by seeking them out. Though teams can undoubtedly have their own dynamic in which the whole is greater than the sum of the parts because ideas are generated in a body corporate, even then it is in large part the quality of the individual participants that produces the goods. Talking about team science cannot get away from this fact. (I worry that in trying to do so REF2028 could become the latest episode in the industrialisation of the sector (Thrift, 2023) bringing with it a further proletarianization of academics as the balance of power shifts farther away from them towards an overweening and increasingly activist research bureaucracy.)

Of course, an emphasis on individuals has downsides. The lone genius model of science may have declined but it would be a brave person who said that it no longer exists. Without a doubt, there are serious issues around equality, diversity and inclusion, bullying and harassment, which skew who is acknowledged as making what contributions to a piece of work. But we should not use these issues to devalue the generation of ideas. It is ideas that we need. One of the only ways of getting out of the mess that large parts of the world are facing is by generating more great ideas. Yet UKRI seems strangely resistant to acknowledging great ideas as being the touchstone of research – the 'incantatory task of naming non-existent objects', as Samuel Delaney once put it – or to registering the presence of the people who have these great ideas as being rather important. But in the present conjuncture, when so many malign forces seem to have lined up to test us, generating great ideas is not just a nice to have. It is an imperative.

Thirdly, there seems to be a degree of mission creep within UKRI, at least as displayed in REF2028, and on a sufficient scale that one could argue that it is in danger of becoming a *de facto* regulator, intervening more and more directly in the workings of universities, just like the Office for Students. There is, of course, the fact that there seems to have been only very limited consultation with research universities' senior management before the main contours ('initial decisions') of the new REF were announced and there is no real opportunity to object to them in the consultation, although it is clear that UKRI is open to at least a degree of negotiation (Corner, 2023). Then, UKRI could be seen as impinging on university autonomy by moving from commissioning excellent research to issues which are rightly those of universities to solve. It might even be seen as stretching the aims and objectives of its Framework Document (BEIS, 2018), to wit:

> *Aims: (a) Push the frontiers of human knowledge and understanding (b) Deliver economic impact (c) Create social and cultural impact by supporting society to become enriched, healthier, more resilient and sustainable.*
>
> *Objectives: (a) be the unified voice for continued strengthening of the UK research and innovation system, nationally and internationally (b) lead on the development and delivery of a coherent national research and innovation strategy which maximises the advancement of knowledge, economic and societal impact, based on more and better evidence and data (c) ensure better prioritisation of resources, especially for the best interdisciplinary and cross-cutting research, as well as longer term investment in research infrastructure (d) maximise the impact of Innovate UK in supporting business-led innovation (e) promote stronger commercialisation, business and policy links, and wider societal engagement with publicly funded research (f) nurture and improve the talent pipeline for research and innovation (g) champion equality, diversity and inclusion across the research and innovation sector, and support a healthy and high-integrity culture (h) deliver a simpler, well-functioning research and innovation ecosystem which is easier to use and helps build collaborative partnerships between end*

users, including universities, researchers, charities, communities, businesses, NGOs [Non-Governmental Organisations] and international organisations (i) be a great place to work, which inspires, engages and learns from its people, and (j) deliver a step-change in administrative efficiency, including through combining corporate functions.

Of course, UKRI is not meant to be a regulator and I do not believe it wants to be one, but it could be argued that UKRI is an arm's-length body (ALB) that does not just want to judge if the research being done by universities is good or bad and fund accordingly – but now wants to tell some of the leading research universities in the world how that research should be done.

Conclusions

What will we be left with in REF2028? A much-reduced examination of peer-reviewed outputs and a host of metrics and narratives concerning process rather than product. Metrics have a place in moderation. But the narrative submissions which also seem to figure in the new REF are a particularly unreliable means of judging things, whether they be explanatory statements on wider contributions to disciplinary knowledge and understanding or wider contributions to impact and engagement. To guard against any criticism that it might be downgrading the judgement of research excellence through peer review of individual outputs by adopting this approach, UKRI seems to be redefining research excellence. It is a new and potentially dangerous orthodoxy based on what might be portrayed as a turn inwards.

The dangers mount up. It is not just the danger arising from reducing the contribution of outputs, serious as that may be. There are other subsidiary dangers too. One is that the role of the most criticised set of measures that is too often used to judge individuals, and the one that most concerns many academics – citations – may well be strengthened as a result of this reduction. Managers of universities are likely to increasingly bypass the REF and turn to measures of individuals like citations which are clearly much more problematic as a means of assessing academic contributions. For many institutions, citations are still one of the ways of identifying who is excellent or has the potential to be excellent. For academics, they are evidence of their impact on the course of research in their chosen field. For all of its undoubted faults, the h-index has shown no sign of going away in large parts of the world and new measures are appearing. For example, the Stanford *World's Top 2% Scientists* ranking using Scopus data is already becoming an industry standard, so to speak, pointing to which institutions have how many top scientists. Unsurprisingly, it is being widely used on their curriculum vitae by these very same scientists. In other words, the REF could increasingly become an irrelevant guide to the quality of UK research outputs and individuals. Equally, the role of league tables could well be further strengthened because the new REF is likely to offer less meaningful guidance on research merit. There is a second danger too: the issue of Panel recruitment (assuming that Panels survive). Being a member of a Panel entails an enormous amount of work done extraordinarily conscientiously and in genuine good faith. Panel members can therefore fairly expect that their views will carry weight. One has to ask, why be on a Panel for this REF? All that work for less than 50 per cent? And one more subsidiary danger is that it gives free rein to notions that might best be described as jaw-dropping. For example, here is one such in an editorial from *Nature* (2023), the flagship of cutting-edge science, opining on making research assessments fairer in the wake of the REF2028 proposals: 'If funding bodies genuinely want to reward a diversity of scholarship, most of the funding should not be going to 4* and 3* research'.

The argument up until here has been about the primacy or otherwise of outputs. I am sure by now that it is pretty clear that I think that it would be best to repair the percentage figure given over to outputs in REF2028, preferably by reverting to the previous REF2021 percentage figure. That is not to say that I think that a focus on process, and particularly on research culture, should not feature in the exercise in a more refined way than 'environment' has in previous exercises. However, as with the introduction of impact, there is a need to:

a) define what is meant;

b) decide what is good and what is bad, taking account of different ideological positions;

c) work out what transcends disciplines and what is discipline-specific and, most critically;

d) decide what is capable of assessment in a way that feeds into the allocation of funds.

Returning to a previous point, the primary purpose of REF is accountability for public funding and every aspect of the exercise must, at the very least, be tested against that purpose.

We now know there is significant lack of clarity about the answers to points a to d above. Corner (2023) has asked for a broader public debate and this is being supplemented with a significant degree of structure through a tender exercise to identify a partner. None of this is a surprise, and there are comparisons with the two years or more it took to answer all of the issues about the introduction of impact assessment. Muscatelli (2023) has raised the question of whether the right way forward is through a pilot exercise, perhaps – as with impact – carried out in a sample of disciplinary areas. Such an exercise would position the UK in a strong place to contribute to the international discussions that are currently taking place (for example in Europe through CoARA (an organisation which argues that research assessment should be based 'primarily on qualitative judgement, for which peer review is central, supported by responsible use of quantitative indicators') and though a number of initiatives (for example, GYA / IAP / ISC (2023)) as well as providing the added benefit of giving the UK an instrument to deploy to test the philosophical approaches being developed in other places.[1] Under the influence of an impending exercise, it is likely too that the UK might come to early conclusions where international exercises across many different countries sometimes take many years to achieve sufficient consensus for implementation to be carried out.

In other words, there is a lot to debate in the proposals for REF2028 and I rather hope that the parameters of the debate can be broadened so as to allow a debate to happen in the round. After all, the stakes are high. The new REF could mark the beginning of a long goodbye to notions of research excellence which we so badly need to keep hold of.

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1 Whether this approach is feasible for REF2028 – which means that 2027 is the submission year – is another issue. It is clearly unattractive to leave too long between REF exercises intended to reward those who show improvement in research performance, so there is a question of whether REF2028 should move forward with a continued focus on research outputs while a parallel pilot takes place for a future exercise.

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